

City of Carson Interim Development and Soundwall Impact Fee

Prepared for:
The City of Carson

Prepared by:
W.G. Zimmerman Engineering, Inc.
17011 Beach Boulevard, Suite 1240
Huntington Beach, CA 92647
Phone: (714) 799 – 1700
Fax: (714) 333 – 4712

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Table of Contents

| | |
|--|----|
| A- Interim Development Impact Fee | 1 |
| 1. Introduction | 1 |
| 2. Mitigation Fee Act | 1 |
| 3. Location of New Developments | 1 |
| 4. Study Area | 4 |
| 5. Existing Traffic Volumes | 4 |
| 6. Trip Generation | 8 |
| 7. Trip Distribution | 10 |
| 8. Traffic Forecasts | 19 |
| 9. Traffic Impacts..... | 26 |
| 1. Project Methodology | 26 |
| 2. Level of Service..... | 27 |
| 3. Significant Traffic Impact Criteria | 30 |
| 4. Significant Impacted Intersections | 30 |
| 10. Mitigation Calculation..... | 30 |
| Intersection 5 – Figueroa Street & Del Amo Boulevard:..... | 31 |
| Intersection 6 – Main Street & Del Amo Boulevard: | 31 |
| Intersection 7 – Stamps Drive & Del Amo Boulevard: | 31 |
| Intersection 8 – South Avalon Boulevard & Del Amo Boulevard: | 31 |
| Intersection 10 – Main Street & Lenardo Drive:..... | 32 |
| Intersection 13 – Lenardo Drive and I-405 Southbound Ramps: | 32 |
| Intersection 20 – South Avalon Boulevard & Carson Street:..... | 32 |
| 11. Improvement Cost..... | 33 |
| 12. Allocation of Costs | 35 |
| 13. Projected Revenue..... | 36 |
| B- SOUNDWALL FEE ANALYSIS | 38 |
| 14. Summary..... | 38 |
| 1. Introduction | 38 |
| 2. Existing Conditions..... | 38 |
| 15. Location..... | 40 |
| 16. Projects | 41 |
| 17. Future Conditions..... | 42 |
| 18. Methodology..... | 43 |
| 19. Cost of Sound Wall | 44 |
| 21. Projected Revenue..... | 48 |

List of Figures

Figure 1: Development Location 2

Figure 2: Study Intersections 5

Figure 3: Existing without Projects AM Peak Hour Intersection Turning Movement Volumes 6

Figure 4: Existing without Projects PM Peak Hour Intersection Turning Movement Volumes 7

Figure 5: Project Trip Distribution 12

Figure 6: Projects Passenger Cars AM Peak Hour Intersection Turning Movement Volumes 13

Figure 7: Projects Passenger Cars PM Peak Hour Intersection Turning Movement Volumes 14

Figure 8: Projects Trucks (in PCE) AM Peak Hour Intersection Turning Movement Volumes 15

Figure 9: Projects Trucks (in PCE) PM Peak Hour Intersection Turning Movement Volumes 16

Figure 10: Projects Total Vehicles (in PCE) AM Peak Hour Intersection Turning Movement Volumes 17

Figure 11: Projects Total Vehicles (in PCE) PM Peak Hour Intersection Turning Movement Volumes 18

Figure 12: Existing Plus Projects AM Peak Hour Intersection Turning Movement Volumes 20

Figure 13: Existing Plus Projects PM Peak Hour Intersection Turning Movement Volumes 21

Figure 14: Future without Projects AM Peak Hour Intersection Turning Movement Volumes 22

Figure 15: Future without Projects PM Peak Hour Intersection Turning Movement Volumes 23

Figure 16: Future Plus Projects AM Peak Hour Intersection Turning Movement Volumes 24

Figure 17: Future Plus Projects PM Peak Hour Intersection Turning Movement Volumes 25

Figure 18: City of Carson Truck Routes 39

Figure 19: Sound Wall Locations 40

Figure 20: Project Locations 42

List of Tables

Table 1: List of Projected Development in the City of Carson 3

Table 2: Project Trip Generation 8

Table 3: City of Carson-Total Development at Buildout (2023) 10

Table 4: Signalized Intersection LOS Criteria 26

Table 5: Unsignalized Intersection LOS Criteria 27

Table 6: Existing Conditions Intersection Level of Service 28

Table 7: Future (Year 2023) Conditions Intersection Level of Service 29

Table 8: Significant Traffic Impact Criteria 30

Table 9: Intersection Impact Analysis 33

Table 10: Intersection Mitigation Cost 33

Table 11: Allocation of Costs per Development type 36

Table 12: Projected Revenue-Intersection Traffic Fees 37

Table 13: Project Trip Generation Estimate 41

Table 14: Selected Truck Routes Noise Levels 43

Table 15: Cost of Sound Wall Barrier per Linear Foot 44

Table 16: *Truck Route Mitigation Cost* 46

Table 17: Allocation of Costs per Development 47

A- Interim Development Impact Fee

1. Introduction

This study establishes the Interim Development Impact Fee for the City of Carson. The Development Impact Fee is a tool used for shifting part of the cost of providing new public infrastructure to the developers in order to mitigate various intersections in the City impacted by new development. This study calculates the impact fees associated with new developments within the City of Carson which impacts twenty-two (22) intersections. The allocation of fees will be based on the projected amount of traffic generated by the new developments to be added to the intersections and the estimated cost to mitigate the added traffic via proposed improvements. These fees are implemented to help reduce the economic burden on the City due to the growth caused by new development. This report will also analyze the noise level impact certain projects will have on truck routes in the City that border residential neighborhoods. Although this is a technical development fee analysis, every effort has been made to write the report clearly and concisely.

2. Mitigation Fee Act

The California Mitigation Fee Act (Assembly Bill 1600) requires local governments to document the following when adopting an impact fee:

- Identify the purpose of the fee;
- Identify the use of revenues;
- Determine a reasonable relationship between the use of the fee and the type of the development paying the fee;
- Determine a reasonable relationship between the need for the fee and the type of development paying the fee; and
- Determine a reasonable relationship between the amount of the fee and the cost of the facility attributable to development paying the fee.

In summary, a fee cannot be more than the cost of the public facility needed to accommodate the new development paying the fee, and the fee revenues can only be used for their intended purpose.

3. Location of New Developments

As shown in Figure 1, a total of 23 projects are expected to be implemented in the City of Carson. These projects are listed in Table 1.

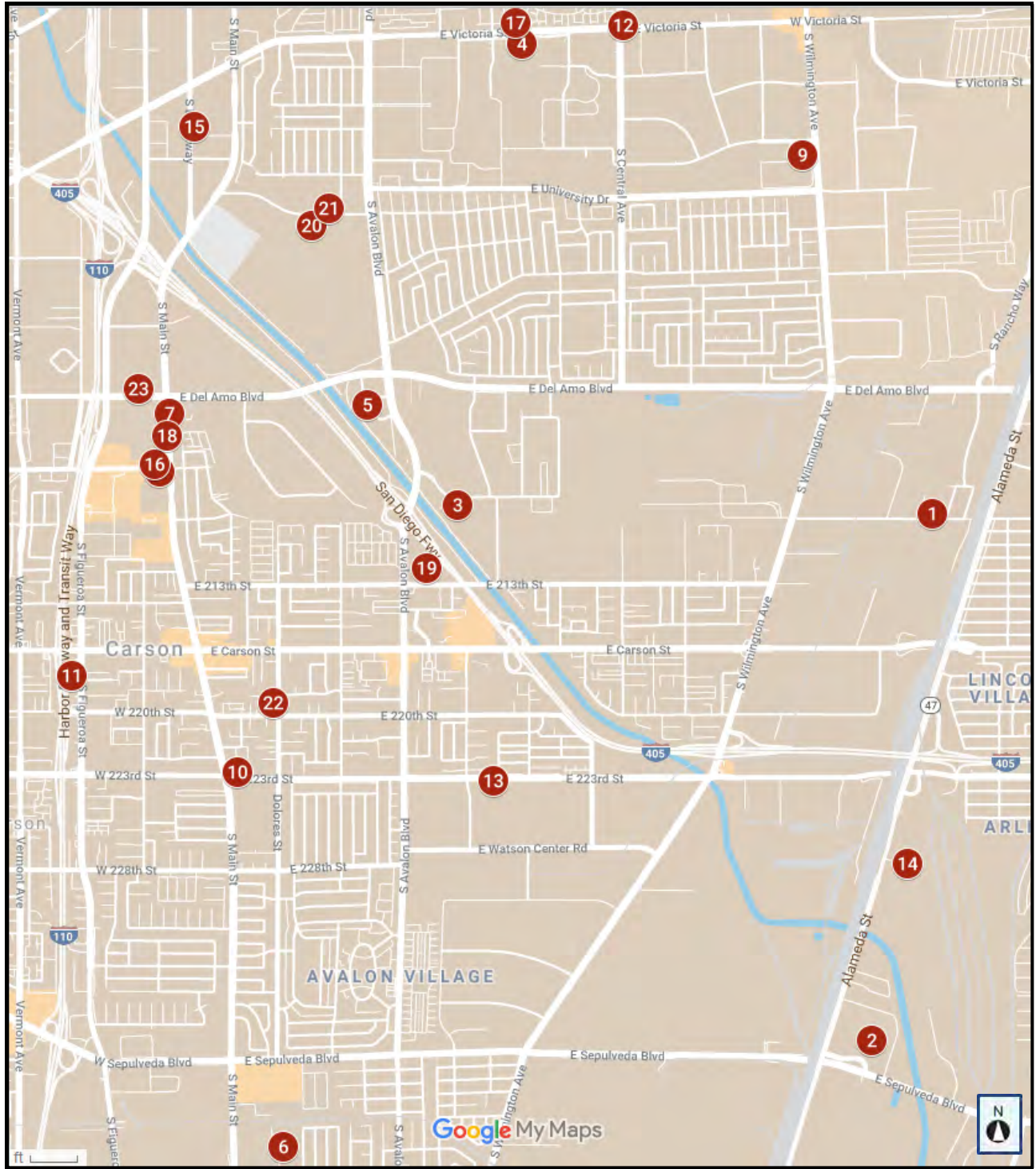


Figure 1: Development Location

Table 1: List of Projected Development in the City of Carson

| # | Project Location | Project Name / Developer | Project Type |
|----|---|--|--------------|
| 1 | 2315 E. Dominguez Street | Terreno | Industrial |
| 2 | 2149 E Sepulveda Boulevard | Shippers | Industrial |
| 3 | 888 E. Dominguez Street | Holiday Inn Express c/o Richard Burrow for Carson Hospitality Group Inc. | Hotel |
| 4 | 1000 E. Victoria | CSUDH Master Plan (5 Year Projection) | Mixed Use |
| 5 | Carson Plaza Drive and Carson Plaza Ct. | Carson Plaza Office Park | Mixed Use |
| 6 | 24700 Main Street | Bridge Industrial | Industrial |
| 7 | 20400 Main Street | Balance & 157 | Commercial |
| 8 | 20881 S. Main Street | Western Realco | Industrial |
| 9 | 18701 S Wilmington Ave | Prologis, 2817 E Cedar St, Suite 200, Ontario, CA 91764 | Industrial |
| 10 | 123 E 223rd St | Hooman Moshar, 25726 Dillon Rd, Laguna Hills, CA 90265 | Residential |
| 11 | 21809-21811 S Figueroa | Birch, Laney LA Inc., 13110 Hawthorne Blvd Ste A, Hawthorne, CA 90250 | Residential |
| 12 | NE Corner of Central Ave. and Victoria St. | Ed Galigher / Victoria Greens (Integral Communities) | Residential |
| 13 | LA DWP corridor in south Carson b/w E. 223rd St. and E. 236th St | Linear Properties Truck Yard in DWP Utility Corridor Easement | Industrial |
| 14 | 22632 S. Alameda St | Mobile-Mini Storage | Industrial |
| 15 | 18530 Broadway | Behren Engineering / Acoustic Engineering Fabrication and Office | Industrial |
| 16 | 225 W Torrance Blvd | Rand Mixed Use Condo project (5 Year Projections) | Residential |
| 17 | 1007 E Victoria | Brandywine residential project | Residential |
| 18 | 20601 S. Main Street | KL Fenix | Industrial |
| 19 | 21212 Avalon | Kott & Kott 14 (5 Year Projection) | Mixed Use |
| 20 | 340 Martin Luther King Jr. Street | Carol Kimmelman Sport | Recreational |
| 21 | 419 Martin Luther King Jr. Street, Carson, CA 9074 | The Creek At Dominguez Hill | Recreational |
| 22 | 21915 Dolores | 5 unit condo | Residential |
| 23 | 20331 Main Street | GS Nursery | Residential |

4. Study Area

As illustrated in Figure 2, a total of 22 intersections were identified for the Interim Development Impact study. These intersections are listed below:

- | | |
|--|--|
| 1. Figueroa Street at I-405 Southbound On-Ramp | 13. Lenardo Drive at I-405 Southbound Ramps |
| 2. Figueroa Street at I-405 Northbound On-Ramp | 14. Avalon Boulevard at I-405 Southbound Ramps |
| 3. Main Street at I-405 Southbound On-Ramp | 15. Avalon Boulevard at I-405 Northbound Ramps |
| 4. Main Street at I-405 Northbound Off-Ramp | 16. Main Street at 213th Street |
| 5. Figueroa Street at Del Amo Boulevard | 17. Avalon Boulevard at 213th Street |
| 6. Main Street at Del Amo Boulevard | 18. Figueroa Street at Carson Street |
| 7. Stamps Drive at Del Amo Boulevard | 19. Main Street at Carson Street |
| 8. Avalon Boulevard at Del Amo Boulevard | 20. Avalon Boulevard at Carson Street |
| 9. Figueroa Street at I-110 Northbound Ramps | 21. I-405 Southbound Ramps at Carson Street |
| 10. Main Street at Street Lenardo Drive | 22. I-405 Northbound Ramps at Carson Street |
| 11. Figueroa Street at Torrance Boulevard | |
| 12. Main Street at Torrance Boulevard | |

5. Existing Traffic Volumes

Existing peak hour traffic volumes provided by the City of Carson are based upon morning and evening peak period intersection turning movement counts obtained in November 2016 during typical weekday conditions. The morning peak period was collected between 7:00 AM and 10:00 AM and the evening peak period was collected between 4:00 PM and 7:00 PM. The actual peak hour within the peak period is the four consecutive 15 minute periods with the highest total volume when all movements are added together. Thus, the weekday evening peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15 minute periods have the highest combined volume. Intersection turning movement count worksheets are provided in Appendix A.

Figure 3 and Figure 4 show the existing morning and evening peak hour intersection turning movement volumes, respectively.

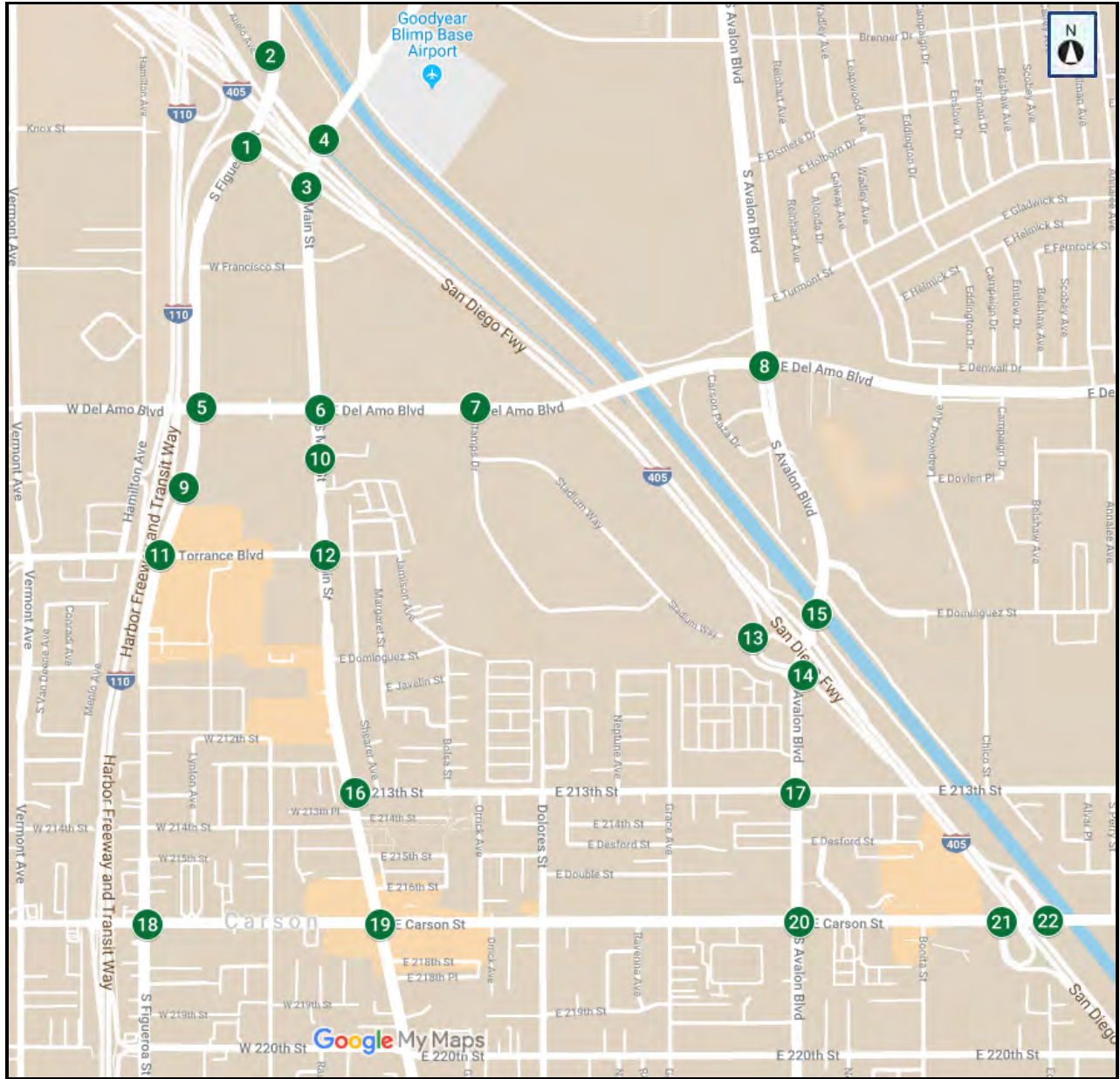


Figure 2: Study Intersections

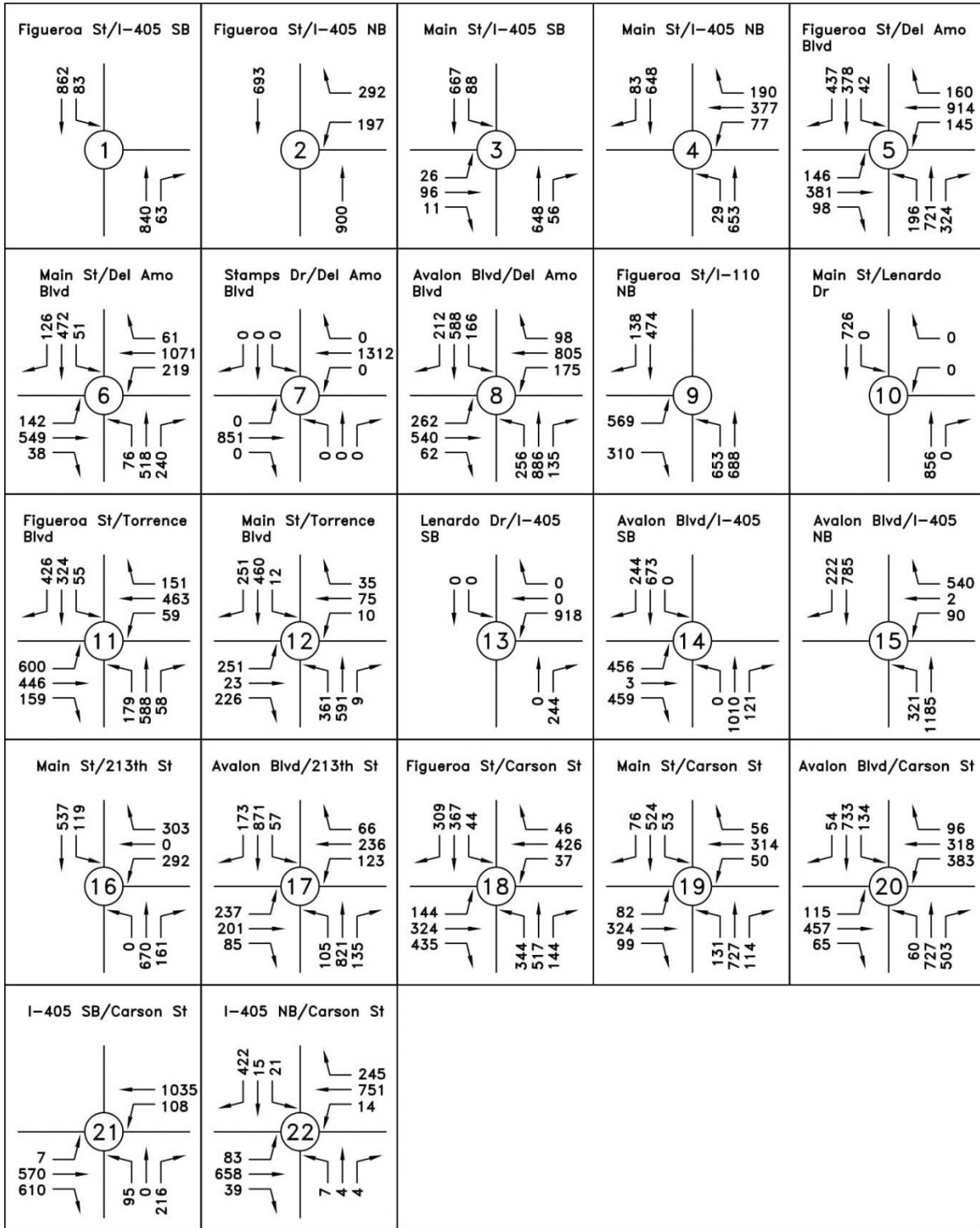


Figure 3: Existing without Projects AM Peak Hour Intersection Turning Movement Volumes

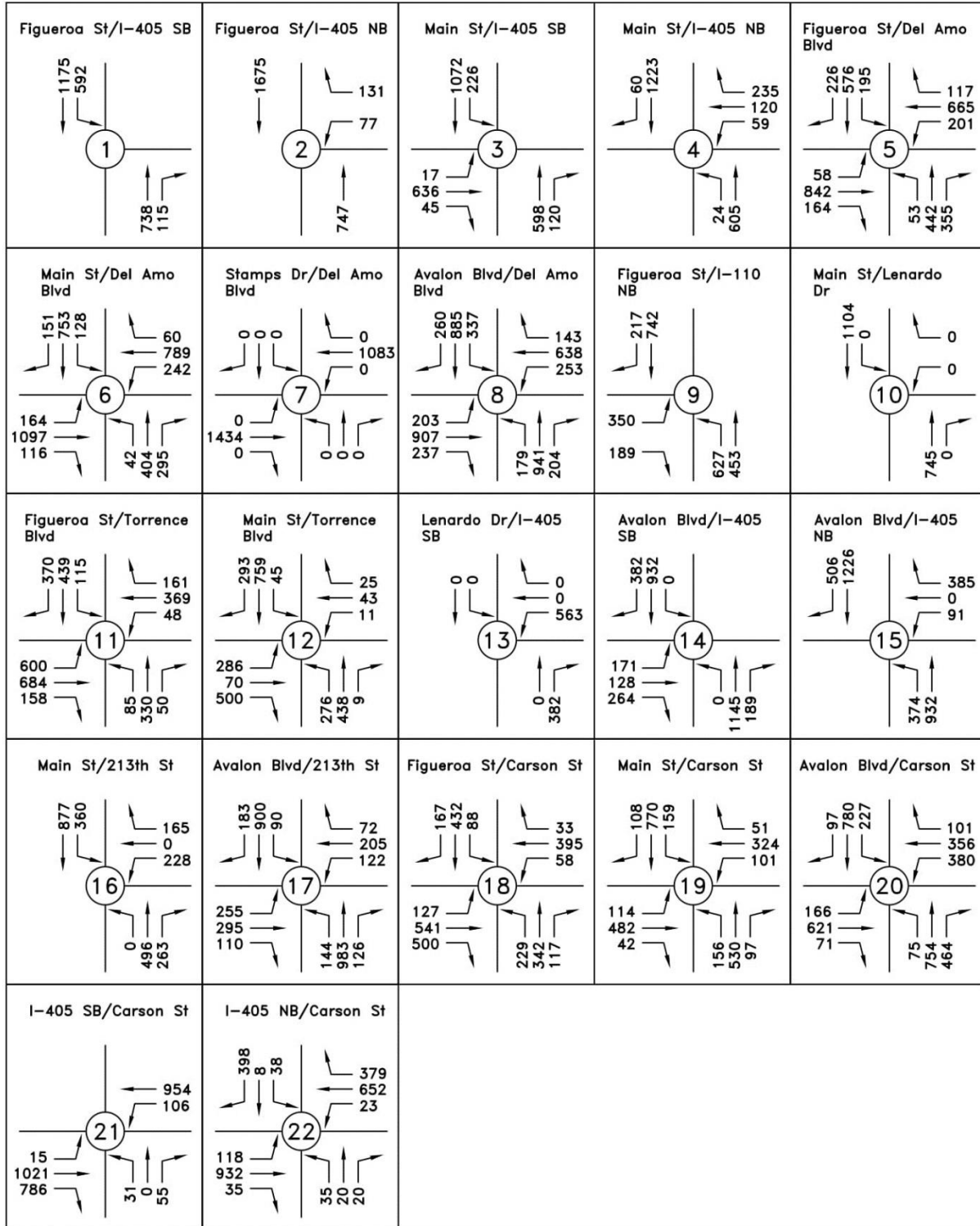


Figure 4: Existing without Projects PM Peak Hour Intersection Turning Movement Volumes

6. Trip Generation

Table 2 shows the trip generation based upon regression/linear equations for each project based on the land use obtained from the Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, 2017.

In accordance with the Institute of Transportation Engineers recommendations, the numbers of trips forecast to be generated by the proposed land use are determined by solving for trips (T) in the trip generation equation given the land use quantity (X). On average, truck trips account for approximately 13-percent of weekday trips generated by industrial park land uses. To provide a conservative analysis, the project trip generation shown in Table 2 assumes trucks will comprise 15-percent of the site-generated trips. The site-generated truck trips have been converted to passenger car equivalent trips based on a factor of 2.0.

As shown in Table 2, the proposed projects are estimated to generate approximately 71,026 daily trips in passenger car equivalents, of which, 5,574 trips would occur during the morning peak hour and 8,814 trips would occur during the afternoon peak hour. The daily trip estimates are used in calculating fees for the affected intersections in the City of Carson. Table 3 represents the new development new trip share in the city at buildout.

Table 2: Project Trip Generation

| # | Project Location | Project Type | Size | | PCE Estimated Trip Generation | | | | | | |
|---|---|--------------|----------|-------------|-------------------------------|--------------------|-----|-------|--------------------|-----|-------|
| | | | | | Daily Trips | AM Peak Hour Trips | | | PM Peak Hour Trips | | |
| | | | Quantity | Unit | | In | Out | Total | In | Out | Total |
| 1 | 2315 E. Dominguez Street | Industrial | 132 | Truck Space | 378 | 48 | 19 | 66 | 20 | 37 | 57 |
| 2 | 2149 E Sepulveda Boulevard | Industrial | 800 | Truck Space | 1305 | 165 | 64 | 229 | 69 | 129 | 198 |
| 3 | 888 E. Dominguez Street | Hotel | 97 | Rooms | 792 | 30 | 21 | 51 | 30 | 29 | 58 |
| 4 | 1000 E. Victoria | Industrial | 150 | KSF | 1066 | 124 | 17 | 141 | 18 | 131 | 148 |
| | | Commercial | 50 | KSF | 991 | 15 | 9 | 25 | 48 | 52 | 100 |
| | | Dormitory | 300 | Beds | 596 | 25 | 27 | 51 | 42 | 30 | 72 |
| | | Residential | 200 | DU | 1131 | 17 | 69 | 87 | 69 | 37 | 105 |
| 5 | Carson Plaza Drive and Carson Plaza Ct. | Office | 50 | KSF | 603 | 75 | 10 | 85 | 14 | 68 | 81 |
| | | Residential | 200 | DU | 1264 | 19 | 78 | 97 | 77 | 41 | 118 |

| # | Project Location | Project Type | Size | | PCE Estimated Trip Generation | | | | | | |
|----|--|--------------|----------|-------------|-------------------------------|--------------------|-----|-------|--------------------|-----|-------|
| | | | Quantity | Unit | Daily Trips | AM Peak Hour Trips | | | PM Peak Hour Trips | | |
| | | | | | | In | Out | Total | In | Out | Total |
| 6 | 24700 Main Street | Industrial | 253 | KSF | 2010 | 234 | 32 | 265 | 34 | 246 | 280 |
| 7 | 20400 Main Street | Commercial | 730 | KSF | 18808 | 290 | 178 | 468 | 911 | 987 | 1898 |
| 8 | 20881 S. Main Street | Industrial | 200 | Truck Space | 695 | 148 | 67 | 212 | 67 | 101 | 167 |
| | | | 158.45 | KSF | 677 | 45 | 12 | 57 | 15 | 46 | 61 |
| 9 | 18701 S Wilmington Ave | Industrial | 438.666 | KSF | 3486 | 405 | 55 | 460 | 58 | 427 | 485 |
| 10 | 123 E 223rd St | Residential | 9 | DU | 50 | 1 | 3 | 4 | 3 | 1 | 4 |
| 11 | 21809-21811 S Figueroa | Residential | 32 | DU | 177 | 2 | 11 | 13 | 11 | 5 | 16 |
| 12 | NE Corner of Central Ave. and Victoria St. | Residential | 176 | DU | 971 | 13 | 61 | 74 | 58 | 29 | 87 |
| 13 | LA DWP corridor in south Carson b/w E. 223rd St. and E. 236th St | Industrial | 580 | Truck Space | 2204 | 273 | 410 | 683 | 270 | 358 | 628 |
| 14 | 22632 S. Alameda St | Office | 18.36 | KSF | 221 | 28 | 4 | 31 | 5 | 25 | 30 |
| 15 | 18530 Broadway | Industrial | 20.16 | KSF | 169 | 20 | 3 | 22 | 3 | 21 | 23 |
| 16 | 225 W Torrance Blvd | Residential | 250 | DU | 1663 | 26 | 102 | 128 | 101 | 54 | 155 |
| 17 | 1007 E Victoria | Residential | 38 | DU | 210 | 3 | 13 | 16 | 13 | 6 | 19 |
| 18 | 20601 S. Main Street | Industrial | 475 | Truck Space | 1132 | 162 | 67 | 229 | 70 | 122 | 193 |
| | | | 53 | KSF | 226 | 15 | 4 | 19 | 5 | 15 | 20 |
| 19 | 21212 Avalon | Commercial | 30 | KSF | 595 | 9 | 6 | 15 | 29 | 31 | 60 |
| | | Hotel | 150 | Rooms | 1226 | 47 | 33 | 80 | 46 | 44 | 90 |
| | | Residential | 500 | DU | 2826 | 43 | 173 | 217 | 171 | 92 | 264 |

| # | Project Location | Project Type | Size | | PCE Estimated Trip Generation | | | | | | |
|-------|--|--------------|----------|------|-------------------------------|--------------------|------|-------|--------------------|------|-------|
| | | | | | Daily Trips | AM Peak Hour Trips | | | PM Peak Hour Trips | | |
| | | | Quantity | Unit | | In | Out | Total | In | Out | Total |
| 20 | 340 Martin Luther King Jr. Street | Recreational | 66 | KSF | 2232 | 89 | 46 | 135 | 89 | 92 | 181 |
| 21 | 419 Martin Luther King Jr. Street, Carson, CA 9074 | Recreational | 532.5 | KSF | 22898 | 965 | 617 | 1582 | 1968 | 1206 | 3174 |
| 22 | 21915 Dolores | Residential | 5 | DU | 28 | 0 | 2 | 2 | 2 | 1 | 3 |
| 23 | 20331 Main Street | Residential | 60 | DU | 399 | 6 | 24 | 31 | 24 | 13 | 37 |
| Total | | | | | 71026 | 3341 | 2236 | 5574 | 4337 | 4476 | 8814 |

Table 3: City of Carson-Total Development at Buildout (2023)

| Development Type | Dev Units | Estimated Units | Estimated Average Daily Traffic | Share of New Trips |
|---------------------------|-----------|-----------------|---------------------------------|--------------------|
| Residential, Multi-Family | DU | 1,470 | 8,717 | 12% |
| Commercial | KSF | 810 | 20,393 | 29% |
| Office | KSF | 68.36 | 824 | 1% |
| Industrial/Business Park | KSF | 1,073.28 | 7,634 | 11% |
| Truck Yard | Space | 2,187 | 5,714 | 8% |
| Hotel | Room | 247 | 2,018 | 3% |
| Recreational | Ksf | 599 | 25,130 | 35% |
| Dormitory | Beds | 300 | 596 | 1% |
| Total | | | 71,026 | 100% |

7. Trip Distribution

Figure 5 shows the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns are based on review of existing traffic volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

Based on the identified project trip generation and distributions, morning and evening peak hour intersection turning movement volumes expected from the project are shown on Figure 6 and Figure 7, respectively (in passenger car equivalent trips). Morning and evening peak hour intersection turning movement volumes of trucks (in passenger car equivalent trips) expected from the project are shown on Figure 8 and Figure 9. The morning and evening peak hour intersection turning movement volumes for the combined passenger car and truck trips expected from the project are shown on Figure 10 and Figure 11, respectively.

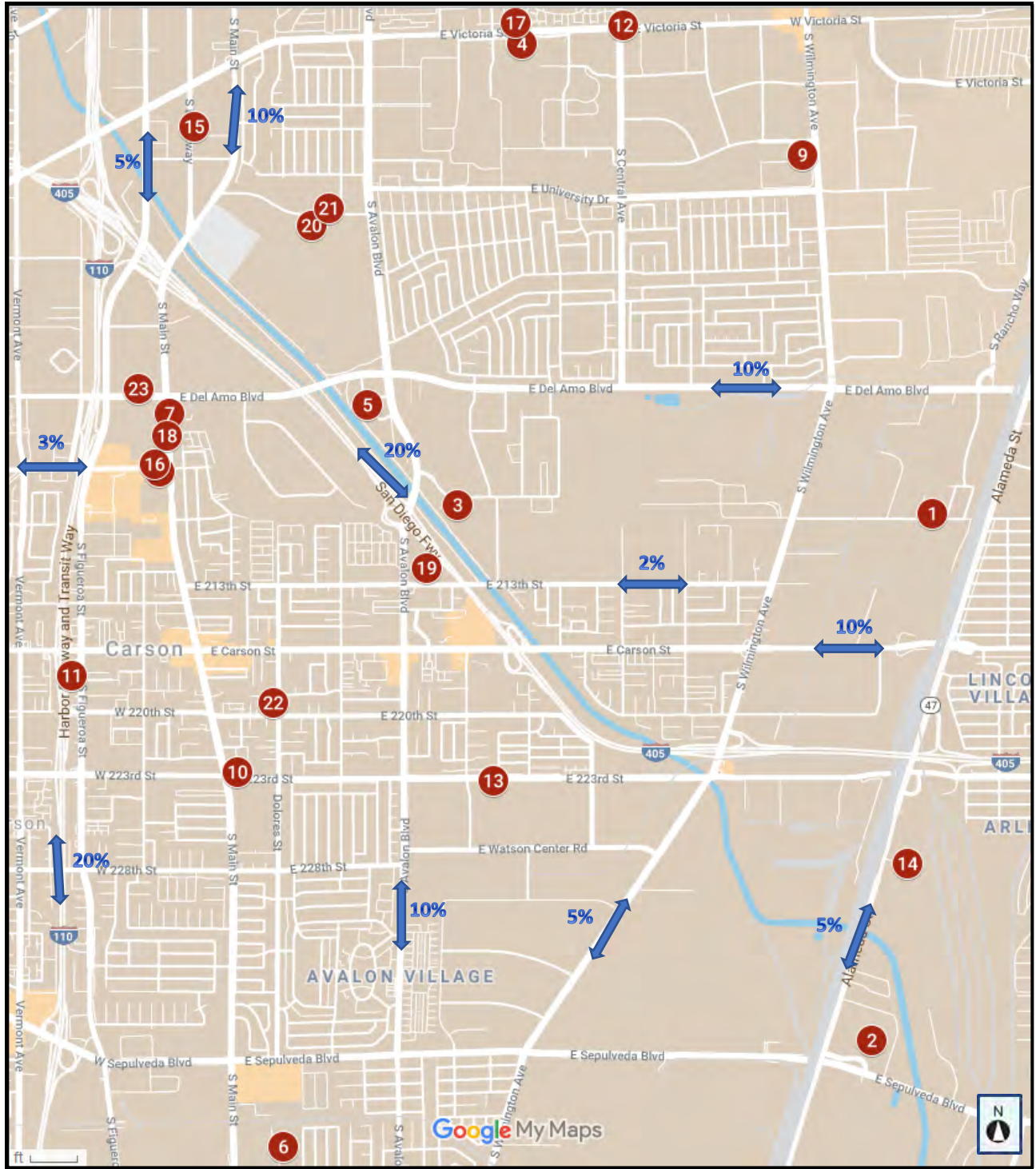


Figure 5: Project Trip Distribution

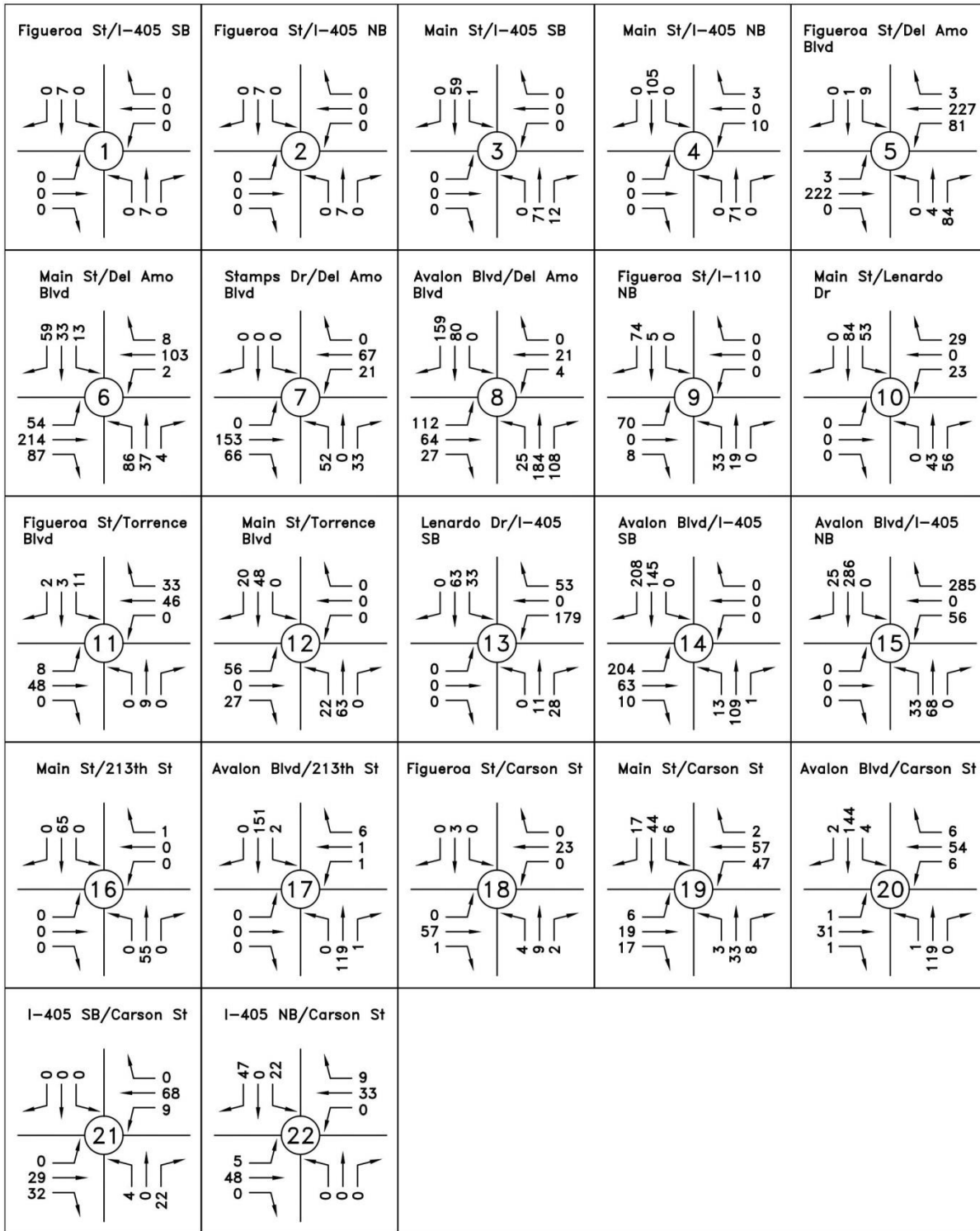


Figure 6: Projects Passenger Cars AM Peak Hour Intersection Turning Movement Volumes

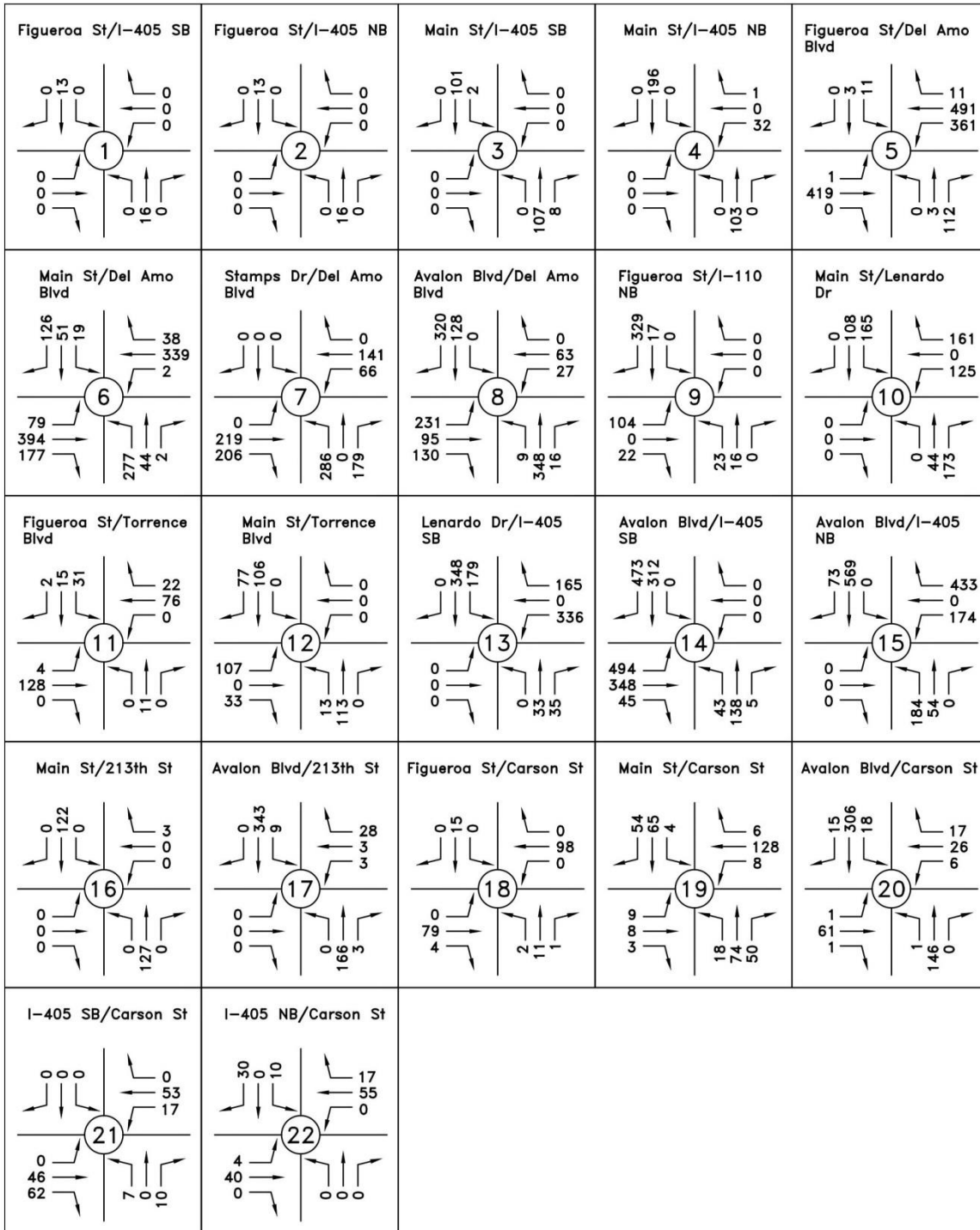


Figure 7: Projects Passenger Cars PM Peak Hour Intersection Turning Movement Volumes

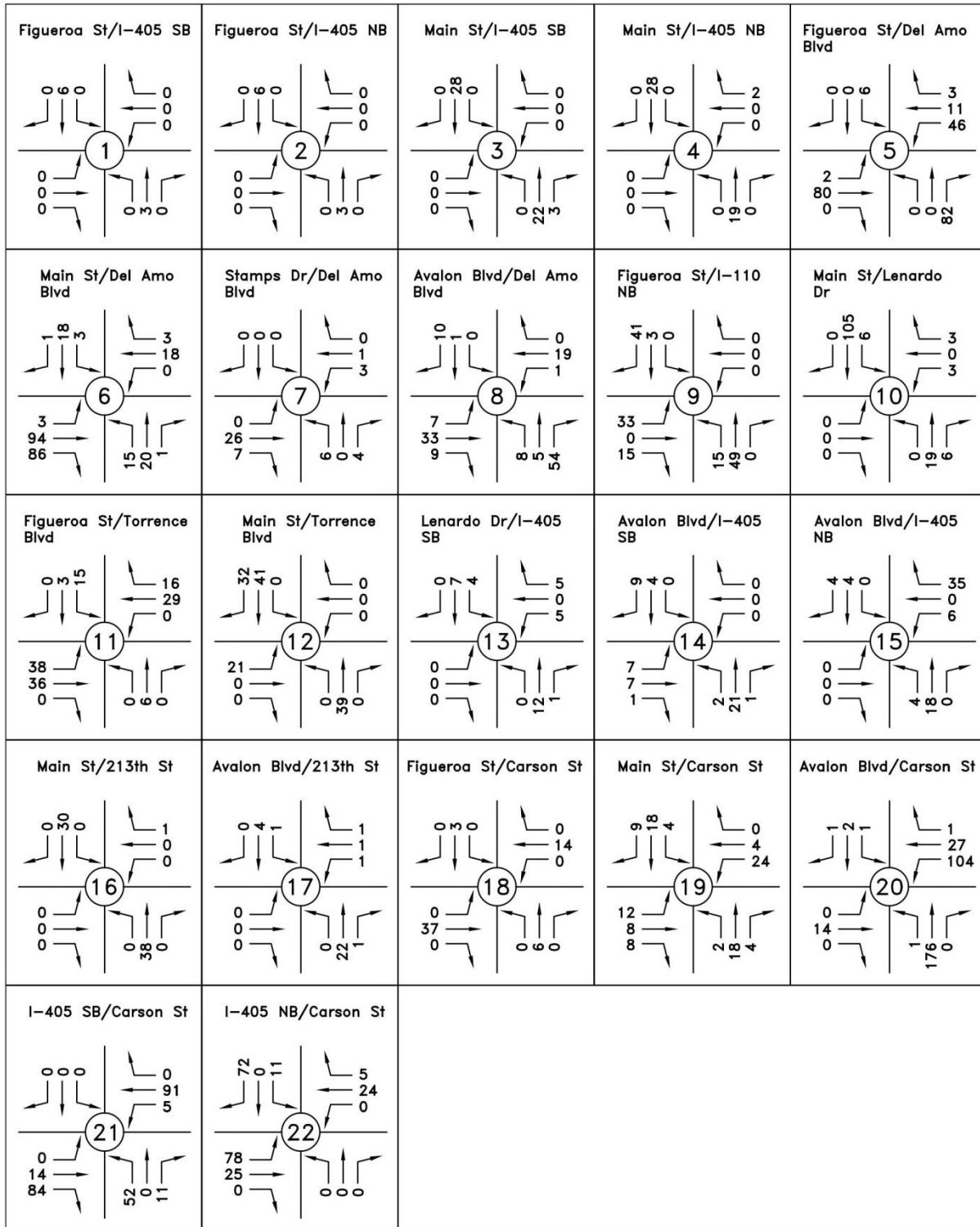


Figure 8: Projects Trucks (in PCE) AM Peak Hour Intersection Turning Movement Volumes

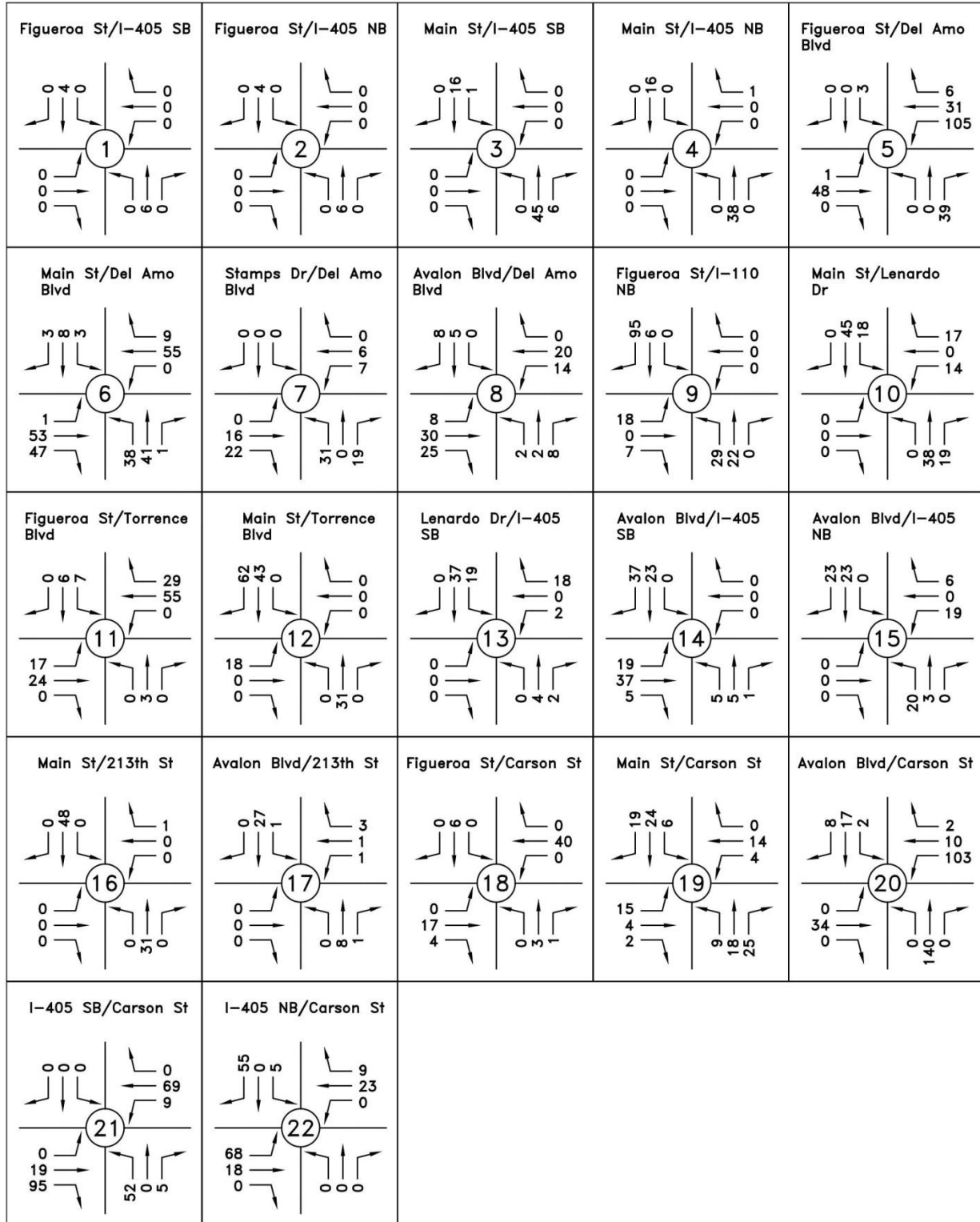


Figure 9: Projects Trucks (in PCE) PM Peak Hour Intersection Turning Movement Volumes

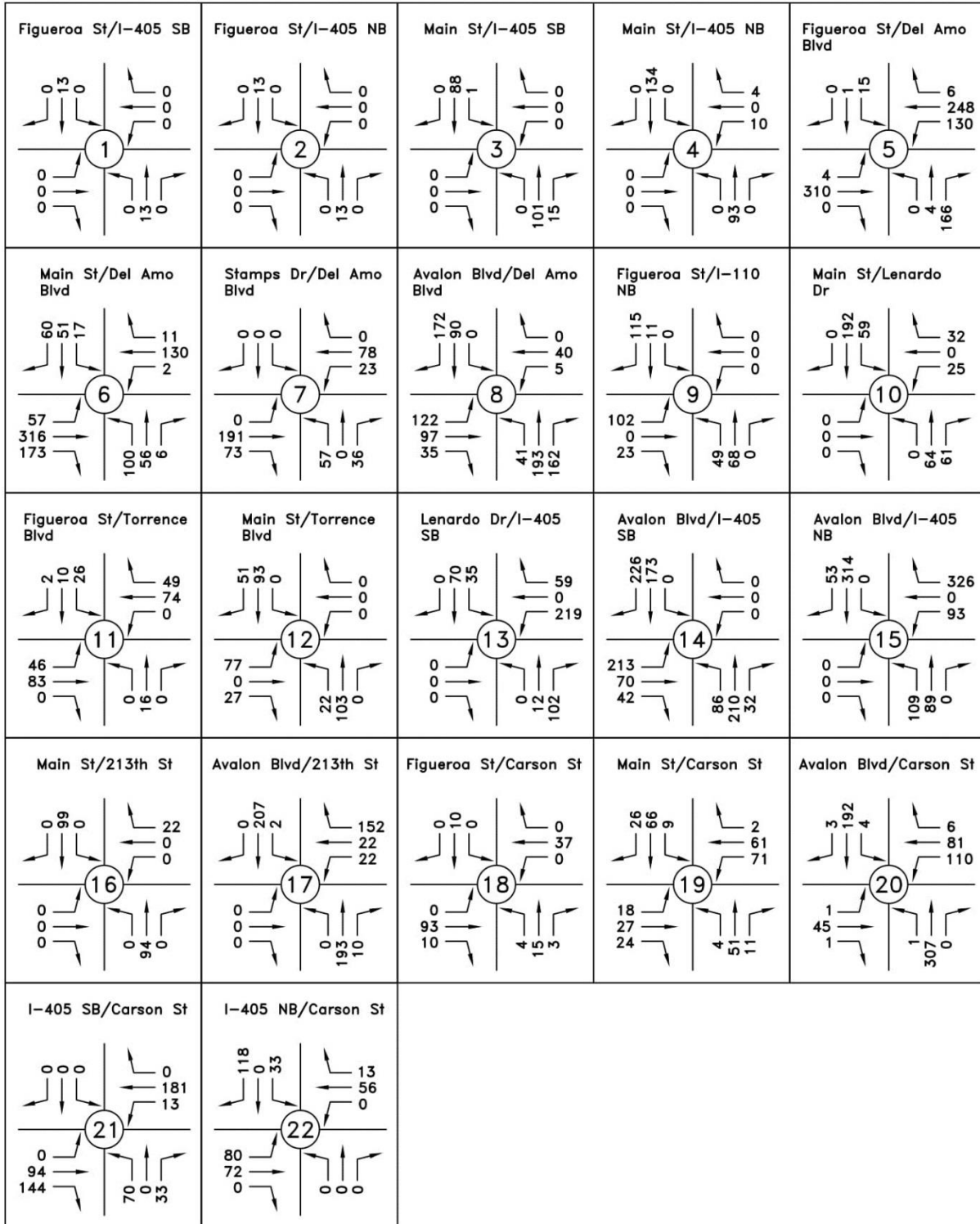


Figure 10: Projects Total Vehicles (in PCE) AM Peak Hour Intersection Turning Movement Volumes

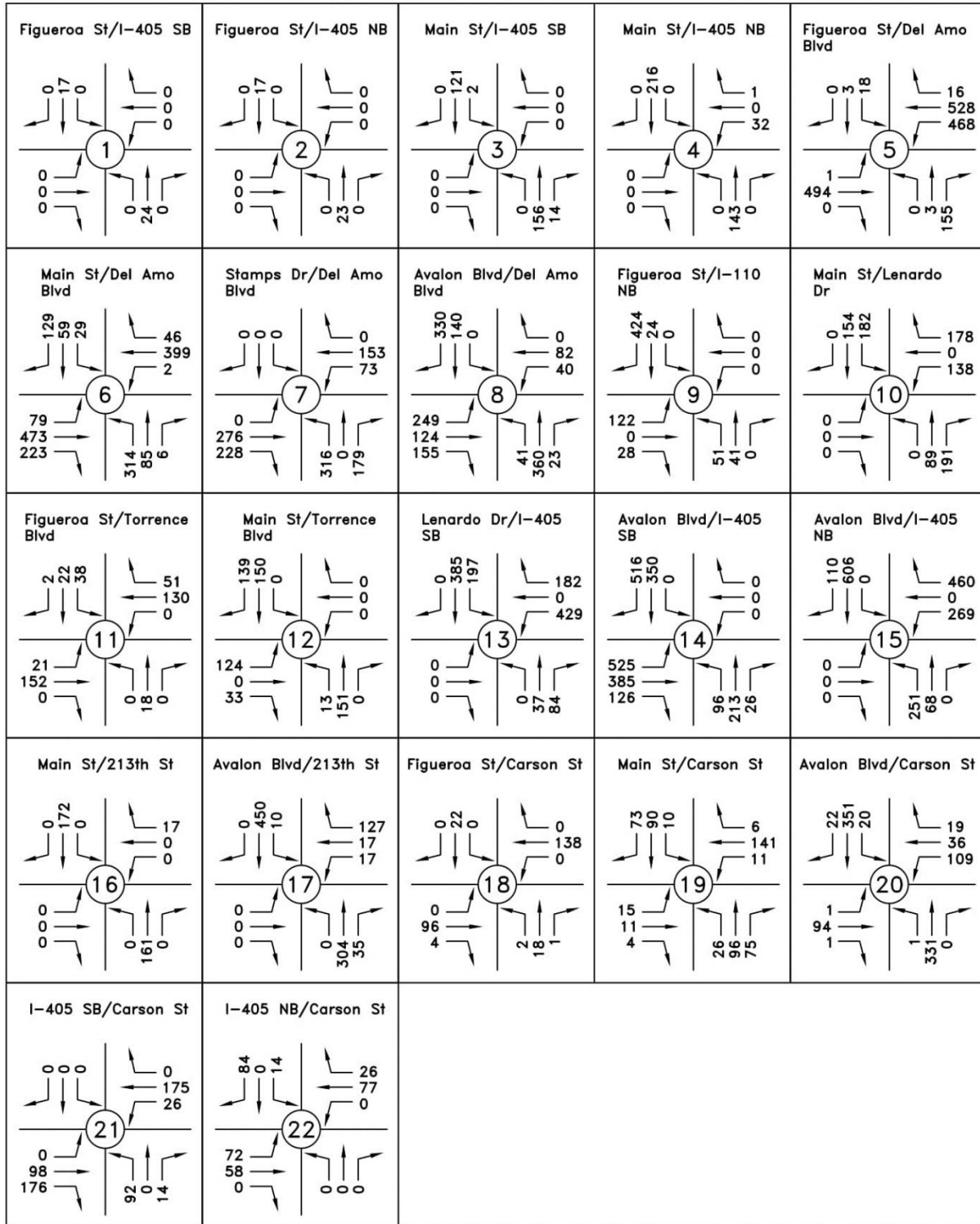


Figure 11: Projects Total Vehicles (in PCE) PM Peak Hour Intersection Turning Movement Volumes

8. Traffic Forecasts

a) Existing Plus Project

The traffic volumes for existing plus project traffic conditions have been derived by adding the project generated trips to existing traffic volumes. Existing plus project morning and evening peak hour intersection turning movement volumes are shown on Figure 12 and Figure 13, respectively.

b) Future (2023) Without Project

To assess Future (Year 2023) without project traffic conditions, existing traffic volumes were combined with an ambient growth factor of 0.5% per year over a 5-year period. Future (Year 2023) Without Project morning and evening peak hour intersection turning movement volumes are shown on Figure 14 and Figure 15, respectively.

c) Future (2023) Plus Project

To assess Future (Year 2023) plus project traffic conditions, existing traffic volumes were combined with an ambient growth over a 5-year period. Future (Year 2023) Without Project morning and evening peak hour intersection turning movement volumes are shown on Figure 14 and Figure 15, respectively.

To assess Future (Year 2023) plus project traffic conditions, project generated trips were added to Future (Year 2023) Without Project traffic volumes. Future (Year 2023) with project morning and evening peak hour intersection turning movement volumes are shown on Figure 16 and Figure 17, respectively.

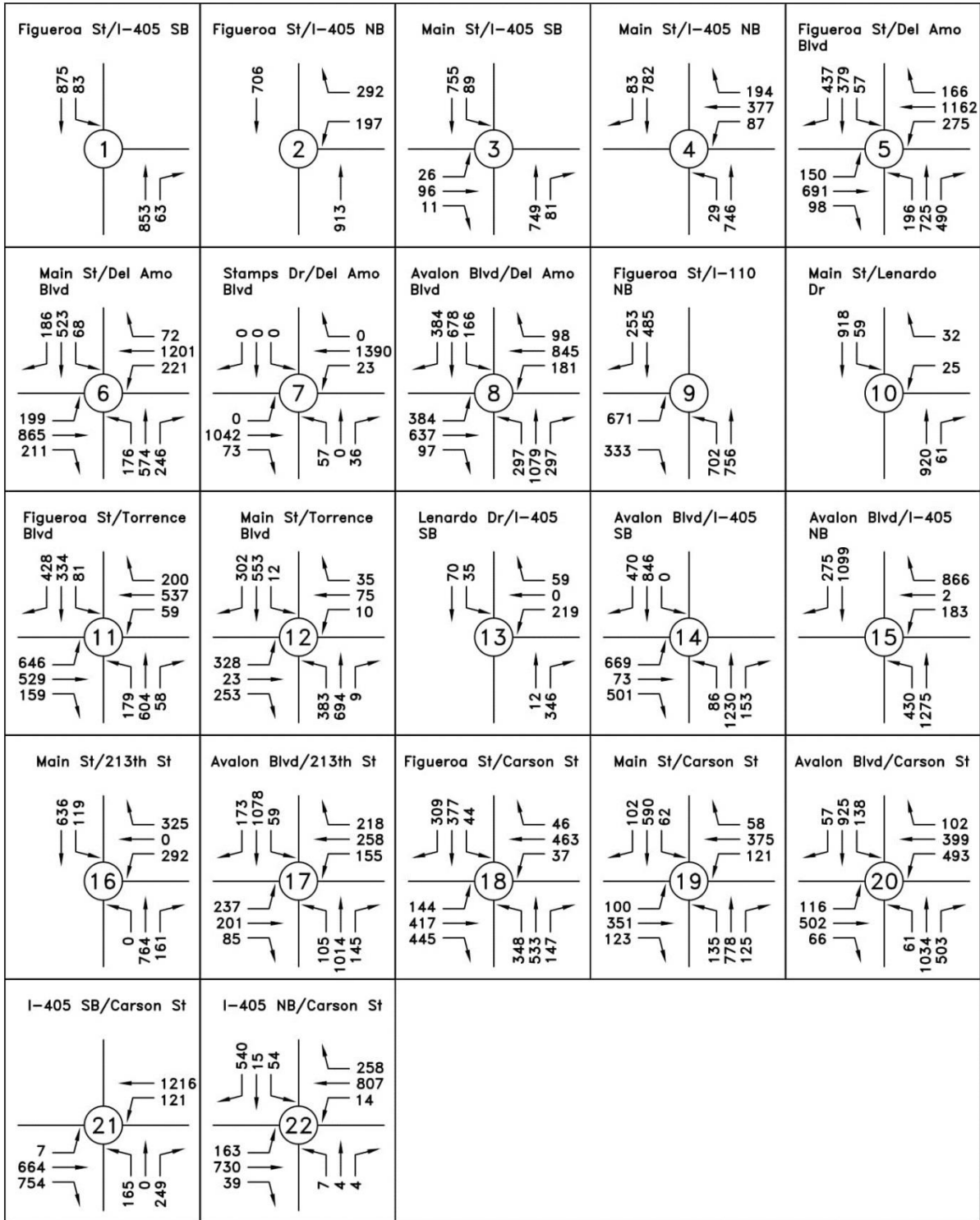


Figure 12: Existing Plus Projects AM Peak Hour Intersection Turning Movement Volumes

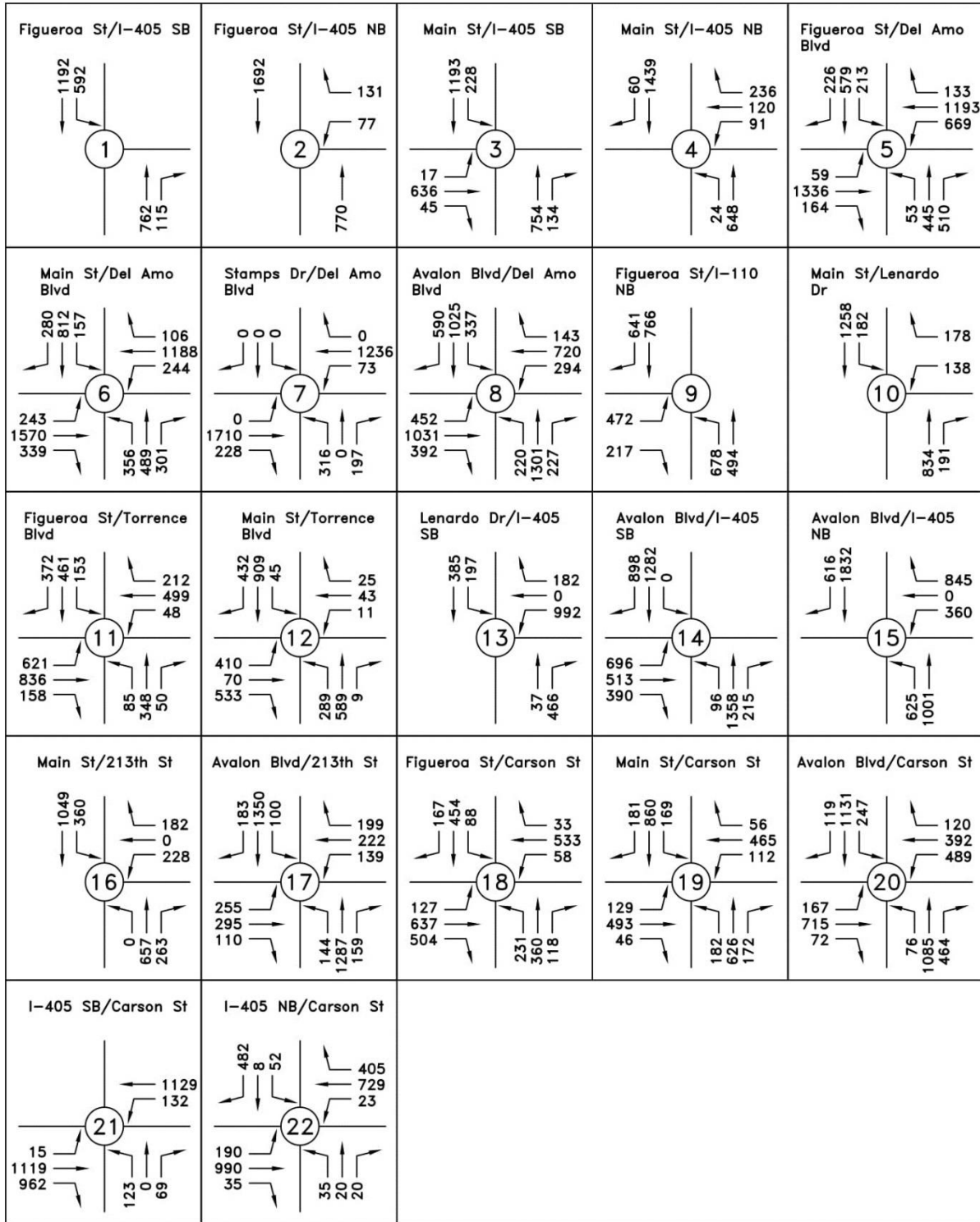


Figure 13: Existing Plus Projects PM Peak Hour Intersection Turning Movement Volumes

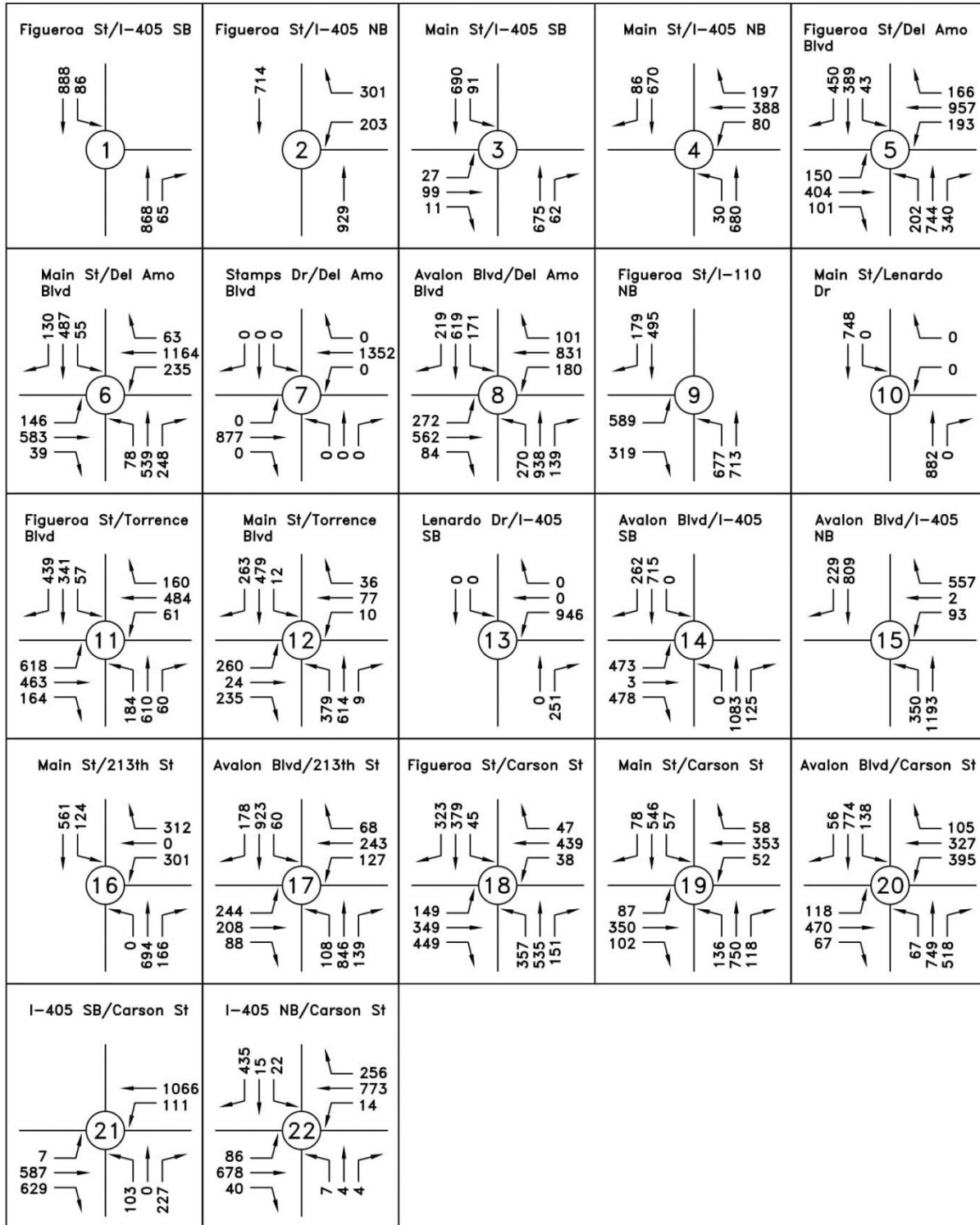


Figure 14: Future without Projects AM Peak Hour Intersection Turning Movement Volumes

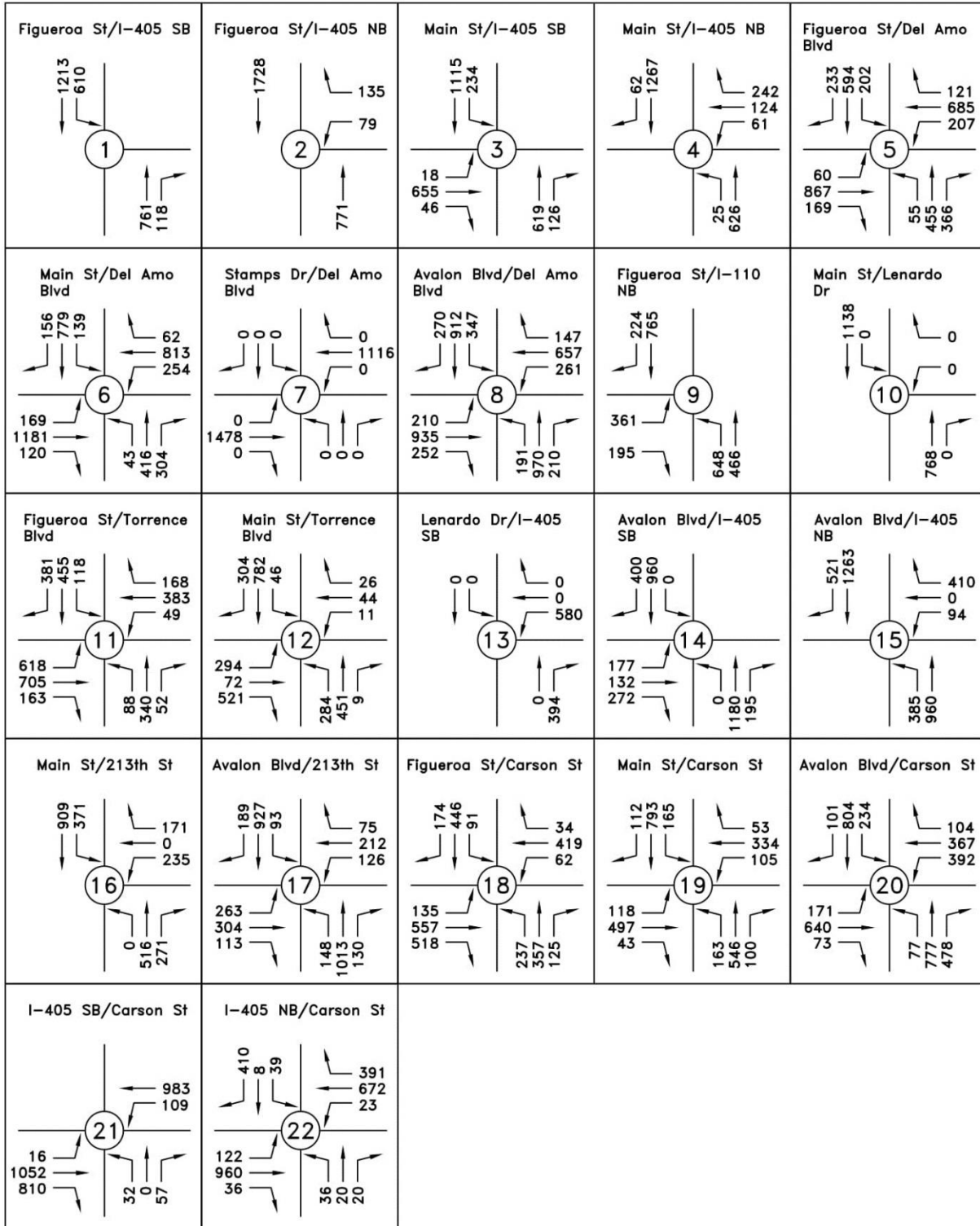


Figure 15: Future without Projects PM Peak Hour Intersection Turning Movement Volumes

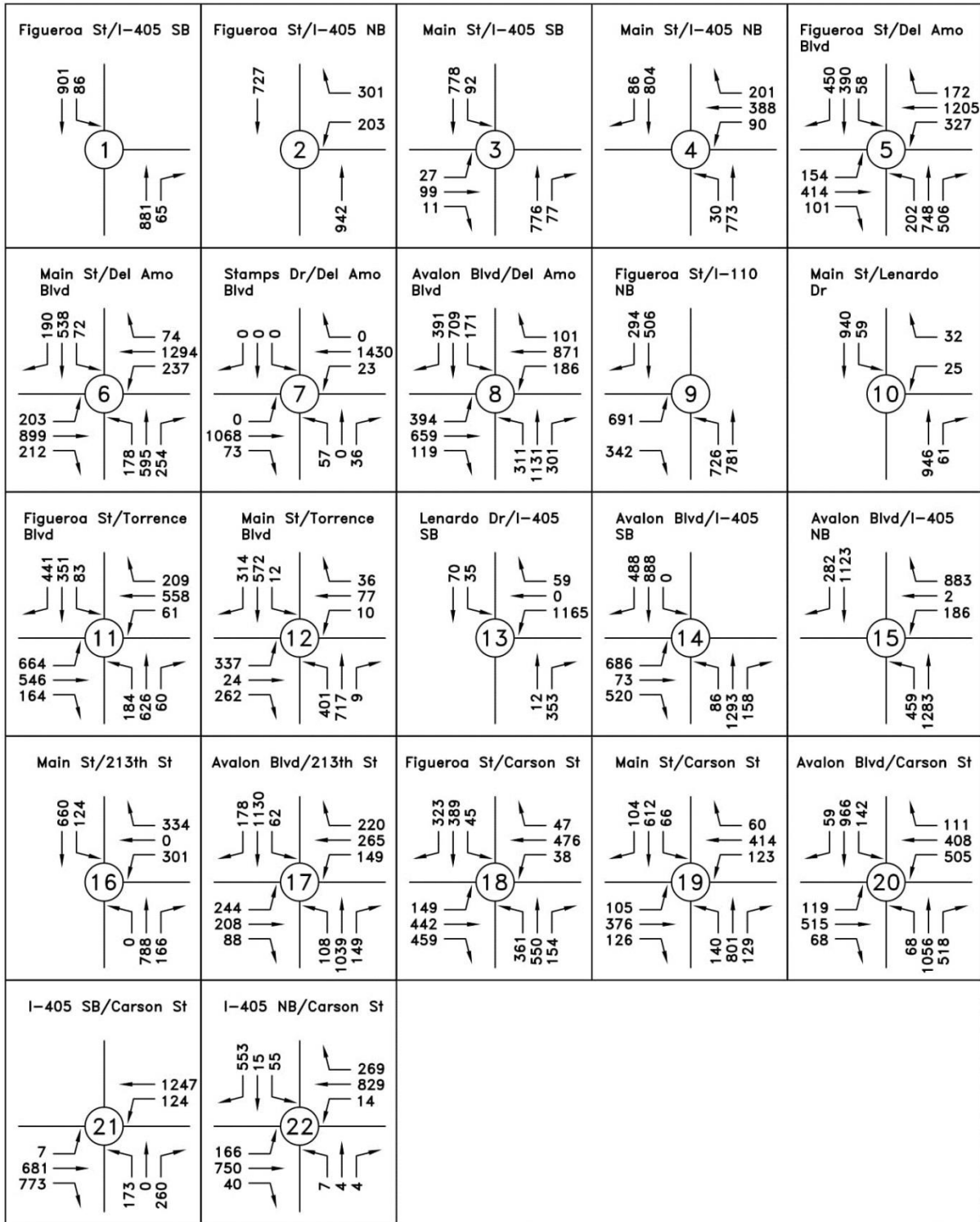


Figure 16: Future Plus Projects AM Peak Hour Intersection Turning Movement Volumes

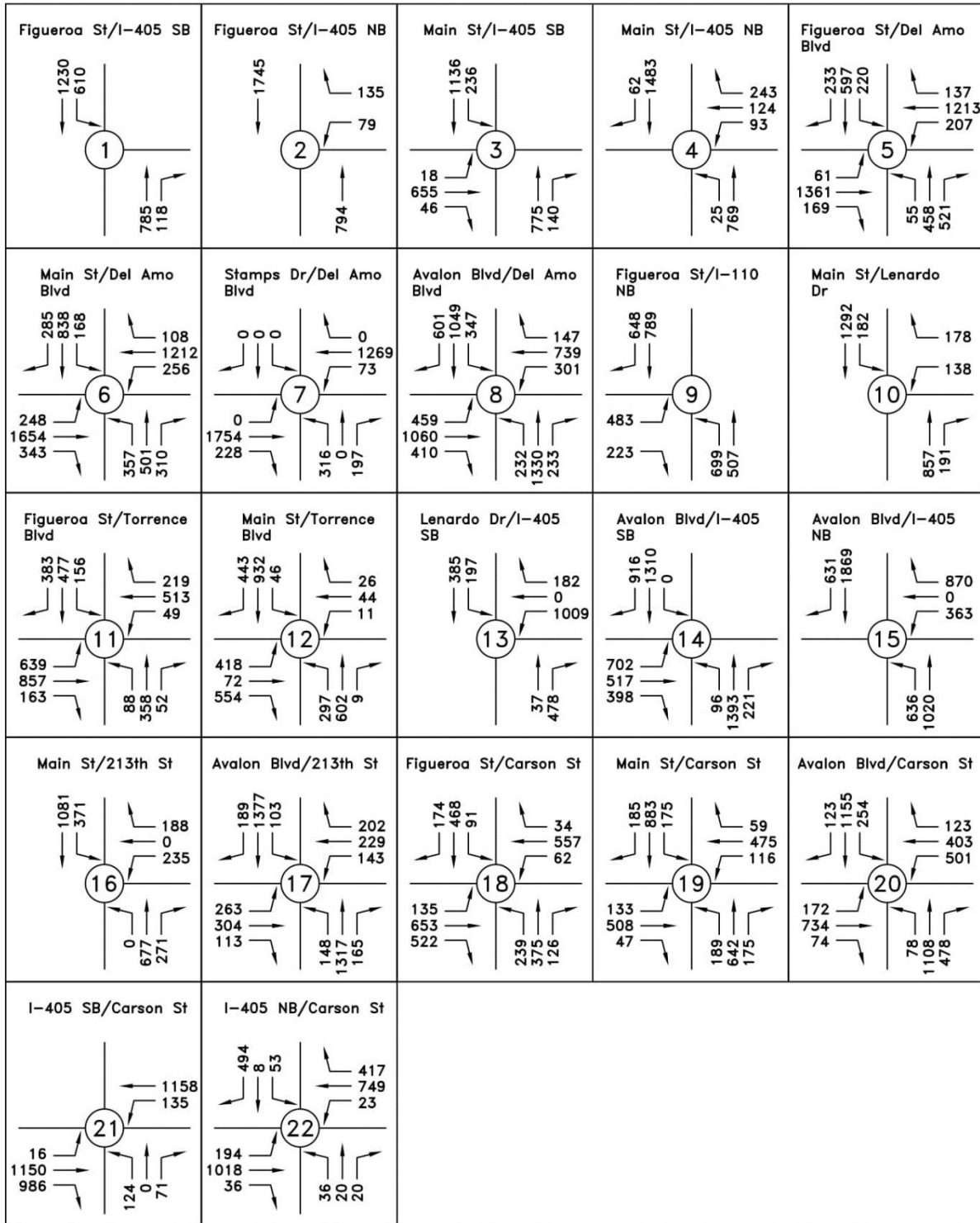


Figure 17: Future Plus Projects PM Peak Hour Intersection Turning Movement Volumes

9. Traffic Impacts

1. Project Methodology

The traffic assessment for the traffic development impact on intersections will be analyzed in the context of the City of Carson and CA MUTCD policies and guidelines. The reference material used to evaluate the study area intersections included the following:

- California Manual on Uniform Traffic Control Devices (CA-MUTCD), 2014 Edition, Rev 3.
- The Highway Capacity Manual (HCM), 2010
- City of Carson Traffic Impact Assessment Guidelines

For this study, level of service (LOS) will be used to determine the operating conditions of each intersection. The criteria for LOS in this study are based on the intersection capacity utilization (ICU) methodology for signalized intersections. The ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movement at the intersection, sums these conflicting V/C ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. According to the City of Carson's Guidelines, LOS at an intersection or roadway is considered to be unsatisfactory when the ICU exceeds 0.90 (LOS D). The relationship of ICU to LOS is shown in Table 4.

Table 4: Signalized Intersection LOS Criteria

| Level of Service (LOS) | Intersection Capacity Utilization (ICU) |
|---|---|
| A | 0.00 - 0.60 |
| B | 0.61 - 0.70 |
| C | 0.71 - 0.80 |
| D | 0.81 - 0.90 |
| E | 0.91 - 1.00 |
| F | > 1.00 |
| Source: Transportation Research Circular No. 212, Interim Material on Highway Capacity. | |

The HCM's (2010) methodology is used to determine the LOS at Unsignalized intersection. The relationship of delay to LOS is demonstrated in Table 5.

Table 5: Unsignalized Intersection LOS Criteria

| Level of Service (LOS) | Unsignalized Intersection Delay (Sec/veh) |
|------------------------|---|
| A | ≤ 10 |
| B | > 10 and ≤ 15 |
| C | > 15 and ≤ 25 |
| D | > 25 and ≤ 35 |
| E | > 35 and ≤ 50 |
| F | > 50 |

Source: Exhibit 19-1, Highway Capacity Manual, 2010

Traffic engineering software Synchro was used to conduct the study network analysis.

2. Level of Service

The existing intersections' LOS for the study area is based on collected traffic counts. The primary measures of evaluation include level of service and delay. The study intersections' LOS was calculated using Synchro software which is based on the Highway Capacity Manual method for signalized and unsignalized intersections. The A.M. and P.M. peak hour LOS were calculated based on following conditions:

- Existing conditions (2018)
- Existing conditions (2018) plus developments
- Future conditions (2023)
- Future conditions (2023) plus developments

Table 6 summarizes the results of the existing weekday morning and evening peak hour V/C ratio and corresponding LOS at each intersection. Table 7 summarizes the results of the future (Year 2023) weekday morning and evening peak hour V/C ratio and corresponding LOS at each intersection. The detailed Synchro calculations report for existing and future conditions are attached as Appendix B.

Table 6: Existing Conditions Intersection Level of Service

| ID | Intersection | Peak Hour | Existing | | Existing + Project | |
|----|---|-----------|------------------|-----|--------------------|-----|
| | | | V/C or Delay (s) | LOS | V/C or Delay (s) | LOS |
| 1 | Figueroa St and I-405 SB On Ramp ^[2] | AM | 0.5 | A | 0.5 | A |
| | | PM | 7.8 | A | 8.4 | A |
| 2 | Figueroa St and I-405 NB Off Ramp ^{[1][3]} | AM | 0.50 | A | 0.50 | A |
| | | PM | 0.64 | B | 0.64 | B |
| 3 | S Main St and I-405 SB On Ramp | AM | 0.55 | A | 0.59 | A |
| | | PM | 0.82 | D | 0.86 | D |
| 4 | S Main St and I-405 NB Off Ramp | AM | 0.55 | A | 0.59 | A |
| | | PM | 0.82 | D | 0.86 | D |
| 5 | Figueroa St and Del Amo Blvd | AM | 0.76 | C | 0.83 | D |
| | | PM | 0.71 | C | 1.07 | F |
| 6 | S Main St and E Del Amo Blvd | AM | 0.72 | C | 0.83 | D |
| | | PM | 0.83 | D | 1.19 | F |
| 7 | Stamps Dr and Del Amo Blvd ^[2] | AM | | | 0.50 | A |
| | | PM | | | 0.59 | A |
| 8 | S Avalon Blvd and E Del Amo Blvd | AM | 0.84 | D | 1.02 | F |
| | | PM | 0.89 | D | 1.11 | F |
| 9 | Figueroa St and I-110 NB Ramps | AM | 0.71 | C | 0.76 | C |
| | | PM | 0.67 | B | 0.73 | C |
| 10 | Main St and Lenardo Dr ^[2] | AM | | | 0.47 | A |
| | | PM | | | 0.59 | A |
| 11 | Figueroa St and W Torrance Blvd | AM | 0.74 | C | 0.80 | C |
| | | PM | 0.72 | C | 0.81 | D |
| 12 | S Main St and W Torrance Blvd | AM | 0.57 | A | 0.65 | B |
| | | PM | 0.69 | B | 0.79 | C |
| 13 | Lenardo Dr and I-405 SB Ramps ^[2] | AM | | | 0.33 | A |
| | | PM | | | 0.48 | A |
| 14 | S Avalon Blvd and I-405 SB Ramps | AM | 0.55 | A | 0.66 | B |
| | | PM | 0.51 | A | 0.73 | C |
| 15 | S Avalon Blvd and I-405 NB Ramps | AM | 0.74 | C | 0.90 | D |
| | | PM | 0.58 | A | 0.90 | D |
| 16 | S Main St and E 213th St | AM | 0.78 | C | 0.81 | D |
| | | PM | 0.77 | C | 0.86 | D |
| 17 | S Avalon Blvd and E 213th St | AM | 0.66 | B | 0.74 | C |
| | | PM | 0.75 | C | 0.85 | D |
| 18 | Figueroa St and W Carson St | AM | 0.68 | B | 0.69 | B |
| | | PM | 0.64 | B | 0.65 | B |
| 19 | S Main St and W Carson St | AM | 0.50 | A | 0.54 | A |
| | | PM | 0.62 | B | 0.67 | B |
| 20 | S Avalon Blvd and E Carson St | AM | 0.75 | C | 0.86 | D |
| | | PM | 0.84 | D | 0.98 | E |
| 21 | I-405 SB Ramps and E Carson St | AM | 0.57 | A | 0.68 | B |
| | | PM | 0.69 | B | 0.83 | D |
| 22 | I-405 NB Ramps and E Carson St | AM | 0.63 | B | 0.72 | C |
| | | PM | 0.59 | A | 0.66 | B |

[1] TWSC: Two-Way Stop Controlled

[2] Unsignalized

[3] Mitigations at intersections under the jurisdiction of Caltrans will require further coordination and detailed design review with the relevant jurisdiction to determine the feasibility of the mitigation.

Table 7: Future (Year 2023) Conditions Intersection Level of Service

| ID | Intersection | Peak Hour | Future | | Future + Project | |
|----|---|-----------|------------------|-----|------------------|-----|
| | | | V/C or Delay (s) | LOS | V/C or Delay (s) | LOS |
| 1 | Figueroa St and I-405 SB On Ramp ^[2] | AM | 0.50 | A | 0.50 | A |
| | | PM | 9.5 | A | 10.4 | B |
| 2 | Figueroa St and I-405 NB Off Ramp ^{[1][3]} | AM | 0.51 | A | 0.51 | A |
| | | PM | 0.65 | B | 0.66 | B |
| 3 | S Main St and I-405 SB On Ramp | AM | 0.56 | A | 0.61 | B |
| | | PM | 0.84 | D | 0.89 | D |
| 4 | S Main St and I-405 NB Off Ramp | AM | 0.56 | A | 0.61 | A |
| | | PM | 0.84 | D | 0.89 | D |
| 5 | Figueroa St and Del Amo Blvd | AM | 0.78 | C | 0.85 | D |
| | | PM | 0.72 | C | 1.09 | F |
| 6 | S Main St and E Del Amo Blvd | AM | 0.75 | C | 0.85 | D |
| | | PM | 0.86 | D | 1.23 | F |
| 7 | Stamps Dr and Del Amo Blvd ^[2] | AM | | | 0.51 | A |
| | | PM | | | 0.74 | C |
| 8 | S Avalon Blvd and E Del Amo Blvd | AM | 0.87 | D | 1.05 | F |
| | | PM | 0.91 | E | 1.14 | F |
| 9 | Figueroa St and I-110 NB Ramps | AM | 0.72 | C | 0.78 | C |
| | | PM | 0.69 | B | 0.75 | C |
| 10 | Main St and Lenardo Dr ^[2] | AM | | | 0.47 | A |
| | | PM | | | 0.6 | A |
| 11 | Figueroa St and W Torrance Blvd | AM | 0.76 | C | 0.82 | D |
| | | PM | 0.73 | C | 0.83 | D |
| 12 | S Main St and W Torrance Blvd | AM | 0.59 | A | 0.66 | B |
| | | PM | 0.71 | C | 0.80 | C |
| 13 | Lenardo Dr and I-405 SB Ramps ^[2] | AM | | | 0.50 | A |
| | | PM | | | 0.55 | A |
| 14 | S Avalon Blvd and I-405 SB Ramps | AM | 0.58 | A | 0.69 | B |
| | | PM | 0.52 | A | 0.74 | C |
| 15 | S Avalon Blvd and I-405 NB Ramps | AM | 0.76 | C | 0.90 | D |
| | | PM | 0.60 | A | 0.90 | D |
| 16 | S Main St and E 213th St | AM | 0.80 | C | 0.84 | D |
| | | PM | 0.79 | C | 0.85 | D |
| 17 | S Avalon Blvd and E 213th St | AM | 0.68 | B | 0.76 | C |
| | | PM | 0.77 | C | 0.86 | D |
| 18 | Figueroa St and W Carson St | AM | 0.70 | B | 0.71 | C |
| | | PM | 0.66 | B | 0.67 | B |
| 19 | S Main St and W Carson St | AM | 0.52 | A | 0.56 | A |
| | | PM | 0.63 | B | 0.69 | B |
| 20 | S Avalon Blvd and E Carson St | AM | 0.77 | C | 0.87 | D |
| | | PM | 0.87 | D | 1.00 | F |
| 21 | I-405 SB Ramps and E Carson St | AM | 0.58 | A | 0.69 | B |
| | | PM | 0.71 | C | 0.84 | D |
| 22 | I-405 NB Ramps and E Carson St | AM | 0.64 | B | 0.73 | C |
| | | PM | 0.60 | A | 0.67 | B |

[1] TWSC: Two-Way Stop Controlled

[2] Unsignalized

[3] Mitigations at intersections under the jurisdiction of Caltrans will require further coordination and detailed design review with the relevant jurisdiction to determine the feasibility of the mitigation.

3. Significant Traffic Impact Criteria

Under the City of Carson guidelines, an intersection would be significantly impacted with an increase in V/C ratio to or greater than 0.02 for intersections operating at LOS E or F after the addition of project traffic. Based on the established criteria shown in Table 8, if a project is found to cause a significant traffic impact on a subject study intersection, then feasible mitigation measures must be provided in order to reduce the expected traffic impacts.

Table 8: Significant Traffic Impact Criteria

| Significant Transportation Impact (<i>V/C Methodology</i>) | | |
|--|-----------------|---------------------------------|
| Level of Service | Final V/C Ratio | Project-Related Increase In V/C |
| E or F | > 0.9 | equal to or greater than 0.02 |

All 22 intersections were analyzed on future plus project traffic volumes to determine the projected V/C ratios and LOS. As shown in Tables 6 and 7, 15 of the 22 of intersections are projected to operate at an acceptable level of service (LOS D or better) during both morning and evening peak hours. The detailed analysis tables are provided in Appendix B.

4. Significant Impacted Intersections

The following four (4) intersections are projected at poor level of service (LOS E or F) after full implementation of all new projects in the City of Carson.

- Figueroa Street & Del Amo Boulevard (PM Peak Hour)
- Main Street & Del Amo Boulevard (PM Peak Hour)
- Avalon Boulevard & Del Amo Boulevard (AM & PM Peak Hour)
- Avalon Boulevard & Carson Street (PM Peak Hour)

The following three (3) unsignalized intersections have to be converted to signalized intersections after full implementation of all new projects in the City of Carson.

- Stamps Drive and Del Amo Boulevard (AM & PM Peak Hour)
- Main Street and Lenardo Drive (AM & PM Peak Hour)
- Lenardo Road and I-405 Southbound Ramps (AM & PM Peak Hour)

10. Mitigation Calculation

This section calculates the mitigation fee at seven (7) intersections described in the previous section. All mitigation geometries are based on future condition plus project analysis. The mitigation measures include a set of physical improvements as well as a set of transportation demand management strategies that would likely reduce the LOS associated with the proposed projects.

Intersection 5 – Figueroa Street & Del Amo Boulevard:

The intersection of Figueroa St. and Del Amo Blvd. would be significantly impacted by additional vehicle trips associated with the new development project during the PM peak hour under the future year analysis. Following are the proposed physical mitigation for this intersection:

- Conversion of the westbound thru lane to second left-turn lane
- Conversion of the first westbound right-turn lane to thru/right lane
- Addition of a second southbound left-turn lane
- Traffic signal modification

The improvements would require acquisition of right-of-way on the northwest of the intersection, removing the sidewalk and re-installing the curb and sidewalk, and re-striping the intersection.

Intersection 6 – Main Street & Del Amo Boulevard:

The intersection of Main St. and Del Amo Blvd. would be significantly impacted by additional vehicle trips associated with the new development project during the PM peak hour under the future year analysis. Following are the proposed physical mitigation for this intersection:

- Addition of a second westbound left-turn lane
- Addition of an eastbound right-turn lane
- Conversion of the eastbound thru/right-turn lane to thru lane
- Addition of a second northbound left-turn lane
- Addition of an northbound right-turn lane
- Conversion of the northbound thru/right-turn lane to thru lane
- Conversion of the southbound thru/right-turn lane to thru lane
- Addition of southbound thru/right-turn lane
- Traffic signal modification

The improvements would require purchasing right-of-way on northwest, northeast, and southwest of the intersection. The improvements would also require removing and re-installing of the existing median islands on the east and south approaches of the intersection, removing and re-installing the sidewalks on all 4 approaches of the intersection, and re-striping the intersection.

Intersection 7 – Stamps Drive & Del Amo Boulevard:

The unsignalized intersection of Stamps Dr. and Del Amo Blvd. would be significantly impacted by additional vehicle trips associated with the new development project during the AM and PM peak hours under the Future year analysis. Following are the proposed physical mitigation for this intersection:

- Install traffic signal and required equipment
- Addition of an eastbound dedicated left-turn lane

The improvements would require removing and re-installing of the existing median islands on the west approach of the intersection.

Intersection 8 – South Avalon Boulevard & Del Amo Boulevard:

The intersection of S. Avalon Blvd. and Del Amo Blvd. would be significantly impacted by additional vehicle trips associated with the new development project during the AM and PM peak hours under the future year analysis. Following are the proposed physical mitigation for this intersection:

- Addition of a second northbound left-turn lane
- Addition of a second westbound left-turn lane

- Conversion of the westbound right-turn lane to thru/right lane
- Conversion of the southbound thru/right-turn lane to a right-turn lane
- Traffic signal modification

The improvements would require removing the existing median islands on the south approach of the intersection, re-striping the south approach of the intersection.

Intersection 10 – Main Street & Lenardo Drive:

The unsignalized intersection of Main St. and Lenardo Dr. would be significantly impacted by additional vehicle trips associated with the new development project during the AM and PM peak hours under the Future year analysis. Following are the proposed physical mitigation for this intersection:

- Install traffic signal and required equipment
- Addition of an northbound dedicated right-turn lane

The improvements would require removing the existing median islands on the south approach of the intersection, re-striping the south approach of the intersection.

Intersection 13 – Lenardo Drive and I-405 Southbound Ramps:

The unsignalized intersection of Lenardo Dr. and I-405 SB ramps would be significantly impacted by additional vehicle trips associated with the new development project during the AM and PM peak hours under the Future year analysis. Following are the proposed physical mitigation for this intersection:

- Traffic signal modification

Intersection 20 – South Avalon Boulevard & Carson Street:

The intersection of S. Avalon Blvd. and Carson St. would be significantly impacted by additional vehicle trips associated with the new development project during the PM peak hour under the future year analysis. Following are the proposed physical mitigation for this intersection:

- Conversion of the first southbound thru lane to left-turn lane
- Conversion of the second eastbound left-turn lane to thru lane
- Conversion of the northbound thru/right-turn lane to right-turn lane
- Traffic signal modification

The improvements would require removing the existing median islands on the north approach of the intersection, re-striping the north approach of the intersection.

Table 9 shows the level of service for the affected intersections after the implementation of proposed physical mitigations.

Table 9: Intersection Impact Analysis

| ID | Peak Hour Period | Future | | Future+Project | | V/C Increase | Significant Impact? | After mitigation | |
|----|------------------|--------|-----|----------------|-----|--------------|---------------------|------------------|-----|
| | | V/C | LOS | V/C | LOS | | | V/C | LOS |
| 5 | AM | 0.78 | C | 0.85 | D | 0.07 | Yes | 0.86 | D |
| | PM | 0.72 | C | 1.09 | F | 0.37 | Yes | 0.90 | D |
| 6 | AM | 0.75 | C | 0.85 | D | 0.10 | Yes | 0.75 | C |
| | PM | 0.86 | D | 1.23 | F | 0.37 | Yes | 0.89 | D |
| 8 | AM | 0.87 | D | 1.05 | F | 0.17 | Yes | 0.84 | D |
| | PM | 0.91 | E | 1.14 | F | 0.23 | Yes | 0.90 | D |
| 20 | AM | 0.77 | C | 0.87 | D | 0.10 | Yes | 0.76 | C |
| | PM | 0.87 | D | 1.00 | F | 0.13 | Yes | 0.87 | D |

11. Improvement Cost

The estimated costs of improvements for each impacted intersection are shown in Table 10.

Table 10: Intersection Mitigation Cost

| ID | Intersection | Mitigation | Cost |
|----|----------------------------------|--|-----------------------|
| 5 | Figueroa St. and Del Amo Blvd. | Acquire ROW from the undeveloped parcel on the northwest of intersection to widening the north and west approaches. | \$700,000.00 |
| | | Convert the first westbound thru lane to second westbound Left-turn lane. | \$54,000.00 |
| | | Convert the westbound right lane to a to a thru/right-turn lane. | \$30,000.00 |
| | | Convert the first southbound thru lane to second left-turn lane | \$54,000.00 |
| | | Add dedicated southbound right-turn lane | \$72,000.00 |
| | | Remove sidewalk on southbound and eastbound approaches of intersection, reinstall sidewalk, re-striping the north, west, and east approaches | \$60,000.00 |
| | | Traffic signal modification | \$150,000.00 |
| | | Total | \$1,120,000.00 |
| 6 | S. Main St. and E. Del Amo Blvd. | Acquire ROW on northeast and northwest of intersection to accommodate westbound and southbound right-turn lanes. | \$700,000.00 |
| | | Convert the first northbound thru lane to second northbound left-turn lane. | \$54,000.00 |

| | | | |
|---|--------------------------------------|---|-----------------------|
| | | Add dedicated northbound right-turn lane. | \$120,000.00 |
| | | Convert the northbound thru/right-turn lane to a thru lane. | \$30,000.00 |
| | | Add dedicated eastbound right-lane. | \$72,000.00 |
| | | Convert the eastbound thru/right-turn lane to thru lane. | \$30,000.00 |
| | | Convert the first westbound thru lane to second westbound Left-turn lane. | \$54,000.00 |
| | | Convert the southbound thru/right-turn lane to thru lane. | \$30,000.00 |
| | | Add southbound thru/right-turn lane. | \$72,000.00 |
| | | Remove and re-install medians on east and south approaches of intersection and re-install striping on all 4 approaches, remove and re-install the sidewalks on all 4 approaches | \$150,000.00 |
| | | Traffic signal modification | \$150,000.00 |
| | | Total | \$1,462,000.00 |
| 7 | Stamps Dr. and Del Amo Blvd. | Add dedicated eastbound left-turn lane. | \$72,000.00 |
| | | Remove and re-install median on eastbound approach of intersection. | \$32,000.00 |
| | | Convert from unsignalized to signalized intersection. | \$250,000.00 |
| | | Total | \$354,000.00 |
| 8 | S. Avalon Blvd. and E. Del Amo Blvd. | Acquire ROW on southwest and northwest of intersection to accommodate northbound and southbound additional lanes. | \$700,000.00 |
| | | Convert the northbound thru lane to second northbound left-turn lane. | \$40,000.00 |
| | | Remove medians on northbound approach of intersection and re-install median and new striping on southbound approach. | \$80,000.00 |
| | | Convert the westbound thru lane to second westbound left-turn lane. | \$40,000.00 |
| | | Convert the westbound right-turn lane to a to a thru/right-turn lane. | \$40,000.00 |
| | | Traffic signal modification | \$150,000.00 |

| | | | |
|---|---------------------------------------|--|----------------|
| | | Total | \$1,050,000.00 |
| 10 | Main St. and Lenardo Dr. | Add dedicated northbound right-turn lane. | \$72,000.00 |
| | | Remove and re-install median on eastbound approach of intersection. | \$32,000.00 |
| | | Convert from unsignalized to signalized intersection. | \$250,000.00 |
| | | Total | \$354,000.00 |
| 13 | Lenardo Dr. and I-405 SB On/Off Ramps | Traffic signal modification | \$150,000.00 |
| | | Total | \$150,000.00 |
| 20 | S. Avalon Blvd. and E. Carson St. | Convert #1 southbound thru lane to second dedicated left-turn lane. | \$40,000.00 |
| | | Remove and re-install the medians on southbound approach of intersection, re-striping on north side of the intersection. | \$32,000.00 |
| | | Convert the northbound thru/right-turn lane to right-turn lane | \$40,000.00 |
| | | Convert the second eastbound left-turn lane to thru lane | \$40,000.00 |
| | | Traffic signal modification | \$150,000.00 |
| | | Total | \$302,000.00 |
| Total | | | \$4,792,000.00 |
| Soil Remediation and Unknown Conditions Costs (10%) | | | \$ 479,200.00 |
| Contingency Costs (15%) | | | \$ 718,800.00 |
| Administrative / Procurement Costs (10%) | | | \$ 479,200.00 |
| Grand Total | | | \$6,469,200.00 |

12. Allocation of Costs

As shown in Table 11, the allocation of intersection improvement costs by development type is based on the share of daily vehicle trips associated with each type of development.

Table 11: Allocation of Costs per Development type

| Development Type | Dev Units | Estimated Units | Estimated Average Daily Traffic ¹ | Share of New Trips | Share of Cost ² |
|---------------------------|-----------|-----------------|--|--------------------|----------------------------|
| Residential, Multi-Family | DU | 1,470 | 8,717 | 12% | \$793,985 |
| Commercial | KSF | 810 | 20,393 | 29% | \$1,857,488 |
| Office | KSF | 68.36 | 824 | 1% | \$75,030 |
| Industrial/Business Park | KSF | 1,073.28 | 7,634 | 11% | \$695,339 |
| Truck Yard | Space | 2,187 | 5,714 | 8% | \$520,405 |
| Hotel | Room | 247 | 2,018 | 3% | \$183,803 |
| Recreational | KSF | 599 | 25,130 | 35% | \$2,288,865 |
| Dormitory | Bed | 300 | 596 | 1% | \$54,285 |
| Total | | | 71,026 | 100% | \$6,469,200.00 |

¹New vehicle trips by development type as a percentage of total new vehicle trips; percentages based on data from Table 3
²Share of improvement cost = total improvement cost from Table 10 x share of new trips

13. Projected Revenue

Potential revenue from the development impact fees calculated in this section can be projected by applying each development cost share from Table 11 to forecasted future units as shown in Table 3. The results are shown in Table 12.

Impact fees calculated in this section are based on the cost of providing intersection improvements that are needed to serve future development, generally.

Assuming that development occurs and improvements are constructed as anticipated in this study; the revenue projected in Table 12 would approximately cover the share of improvement costs assigned to

impact fees in Table 10, provided that fees are adjusted periodically to keep pace with changes in construction costs.

Costs and impact fees in this report are shown in current (2019) dollars. Once adopted, impact fees should be adjusted at least annually, to reflect changes in price levels. An appropriate index can be used to adjust facility cost estimates until the cost estimates and fee calculations are updated.

Table 12: Projected Revenue-Intersection Traffic Fees

| Development Type | Dev Units ¹ | Share of New Trips ² | Share of Cost ³ | Added Trips | Trips per Unit | Fee per Unit |
|---------------------------|------------------------|---------------------------------|----------------------------|-------------|----------------|--------------|
| Residential, Multi-Family | DU | 12% | \$793,985 | 8,717 | 5.93 | \$540.13 |
| Commercial | KSF | 29% | \$1,857,488 | 20,393 | 25.18 | \$2,293.19 |
| Office | KSF | 1% | \$75,030 | 824 | 12.05 | \$1,097.57 |
| Industrial/Business Park | KSF | 11% | \$695,339 | 7,634 | 7.11 | \$647.87 |
| Truck Yard | Space | 8% | \$520,405 | 5,714 | 2.61 | \$ 237.95 |
| Hotel | Room | 3% | \$183,803 | 2,018 | 8.17 | \$744.14 |
| Recreational | Ksf | 35% | \$2,288,865 | 25,130 | 41.99 | \$3,824.34 |
| Dormitory | Bed | 1% | \$54,285 | 596 | 1.99 | \$180.95 |
| Total | | 100% | \$6,469,200.00 | | | |

¹ Units of development; DU = dwelling unit, KSF = 1,000 gross square feet of building area

² New vehicle trips by development type as a percentage of total new vehicle trips; percentages based on data from Table 3

³ Share of improvement cost = total improvement cost from Table 10 x share of new trips

B- SOUNDWALL FEE ANALYSIS

14. Summary

1. Introduction

This Fee Analysis develops an impact fee for the City of Carson to apply towards development projects. The process calculates the percentage of traffic from each development projects produce in the City. Based on the cost of various mitigations needed to better handle the increase in traffic a cost can be applied per trip produced by the different developments across the City. As a result the City can shift part of the cost on to the developers based on the projected amount of trips their project will create. Similarly, this section of the report will analyze the noise level impact certain projects will have on truck routes in the City that border residential neighborhoods. The noise levels are measured in decibels (dBA). Decibels are based on the logarithmic scale, the scale compresses the range of sound pressure to a range of numbers similar to the Richter scale used to measure earthquakes. The type of mitigation to be proposed will be soundwalls placed along truck routes which border the affected neighborhoods. The cost of the soundwalls will be distributed to the various projects contributing to the increase in noise levels along the truck routes.

2. Existing Conditions

This report provides an analysis of the various projects in the City of Carson and the impact they have on traffic. Several projects involve the construction of various warehouses and retail centers which contribute to the increase in truck traffic. The City has several truck routes used for hauling and delivering goods throughout the area; see Figure 18. These truck routes are impacted by the increase in traffic and as a result, raise the noise level. In this fee analysis, the noise level of truck routes bordering residential neighborhoods was studied and used to determine the proposed location of soundwall barriers. Sections of roadways along Sepulveda Boulevard, Wilmington Avenue, Del Amo Boulevard, 223rd Street, and Albertoni Street have been considered using their proximity to future development projects, as shown in Figure 19, and the existing decibel level data collected from The City of Carson's General Plan Chapter 7; See Table 14.

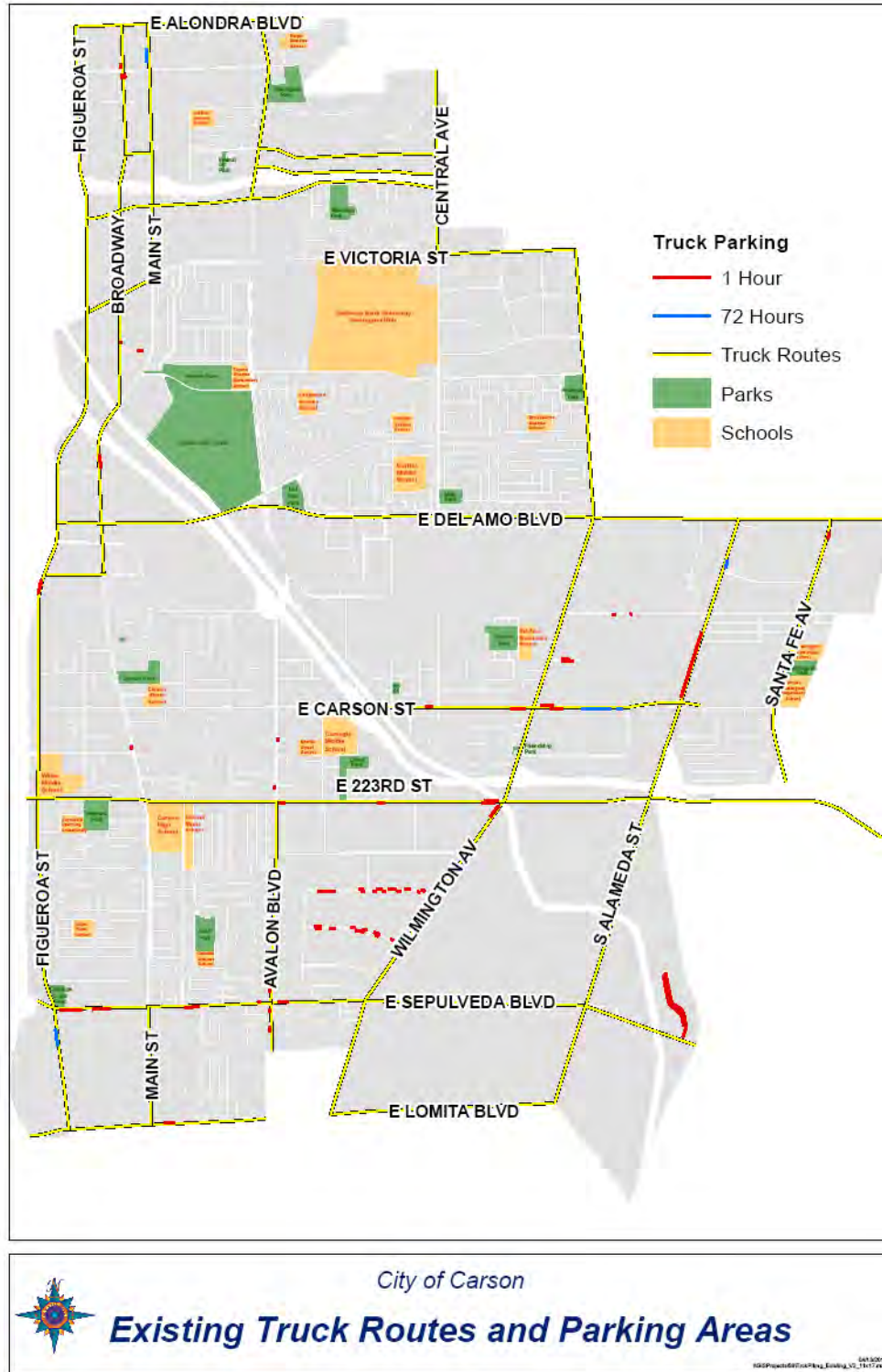


Figure 18: City of Carson Truck Routes

15. Location

As illustrated in Figure 19, 7 sections of truck routes were identified for the removal and replacement, or installation of a soundwall. These streets are listed below:

1. Albertoni Street – Main Street to Central Avenue (3,000 feet)
2. Del Amo Boulevard – Main Street to I-405 (4,000 feet)
3. Wilmington Avenue – University Avenue to Del Amo Boulevard (3,000 feet)
4. Wilmington Avenue – 213th Street to 300 feet N/O Carson Street (1,000 feet)
5. Wilmington Avenue – 300 feet S/O Carson Street to I-405 (1,800 feet)
6. 223rd Street – Figueroa Street to Avalon Boulevard (8,000 feet)
7. Sepulveda Boulevard – Main Street to Wilmington Avenue (8,000 feet)

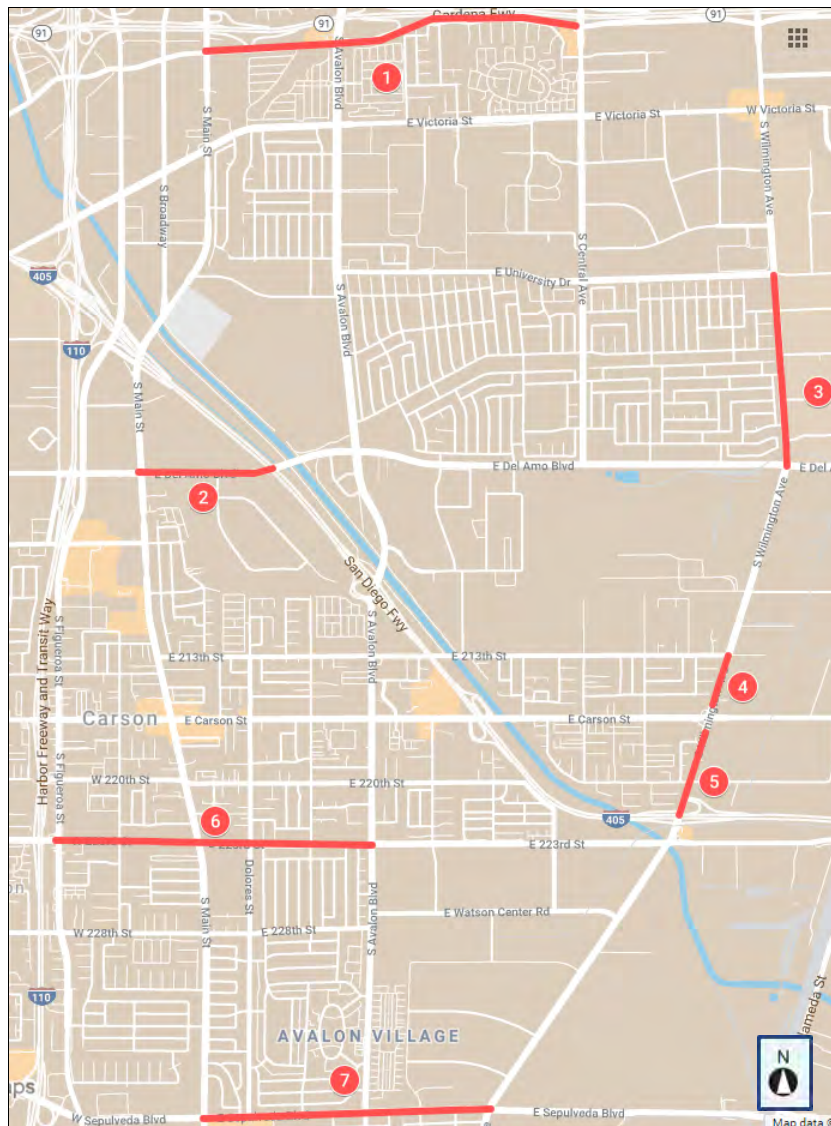


Figure 19: Sound Wall Locations

16. Projects

The Interim Development Impact Fee Analysis studies the impact on traffic and noise from development and determines the cost allocation which is distributed to the various developers. This report analyzes 23 different projects throughout the City. This section concentrates on the proposed placement of soundwalls and has determined the location of the soundwalls and the projects which contribute to the increase in traffic along the truck routes. As shown in Figure 20, a total of 10 projects have been identified which are contributing factors to the increase in noise levels along the truck routes requiring a soundwall. The projects are listed below in Table 13 with trip generation and land use data included:

Table 13: Project Trip Generation Estimate

| Related Project Trip Generation Estimate | | | | | | | | | | | |
|--|---------------------------------|------------|----------|------|--|-----|-----|-------|-----|-----|-------|
| No. | Project Location | Land Use | Quantity | Unit | Trip Generation (Passenger Car Equivalent) | | | | | | |
| | | | | | Daily | AM | | | PM | | |
| | | | | | | IN | OUT | TOTAL | IN | OUT | TOTAL |
| 1 | 2315 E. Dominguez Street | Industrial | 132 | TS | 378 | 48 | 19 | 66 | 20 | 37 | 57 |
| 2 | 2149 E. Sepulveda Boulevard | Industrial | 800 | TS | 1,305 | 165 | 64 | 229 | 69 | 129 | 198 |
| 6 | 24700 Main Street | Industrial | 253 | KSF | 2,010 | 234 | 32 | 265 | 34 | 246 | 280 |
| 7 | 20400 Main Street | Commercial | 730 | KSF | 18,808 | 290 | 178 | 468 | 911 | 987 | 1,898 |
| 8 | 20881 S. Main Street | Industrial | 158.45 | KSF | 1,372 | 193 | 79 | 272 | 82 | 147 | 229 |
| 9 | 18701 S. Wilmington Avenue | Industrial | 438.67 | KSF | 3,486 | 405 | 55 | 460 | 58 | 427 | 485 |
| 13 | LA DWP corridor in South Carson | Industrial | 580 | TS | 2,204 | 273 | 410 | 683 | 270 | 358 | 628 |
| 14 | 22632 S. Alameda Street | Industrial | 18.36 | KSF | 221 | 28 | 4 | 32 | 5 | 25 | 30 |
| 15 | 18530 Broadway | Industrial | 20.16 | KSF | 169 | 20 | 3 | 23 | 3 | 21 | 24 |
| 18 | 20601 S. Main Street | Industrial | 53 | KSF | 1,358 | 177 | 71 | 248 | 75 | 137 | 212 |

KSF = 1,000 gross square feet of building area, TS = Truck Space

17. Future Conditions

The City of Carson has 23 projects planned for the future which were studied in this report. It was determined that 10 of these projects have a direct impact on the increase of noise levels along the truck routes shown in Figure 20. These projects include the construction of commercial and industrial storage facilities, truck yards, and warehouses which will add a combined total of 31,311 daily trips to the roadway sections selected for the installation of soundwall. This increase in traffic added by the future developments will increase the amount and level of noise throughout the City. The installation of the soundwalls will help mitigate the noise pollution along the truck routes by decreasing the noise level. The height and location of the walls will be based on lowering the noise level as close to 67 decibels (dBA) per the 2013 Caltrans Technical Noise Supplement (TeNS). This report focused on areas of the City which have the highest levels of noise according to the City of Carson's General Plan. The projects listed in Table 13 are illustrated below in Figure 20.

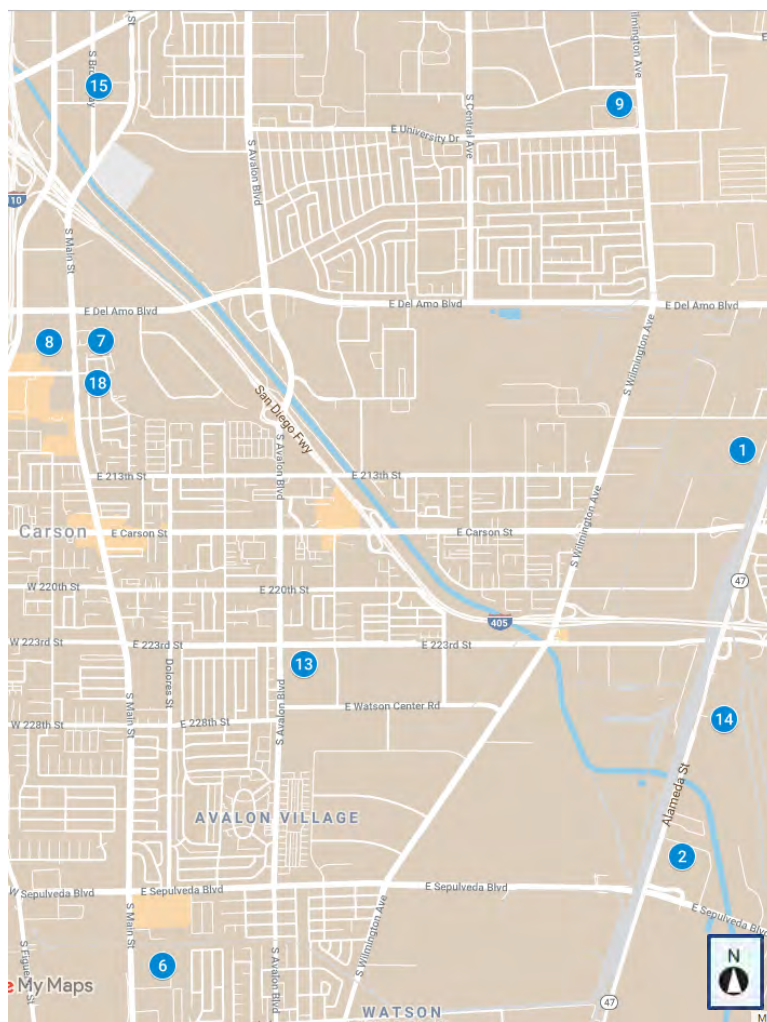


Figure 20: Project Locations

18. Methodology

The process used for determining the development impact on noise levels along selected truck routes in the City of Carson utilizes the guidelines, data, and policies provided by the City of Carson’s General Plan, Caltrans Standard Plans, Caltrans Contract Cost Data, the Caltrans Highway Design Manual, Caltrans Technical Noise Supplement (TeNS), and California Manual on Uniform Traffic Control Devices (CA MUTCD). Truck routes (as shown in Figure3) in the City were examined for proximity to the list of projects provided and whether or not roadway segments were adjacent to residential neighborhoods. After identifying the corridors which qualify as being affected by nearby development impacts, noise level data was evaluated to determine which areas exceeded the standard of 67 dBA. Once the areas of concern were identified, the corridors were evaluated for soundwall design considerations to reduce the noise level to below the standard. According to Chapter 7 of the City’s General Plan, the existing noise levels at the residential locations decrease due to various sound barriers such as vegetation or trees, embankments, and fencing or property walls in place. These barriers can reduce the measured noise level by as much as 5-10 dBA, this study will use the minimum decrease in noise level of 5 dBA (See Table 14). These areas currently exceed the maximum noise level standard and will be further impacted by the projects listed in Table 13.

Table 14: Selected Truck Routes Noise Levels

| Selected Truck Route Sections and Current Noise Levels | | | |
|--|--|----------------------|------------------------------------|
| Location (List From Section 3) | Associated Project | Existing Noise Level | Existing Noise Level (minus 5 dBA) |
| 1. Albertoni Street | 9 – 18701 S. Wilmington Avenue 15 – 18530 Broadway | 74.4 dBA | 69.4 dBA |
| 2. Del Amo Boulevard | 7 – 20400 Main Street 8 – 20881 S. Main Street 18 – 20601 S. Main Street | 75.1 dBA | 70.1 dBA |
| 3. Wilmington Avenue | 1 – 2315 E. Dominguez Street 9 – 18701 S. Wilmington Avenue | 75.5 dBA | 70.5 dBA |
| 4. Wilmington Avenue | 1 – 2315 E. Dominguez Street 14 – 22632 S. Alameda Street | 79.5 dBA | 74.5 dBA |
| 5. Wilmington Avenue | 1 – 2315 E. Dominguez Street 14 – 22632 S. Alameda Street | 79.5 dBA | 74.5 dBA |

| Selected Truck Route Sections and Current Noise Levels | | | |
|--|--------------------------------|----------------------|------------------------------------|
| Location (List From Section 3) | Associated Project | Existing Noise Level | Existing Noise Level (minus 5 dBA) |
| 6. 223 rd Street | 13 – LA DWP | 74.4 dBA | 69.4 dBA |
| | 14 – 22632 S. Alameda Street | | |
| 7. Sepulveda Boulevard | 2 – 2149 E Sepulveda Boulevard | 77.7 dBA | 74.7 dBA |
| | 6 – 24700 S. Main Street | | |

19. Cost of Sound Wall

All mitigations include the construction of a soundwall and based upon existing and future conditions. The cost of the soundwall varies in height, length, materials, and installation costs. The cost estimates for the proposed sound walls were obtained from 2018 Caltrans Contract Cost Data and is presented below in Table 15.

Table 15: Cost of Sound Wall Barrier per Linear Foot

| Height of wall | Material | Quantity (1) | Unit Cost (2) | Cost per Item (1x2) | Total Cost per Linear Foot |
|----------------|---------------------|-----------------|---------------|---------------------|---|
| 6 Feet | Structural Concrete | .33 Cubic Yards | \$950.00 | = \$314 | \$494 + 20% Construction Contingency = \$593 |
| | Rebar | 20 lb | \$1.50 | = \$30 | |
| | Soundwall | 6 Feet | \$30.00 | = \$150 | |
| 10 Feet | Structural Concrete | .55 Cubic Yards | \$950.00 | = \$523 | \$868 + 20% Construction Contingency = \$1040 |
| | Rebar | 30 lb | \$1.50 | = \$45 | |
| | Soundwall | 10 Feet | \$30.00 | = \$300 | |

The height of each soundwall was based on the potential reduction in noise level per the Caltrans Technical Noise Supplement. The installation of a 6 foot soundwall will reduce the noise level by 5 dBA and the installation of a 10 foot soundwall will reduce the noise level by 7 dBA. Each wall was selected according to the number of decibels needed to reduce each roadway section to below or close to the standard noise level of 67 dBA.

1. Albertoni Street – Portions from Main Street to Central Avenue (3,000 feet). This segment borders a residential neighborhood on the south side of the truck route for a length of 3,000 feet.

The corridor has an existing noise level of 69.4 dBA, the installation of a 6 foot soundwall will decrease the noise level to 64.4 dBA.

2. Del Amo Boulevard – Main Street to I-405 (4,000 feet). This segment borders a residential neighborhood on the north and south side of the truck route for a length of 4,000 feet. The selected corridor has an existing decibel noise level of 70.1 dBA, the installation of a 6 foot soundwall will decrease the noise level to 66.1 dBA.
3. Wilmington Avenue – University Avenue to Del Amo Boulevard (3,000 feet). This length of Wilmington Avenue borders a residential neighborhood on the west side of the truck route for a length of 3,000 feet. This segment has an existing noise level of 70.5 dBA, the installation of a 6 foot soundwall will decrease the noise level to 65.5dBA.
4. Wilmington Avenue – 213th Street to 300 feet N/O Carson Street (1,000 feet). This segment borders a residential neighborhood on the west side of the truck route for a length of 1,000 feet. The selected street has an existing decibel noise level of 74.5 dBA, the installation of a 10 foot soundwall will decrease the noise level to 67.5 dBA.
5. Wilmington Avenue – 300 feet S/O Carson Street to I-405 (1,800 feet). This segment borders a residential neighborhood on the west side of the truck route for a length of 1,800 feet. The selected roadway has an existing decibel noise level of 74.5 dBA, the installation of a 10 foot soundwall will decrease the noise level to 67.5 dBA.
6. 223rd Street – Portions from Figueroa Street to Avalon Boulevard (8,000 feet). This segment borders a residential neighborhood on the north and south side of the truck route for a length of 8,000 feet. The selected route has an existing noise level of 69.4 dBA, the installation of a 6 foot soundwall will decrease the noise level to 64.4 dBA.
7. Sepulveda Boulevard – Main Street to Wilmington Avenue (8,000 feet). This portion of Sepulveda Boulevard borders a residential neighborhood on the north and south side of the truck route for a length or 8,000 feet. The study corridor has an existing noise level of 74.7 dBA, the installation of a 10 foot soundwall will decrease the noise level to 67.7 dBA.

20. Improvement Cost:

The cost estimate of improvements for each impacted truck route is shown in Table 16.

Table 16: *Truck Route Mitigation Cost*

| Total Cost of Improvements for Impacted Truck Routes | | | | |
|--|-------------------------------|----------------------|---|--------------|
| Impacted Truck Routes | Proposed Height of Sound Wall | Length of Sound Wall | Unit Cost of Sound Wall per Linear Foot | Total Cost |
| 1. Albertoni St. | 6 Feet | 3,000 Feet | \$593 | \$1,779,000 |
| 2. Del Amo Blvd. | 6 Feet | 4,000 Feet | \$593 | \$2,372,000 |
| 3. Wilmington Ave. | 6 Feet | 4,000 Feet | \$593 | \$2,372,000 |
| 4. Wilmington Ave. | 10 Feet | 1,000 Feet | \$1,040 | \$1,040,000 |
| 5. Wilmington Ave. | 10 Feet | 1,800 Feet | \$1,040 | \$1,872,000 |
| 6. 223 rd St. | 6 Feet | 8,000 Feet | \$593 | \$4,744,000 |
| 7. Sepulveda Blvd. | 10 Feet | 8,000 Feet | \$1,040 | \$8,320,000 |
| | | | Total = | \$22,499,000 |

The total cost of \$22,499,000 shown in Table 16 is distributed to each associated project by dividing the total cost by the number of daily trips produced by each project per square feet of building space or per truck space. Based on each projects percentage of the trips contributed will determine the cost allocation to each individual development as shown in Table 17.

Table 17: Allocation of Costs per Development

| Allocation of Costs | | | | | | |
|--------------------------|------------------------------|--|-------------------------|----------------------------|-------------------|-----------------|
| Impacted Truck Routes | Associated Projects | Total Trips/ KSF or TS ^[1] | % Share of Improvements | Total Cost of Improvements | Cost Per SF or TS | Cost Allocation |
| 1. Albertoni St. | 9 – 18701 S. Wilmington Ave. | 3,486/438.66KSF | 95% | \$1,779,000 | \$3.85 | \$1,690,050 |
| | 15 – 18530 Broadway | 169/ 20.16 KSF | 5% | | \$4.41 | \$88,950 |
| 2. Del Amo Blvd. | 7 – 20400 Main St. | 18,808/730 KSF | 87% | \$2,372,000 | \$2.83 | \$2,063,640 |
| | 8 – 20881 S. Main St. | 1,372/158.45 KSF | 7% | | \$1.05 | \$166,040 |
| | 18 – 20601 S. Main St | 1,358/53 KSF | 6% | | \$2.69 | \$142,320 |
| 3. Wilmington Ave. | 1 – 2315 E. Dominguez St. | 378/ 132 TS | 10% | \$2,372,000 | \$1,797 | \$237,200 |
| | 9 – 18701 S. Wilmington Ave. | 3,486/ 438.66 KSF | 90% | | \$4.87 | \$2,134,800 |
| 4. Wilmington Ave. | 1 – 2315 E. Dominguez St. | 378/ 132 TS | 63% | \$1,040,000 | \$4,964 | \$655,200 |
| | 14 – 22632 S. Alameda St. | 221/ 18.36 KSF | 37% | | \$20.96 | \$384,800 |
| 5. Wilmington Ave. | 1 – 2315 E. Dominguez St. | 378/ 132 TS | 63% | \$1,872,000 | \$8,935 | \$1,179,360 |
| | 14 – 22632 S. Alameda St. | 221/ 18.36 KSF | 37% | | \$37.73 | \$692,640 |
| 6. 223 rd St. | 13 – LA DWP | 2,204/ 580 TS | 91% | \$4,744,000 | \$7,443 | \$4,317,040 |
| 6. 223 rd St. | 14 – 22632 S. Alameda St. | 221/ 18.36 KSF | 9% | \$4,744,000 | \$23.25 | \$426,960 |

| Allocation of Costs | | | | | | |
|---|-----------------------------|--|-------------------------|----------------------------|----------------------|-----------------|
| Impacted Truck Routes | Associated Projects | Total Trips/ KSF or TS ^[1] | % Share of Improvements | Total Cost of Improvements | Cost Per SF or TS | Cost Allocation |
| 7. Sepulveda Blvd. | 2 – 2149 E. Sepulveda Blvd. | 1,305/ 800 TS | 39% | \$8,320,000 | \$4056 | \$3,244,800 |
| | 6 – 24700 Main St. | 2,010/253 KSF | 61% | | \$20 | \$5,075,200 |
| | | | | | Total = \$22,499,000 | |
| ¹ KSF = 1,000 gross square feet of building area, TS = Truck Space | | | | | | |

21. Projected Revenue

Revenue from the development impact fees concerning the installation of sound wall barriers to mitigate noise levels can be found in Total Cost Allocation in Table 17. Assuming that development occurs and the sound wall barriers are constructed the revenue projected in Table 17 would approximately cover the share of improvement costs. Costs and impact fees in this report are shown in current (2019) dollars. Once adopted, impact fees should be adjusted at least annually, to reflect changes in price levels.

Appendix A: Intersection Turning Movements

ITM Peak Hour Summary

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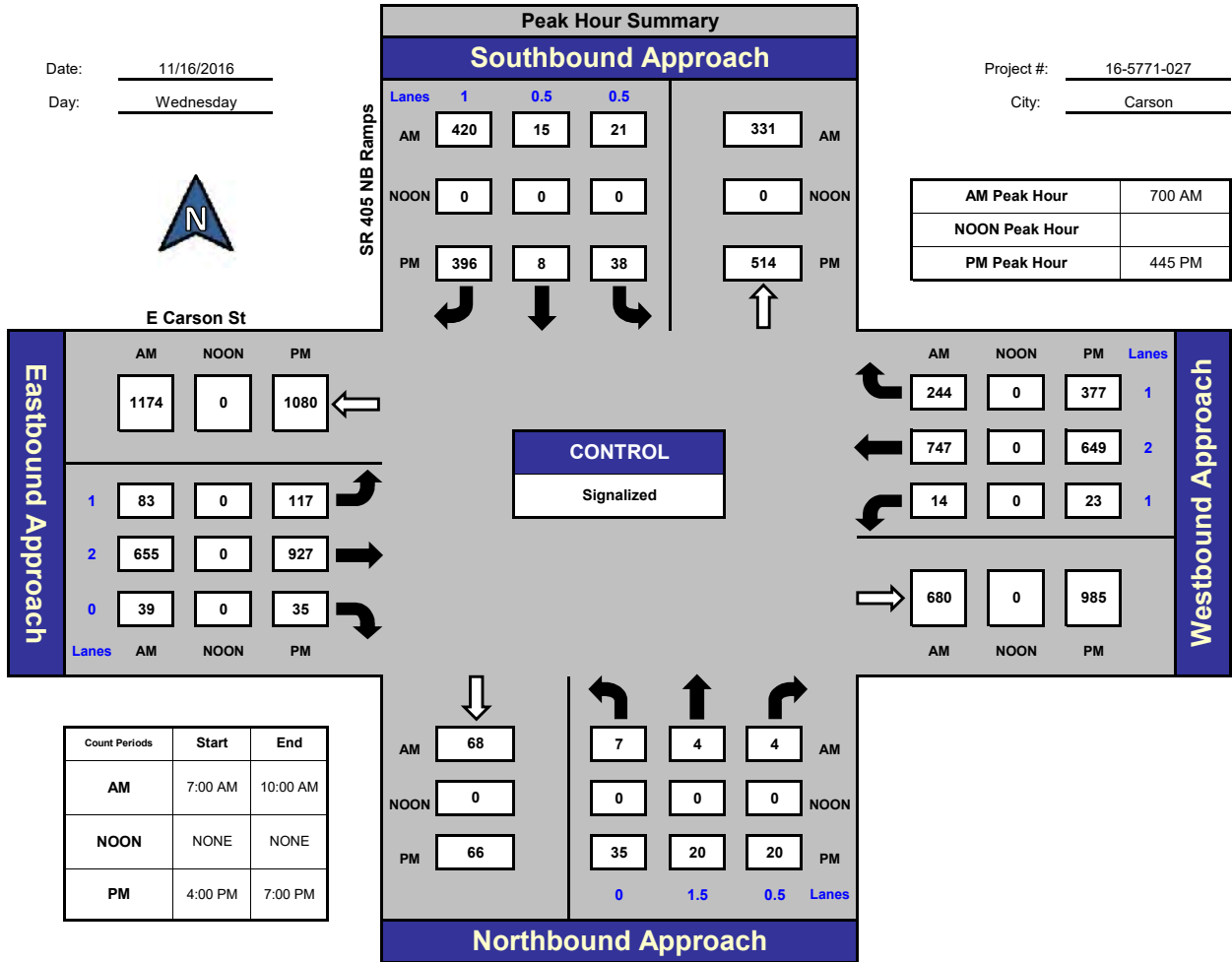


National Data & Surveying Services

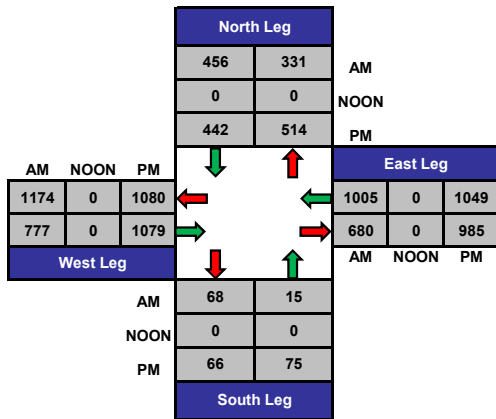
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Date: 11/16/2016
Day: Wednesday

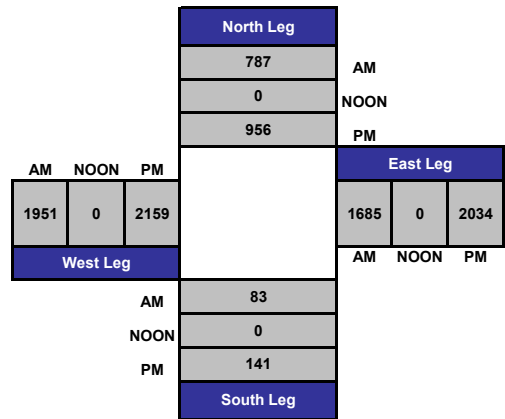
Project #: 16-5771-027
City: Carson



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

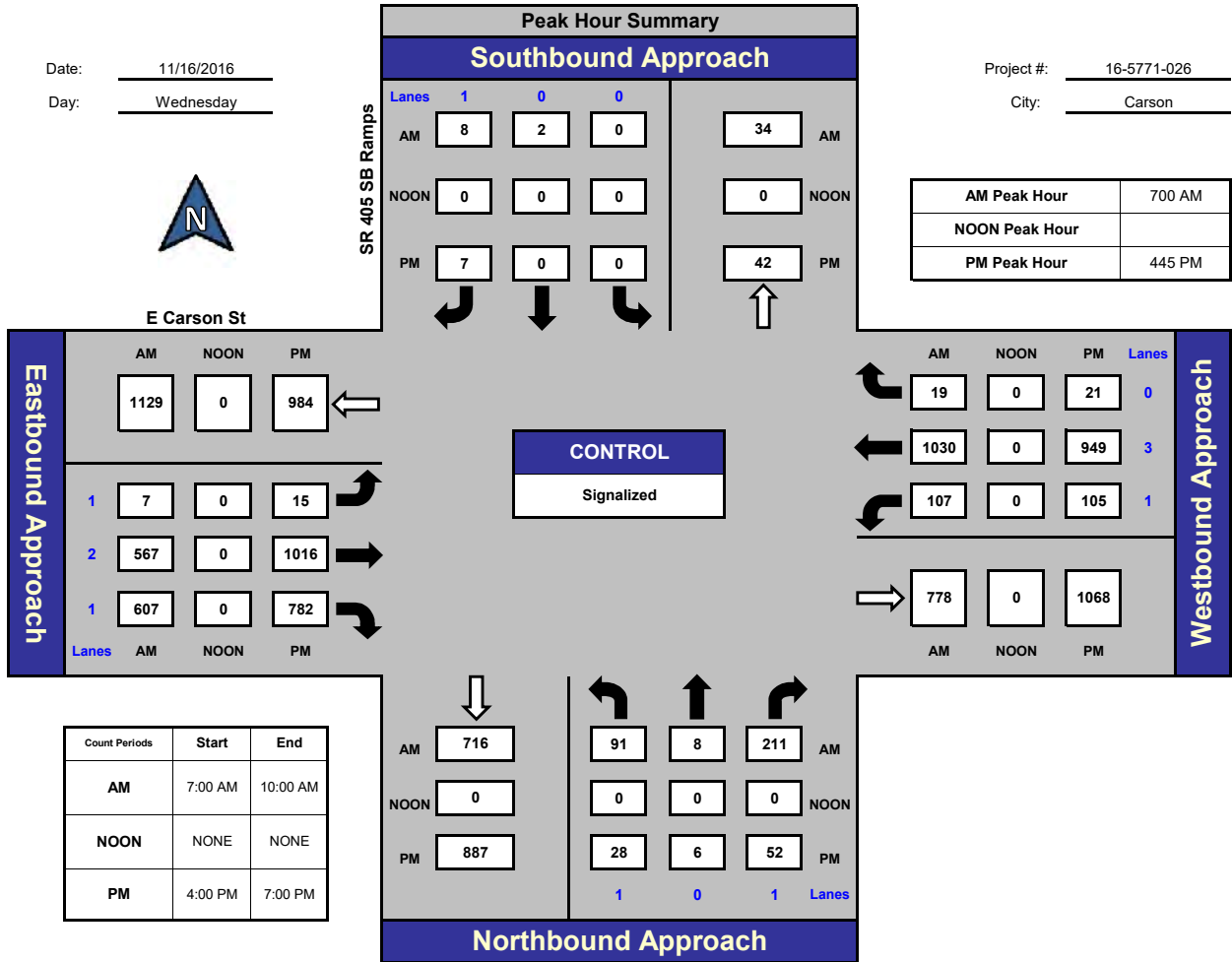


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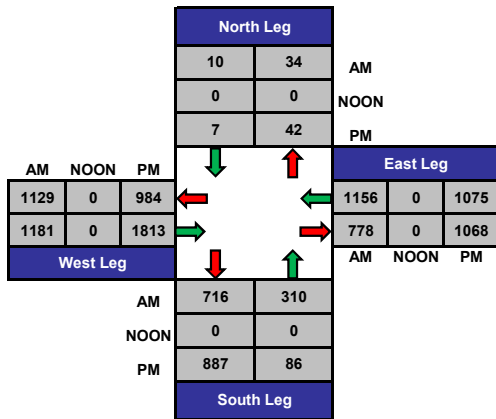
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Date: 11/16/2016
Day: Wednesday

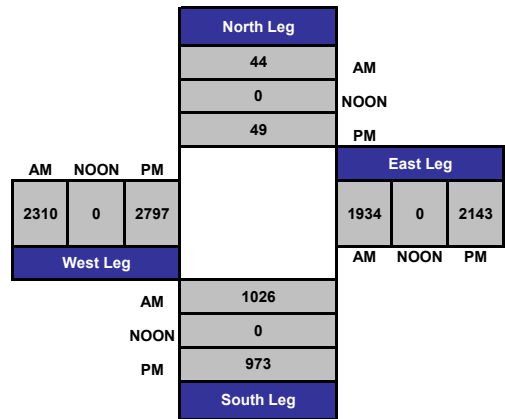
Project #: 16-5771-026
City: Carson



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

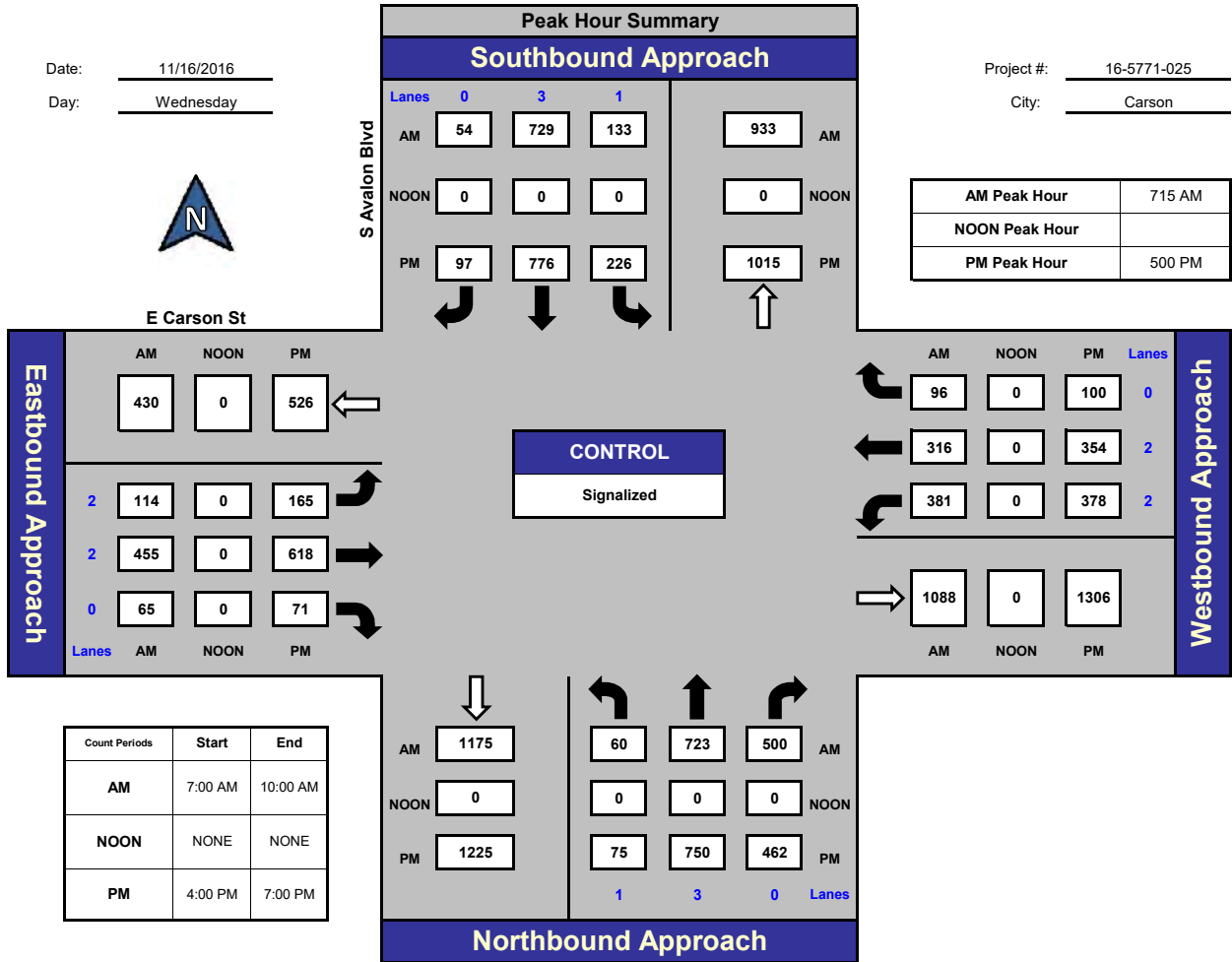
S Avalon Blvd and E Carson St, Carson

Date: 11/16/2016

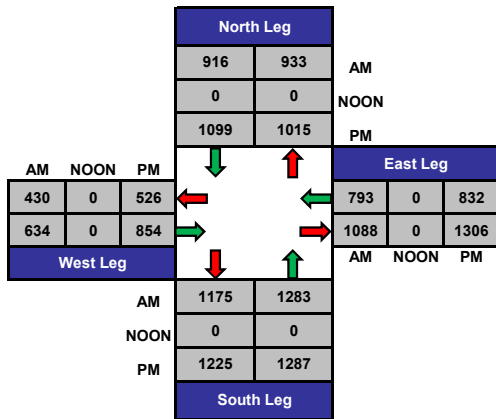
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Project #: 16-5771-025

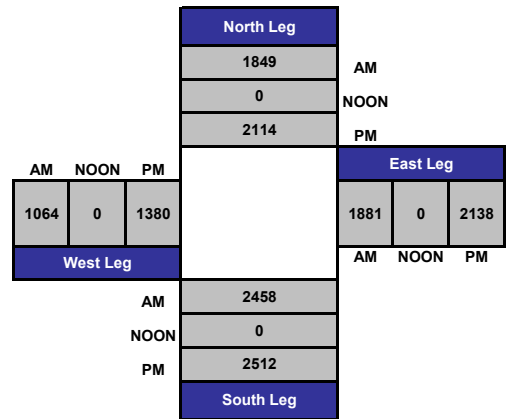
City: Carson



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

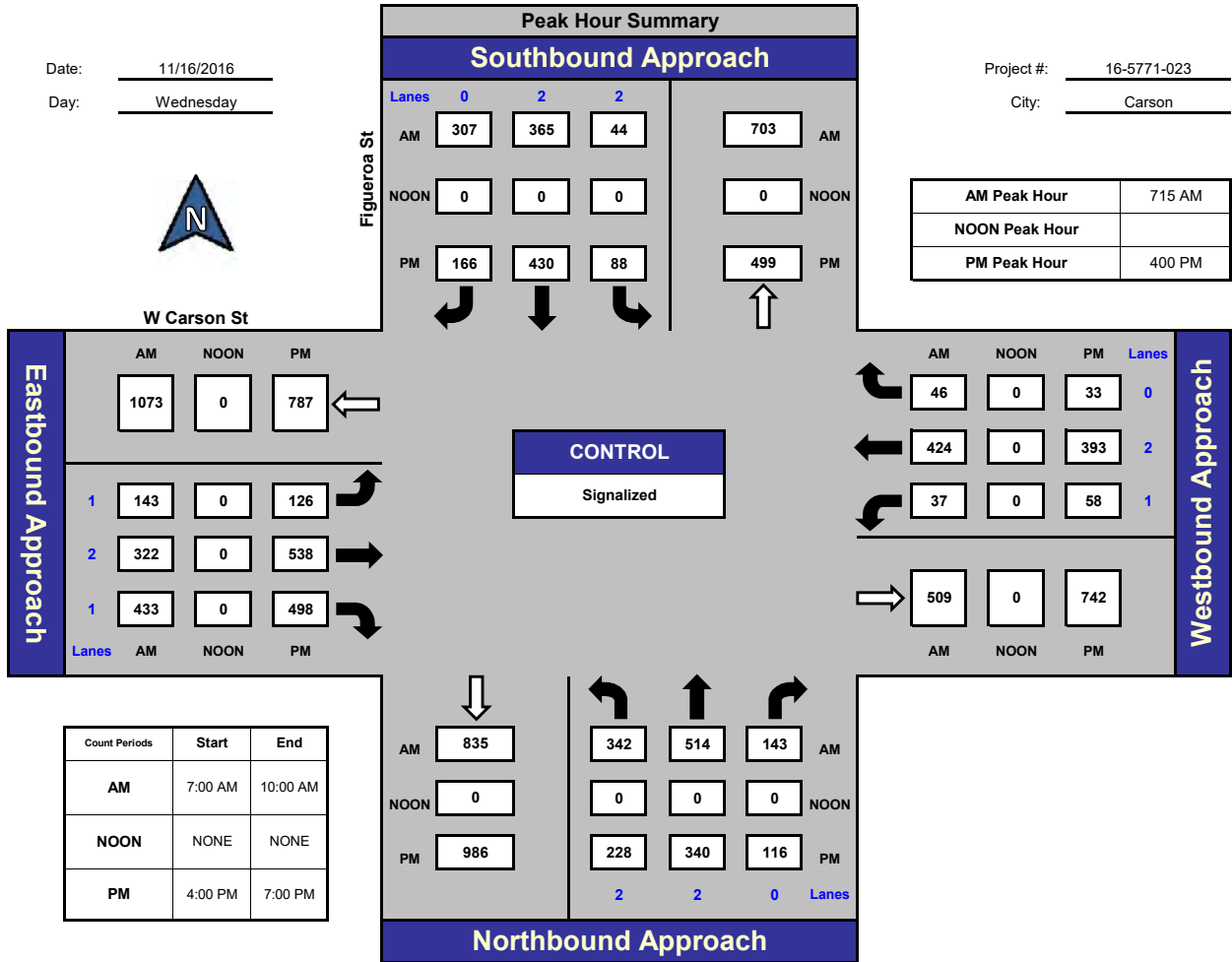


National Data & Surveying Services

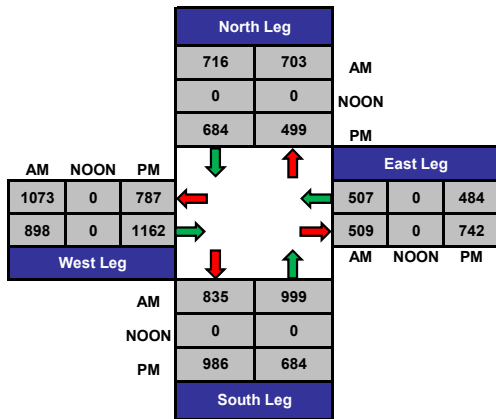
Figueroa St and W Carson St, Carson

Date: 11/16/2016
Day: Wednesday

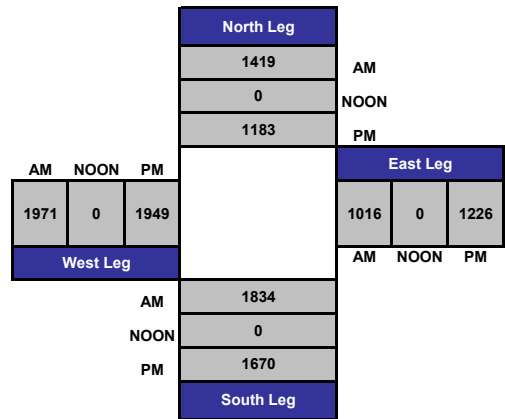
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City: Carson



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

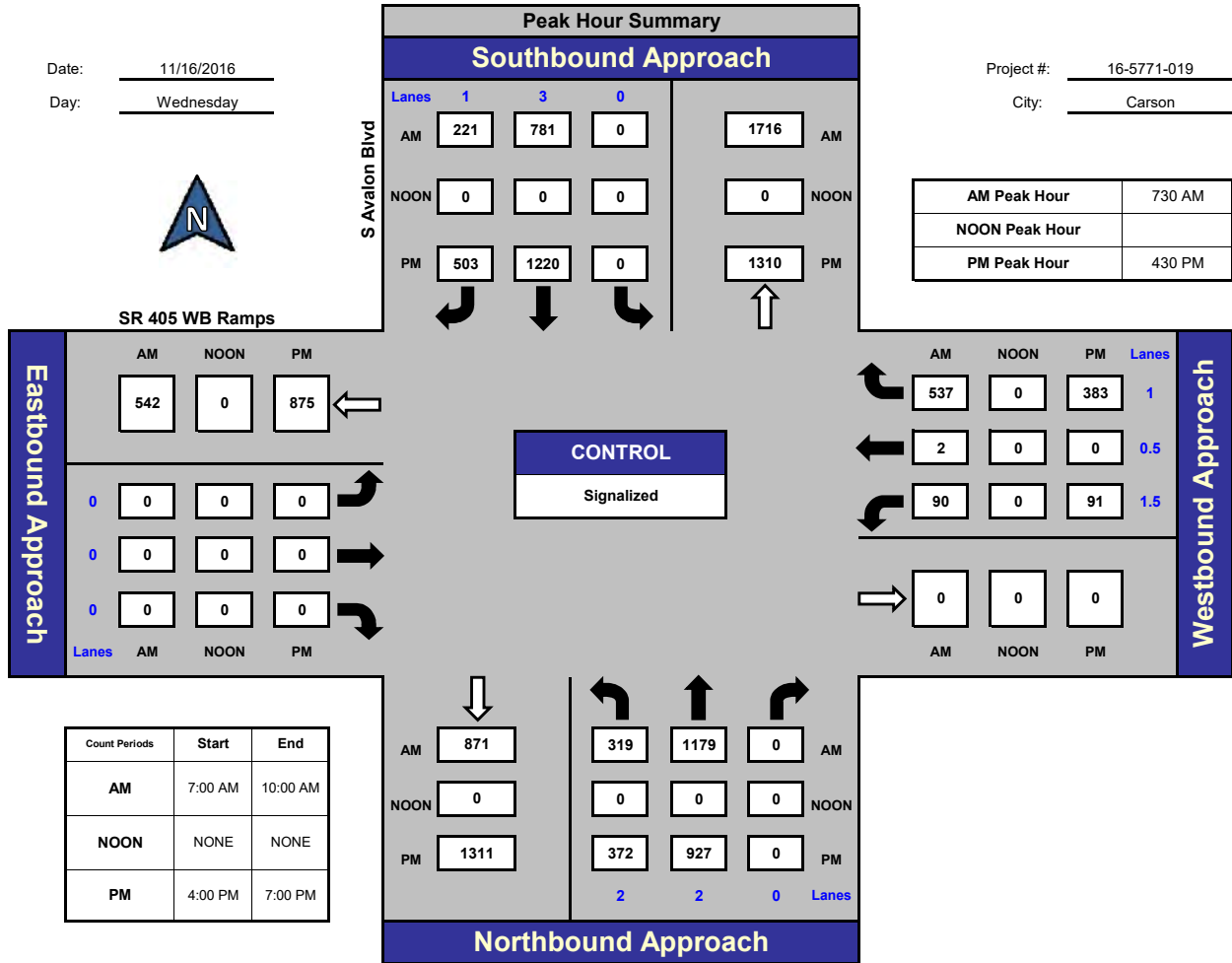
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Date: 11/16/2016

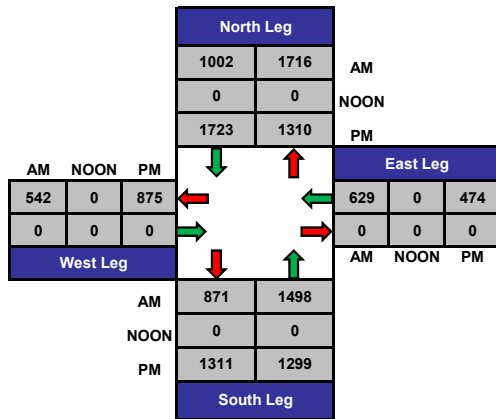
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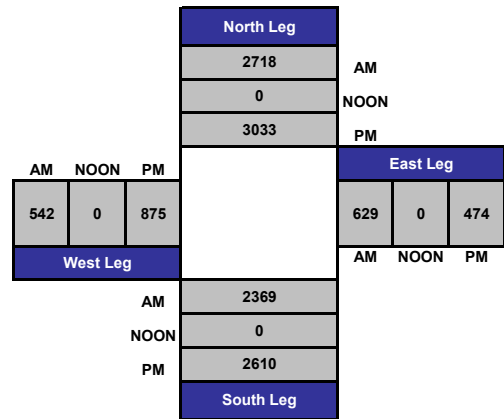
City: Carson



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

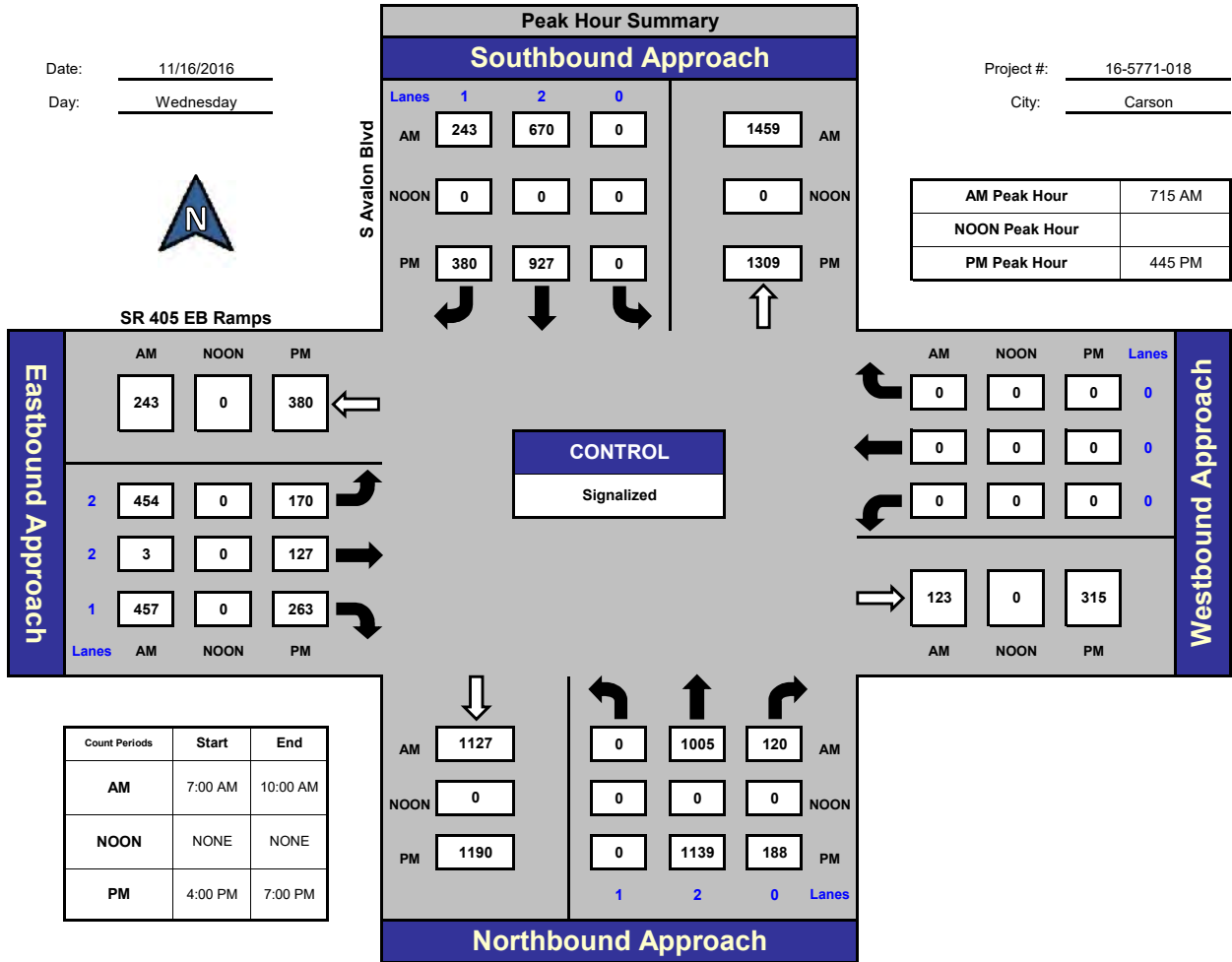
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Date: 11/16/2016

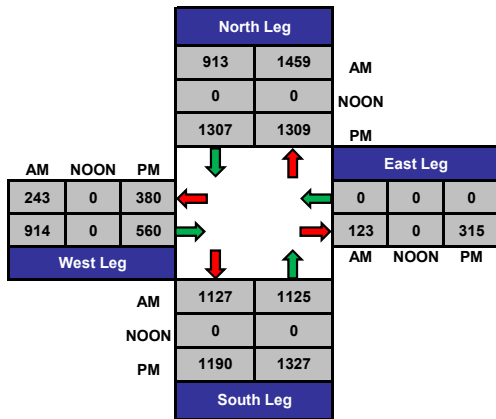
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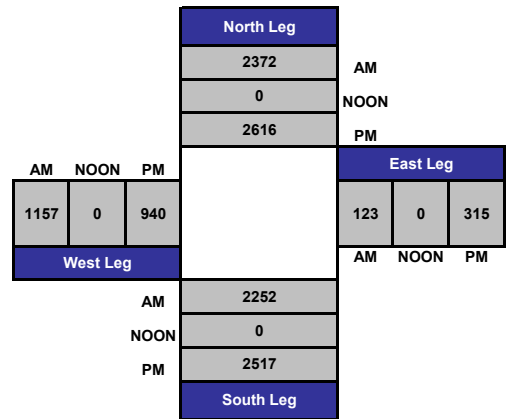
City: Carson



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

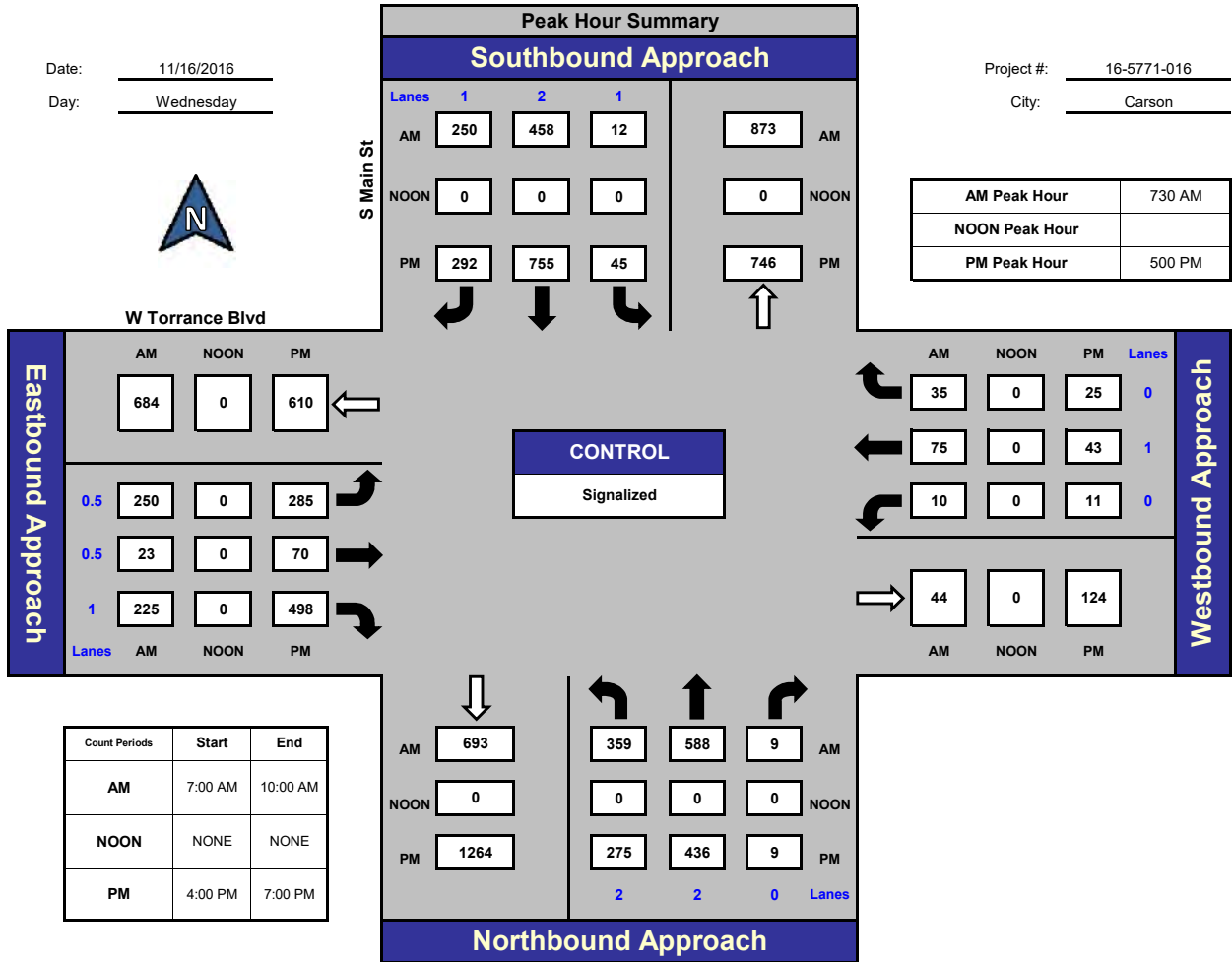


National Data & Surveying Services

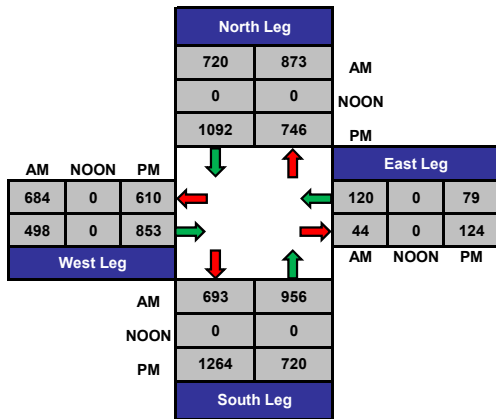
S Main St and W Torrance Blvd, Carson

Date: 11/16/2016
Day: Wednesday

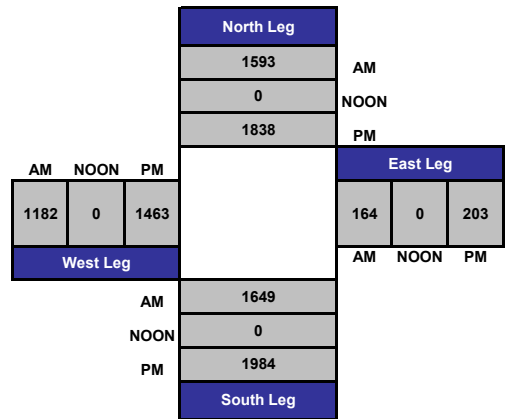
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City: Carson



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

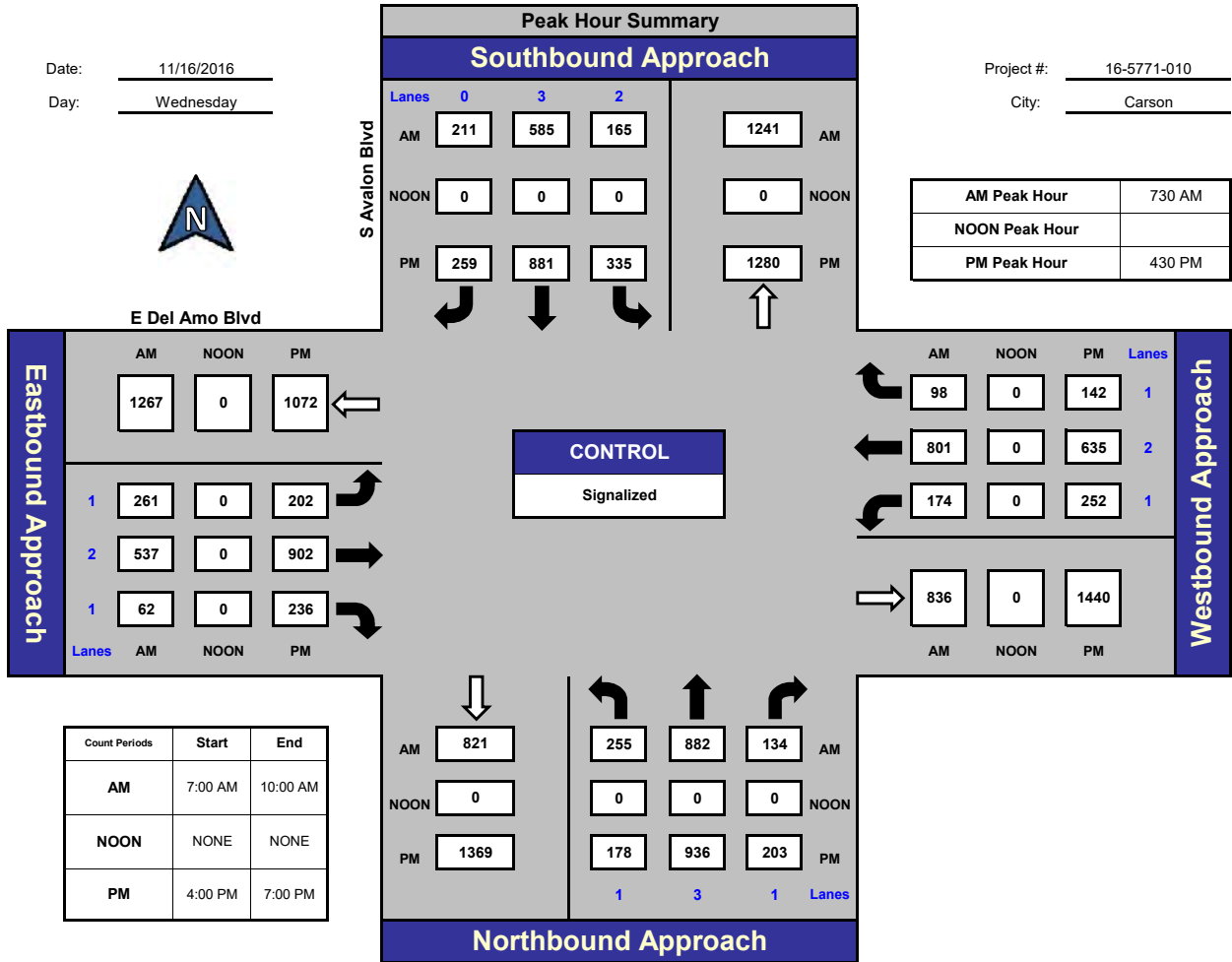
S Avalon Blvd and E Del Amo Blvd, Carson

Date: 11/16/2016

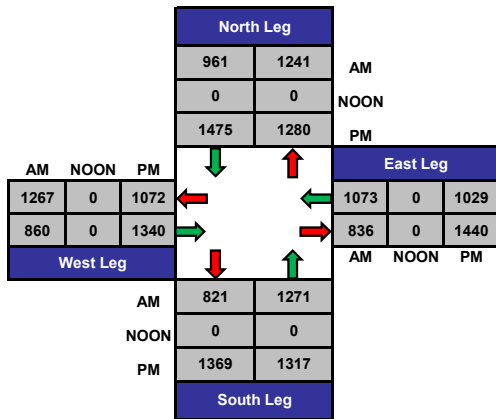
Day: Wednesday

Project #: 16-5771-010

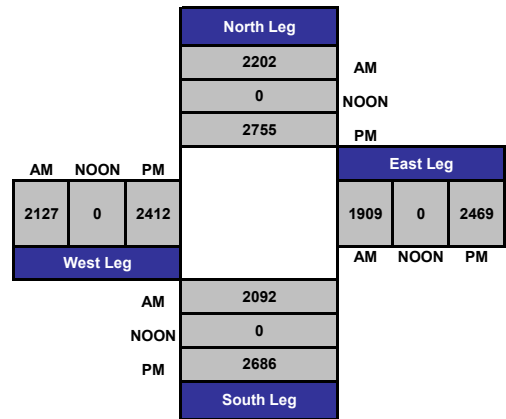
City: Carson



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

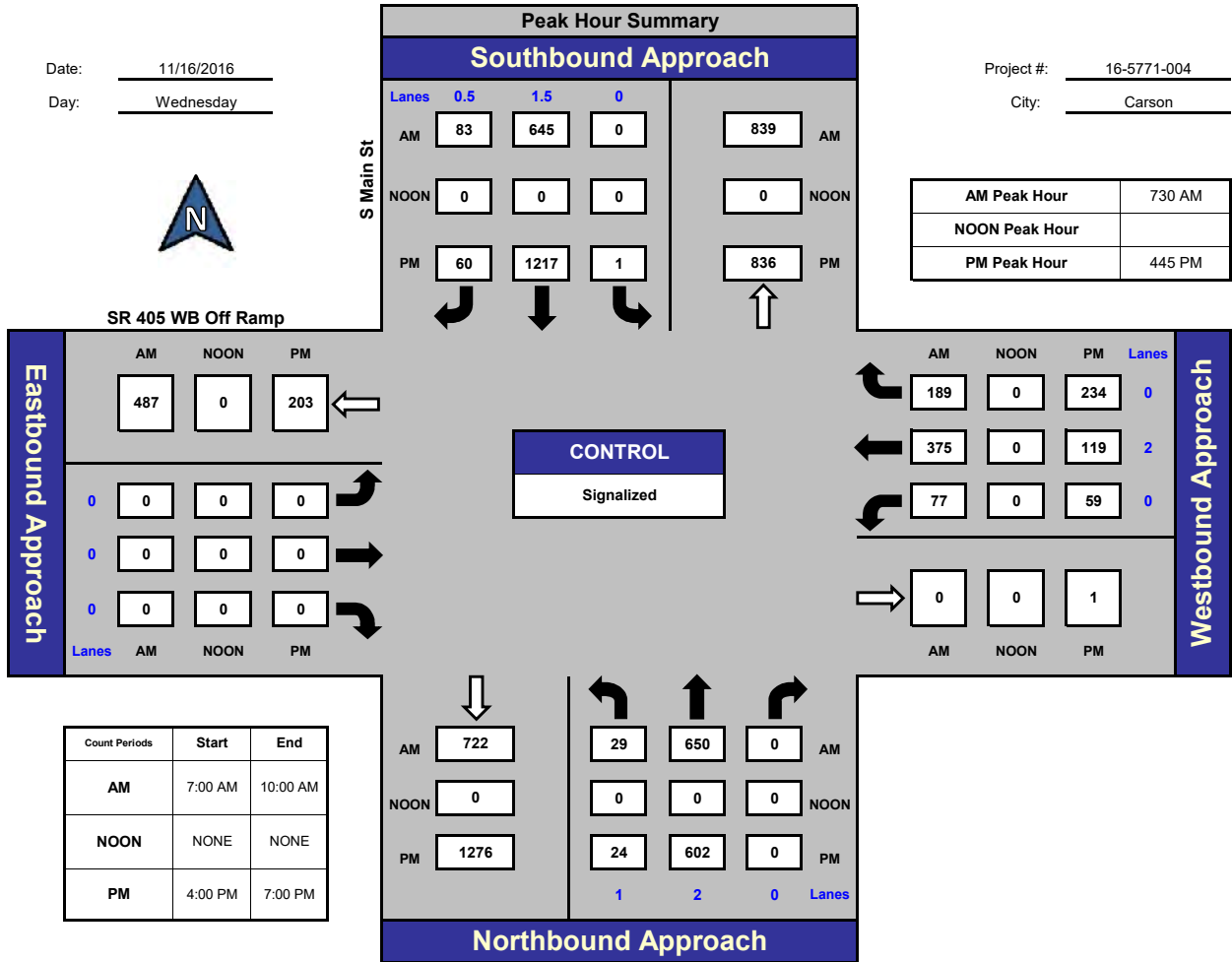
S Main St and SR 405 WB Off Ramp, Carson

Date: 11/16/2016

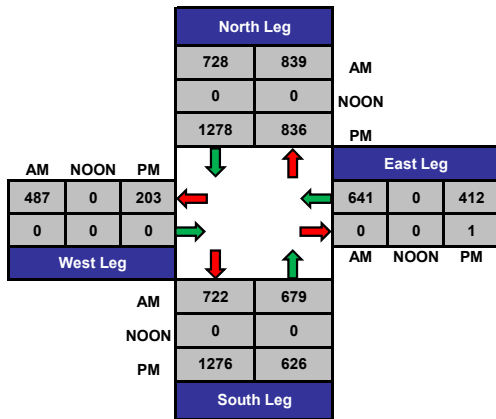
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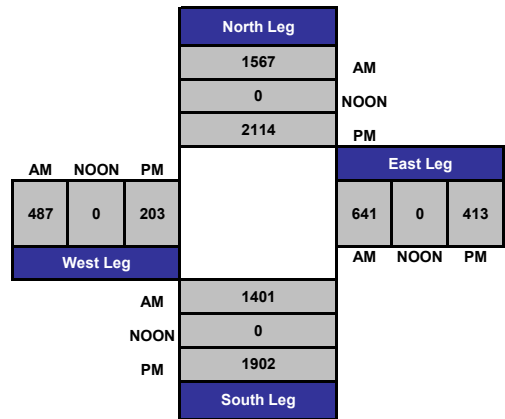
City: Carson



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

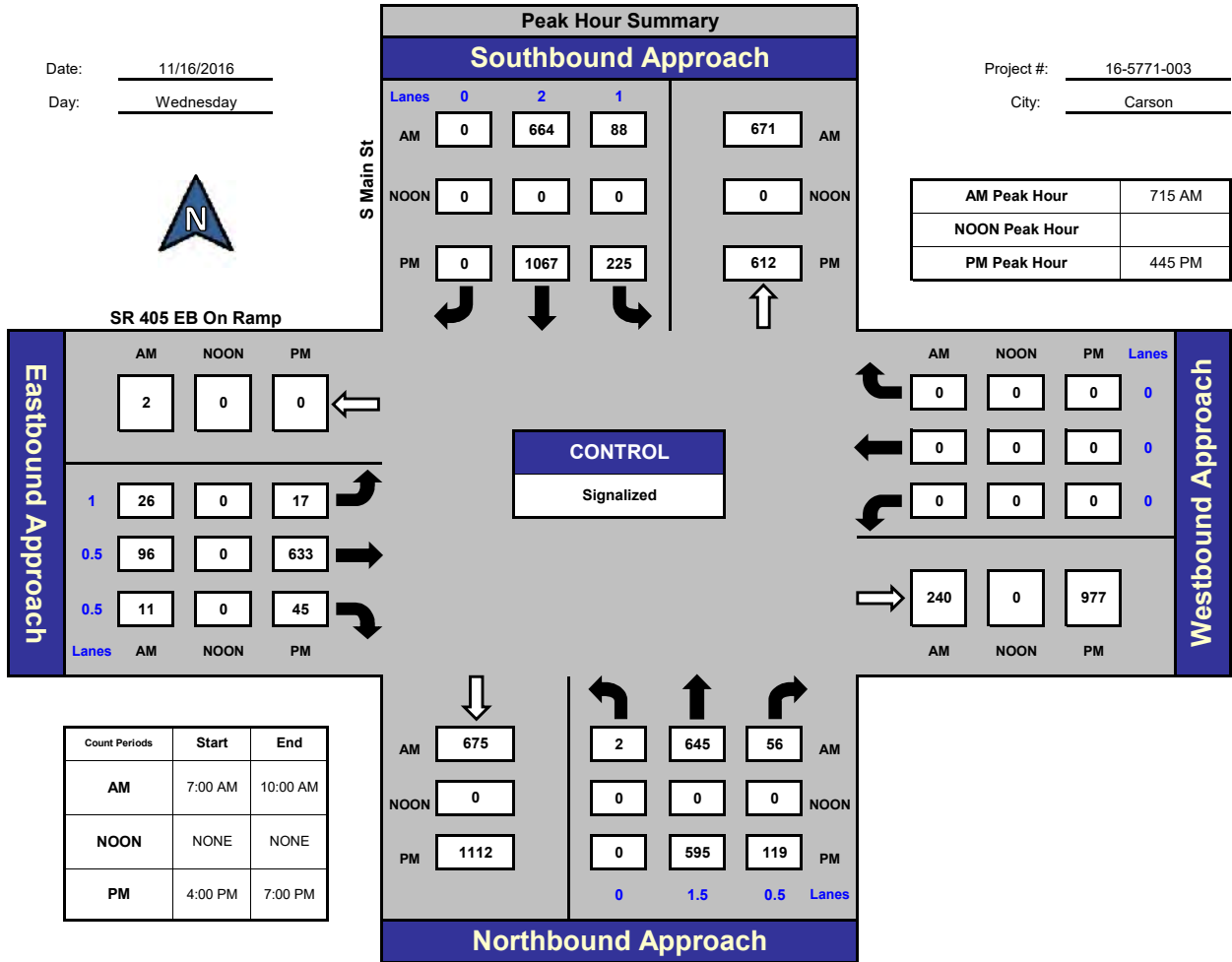


National Data & Surveying Services

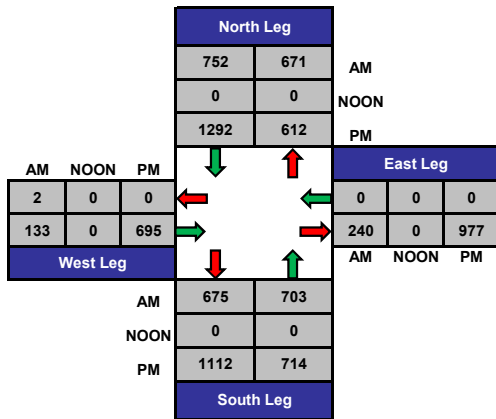
S Main St and SR 405 EB On Ramp, Carson

Date: 11/16/2016
Day: Wednesday

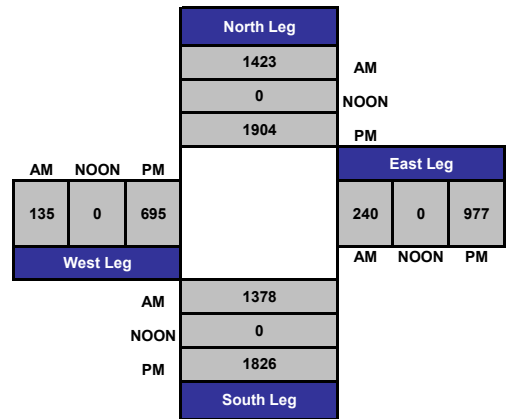
Project #: 16-5771-003
City: Carson



Total Ins & Outs



Total Volume Per Leg



Appendix B: Level of Service

Existing without Development

Lanes, Volumes, Timings
 1: S Figueroa St & I-405 SB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | ↑↑ | | ↑ | ↑↑ |
| Volume (vph) | 0 | 0 | 840 | 63 | 83 | 862 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 220 | |
| Storage Lanes | 0 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Fr _t | | | 0.990 | | | |
| Fl _t Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 3504 | 0 | 1770 | 3539 |
| Fl _t Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 3504 | 0 | 1770 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 607 | | 2451 | | | 246 |
| Travel Time (s) | 10.3 | | 41.8 | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 913 | 68 | 90 | 937 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 981 | 0 | 90 | 937 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Yield | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 49.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 2: S Figueroa St & I-405 NB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 197 | 292 | 900 | 0 | 0 | 693 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | | 0.850 | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 724 | | 246 | | | 1243 |
| Travel Time (s) | 12.3 | | 4.2 | | | 21.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 214 | 317 | 978 | 0 | 0 | 753 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 214 | 317 | 978 | 0 | 0 | 753 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 49.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings 3: S Main St & I-405 SB Ramps

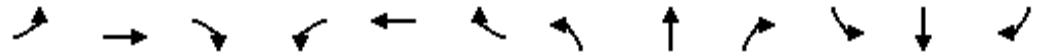
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 26 | 96 | 11 | 0 | 0 | 0 | 0 | 648 | 56 | 88 | 667 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 250 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr't | | 0.984 | | | | | | 0.988 | | | | |
| Flt Protected | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1833 | 0 | 0 | 0 | 0 | 0 | 3497 | 0 | 1770 | 3539 | 0 |
| Flt Permitted | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1833 | 0 | 0 | 0 | 0 | 0 | 3497 | 0 | 1770 | 3539 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 11 | | | | | | 17 | | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 607 | | | 169 | | | 2341 | | | 290 | |
| Travel Time (s) | | 10.3 | | | 2.9 | | | 35.5 | | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 28 | 104 | 12 | 0 | 0 | 0 | 0 | 704 | 61 | 96 | 725 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 28 | 116 | 0 | 0 | 0 | 0 | 0 | 765 | 0 | 96 | 725 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | | | | | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | | | | | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | | | | | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 4 | | | | | | | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 3: S Main St & I-405 SB Ramps

1/3/2019

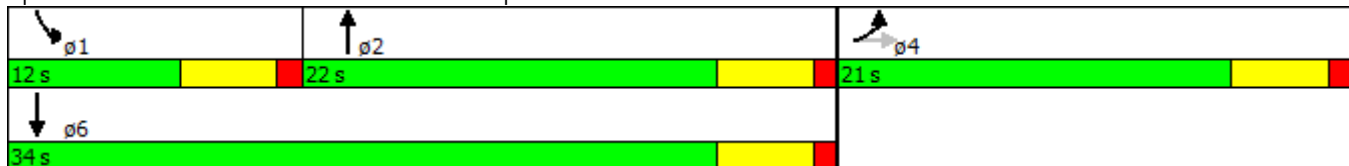


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | | | | | 22.0 | | 12.0 | 34.0 | |
| Total Split (%) | 38.2% | 38.2% | | | | | | 40.0% | | 21.8% | 61.8% | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 17.0 | | 7.0 | 29.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | | | | | Max | | None | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | 0 | |
| Act Effct Green (s) | 8.2 | 8.2 | | | | | | 27.6 | | 6.7 | 35.0 | |
| Actuated g/C Ratio | 0.16 | 0.16 | | | | | | 0.55 | | 0.13 | 0.70 | |
| v/c Ratio | 0.10 | 0.38 | | | | | | 0.40 | | 0.41 | 0.29 | |
| Control Delay | 17.0 | 19.9 | | | | | | 10.8 | | 25.1 | 4.6 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.1 | |
| Total Delay | 17.0 | 19.9 | | | | | | 10.8 | | 25.1 | 4.7 | |
| LOS | B | B | | | | | | B | | C | A | |
| Approach Delay | | 19.3 | | | | | | 10.8 | | | 7.1 | |
| Approach LOS | | B | | | | | | B | | | A | |

Intersection Summary

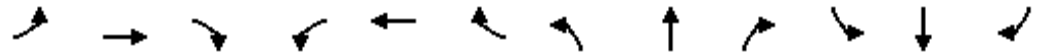
| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 50.1 |
| Natural Cycle: | 55 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.41 |
| Intersection Signal Delay: | 9.8 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 55.1% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 3: S Main St & I-405 SB Ramps



Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑↑ | | | ↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 77 | 377 | 190 | 29 | 653 | 0 | 0 | 648 | 83 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.956 | | | | | | 0.983 | |
| Flt Protected | | | | | 0.994 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3363 | 0 | 1770 | 3539 | 0 | 0 | 3479 | 0 |
| Flt Permitted | | | | | 0.994 | | 0.316 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3363 | 0 | 589 | 3539 | 0 | 0 | 3479 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 118 | | | | | | 38 | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 724 | | | 336 | | | 290 | | | 724 | |
| Travel Time (s) | | 12.3 | | | 5.7 | | | 4.4 | | | 11.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 84 | 410 | 207 | 32 | 710 | 0 | 0 | 704 | 90 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 701 | 0 | 32 | 710 | 0 | 0 | 794 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | | 2 | | | | | |
| Detector Phase | | | | 8 | 8 | | 2 | 2 | | | | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | | 21.0 | 21.0 | | | | 21.0 |

Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

1/3/2019

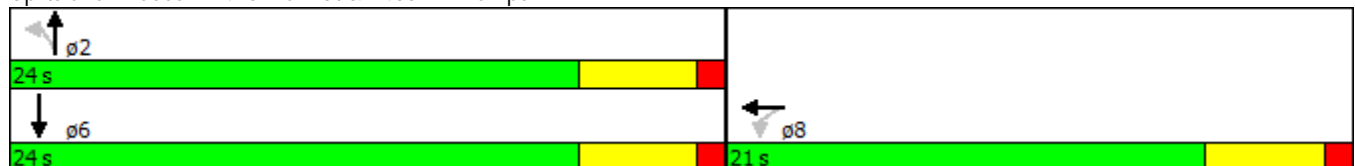


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-------|-------|-----|-----|-------|-----|
| Total Split (s) | | | | 21.0 | 21.0 | | 24.0 | 24.0 | | | 24.0 | |
| Total Split (%) | | | | 46.7% | 46.7% | | 53.3% | 53.3% | | | 53.3% | |
| Maximum Green (s) | | | | 16.0 | 16.0 | | 19.0 | 19.0 | | | 19.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | | 1.0 | 1.0 | | | 1.0 | |
| Lost Time Adjust (s) | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | None | | Max | Max | | | Max | |
| Walk Time (s) | | | | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | | 11.0 | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | | 0 | 0 | | | 0 | |
| Act Effect Green (s) | | | | | 12.9 | | 19.1 | 19.1 | | | 19.1 | |
| Actuated g/C Ratio | | | | | 0.31 | | 0.45 | 0.45 | | | 0.45 | |
| v/c Ratio | | | | | 0.63 | | 0.12 | 0.44 | | | 0.50 | |
| Control Delay | | | | | 12.9 | | 9.3 | 9.5 | | | 9.6 | |
| Queue Delay | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Delay | | | | | 12.9 | | 9.3 | 9.5 | | | 9.6 | |
| LOS | | | | | B | | A | A | | | A | |
| Approach Delay | | | | | 12.9 | | | 9.5 | | | 9.6 | |
| Approach LOS | | | | | B | | | A | | | A | |

Intersection Summary

| | |
|-----------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 42.1 |
| Natural Cycle: | 45 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.63 |
| Intersection Signal Delay: | 10.6 |
| Intersection Capacity Utilization | 55.1% |
| Analysis Period (min) | 15 |
| Intersection LOS: | B |
| ICU Level of Service | B |

Splits and Phases: 4: S Main St & I-405 NB Ramps



Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

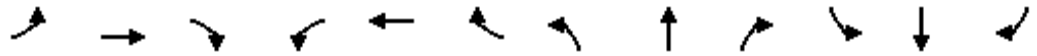
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↘ | ↕↕↕ | | ↘ | ↕↕ | ↗ | ↘ | ↕↕ | ↗ | ↘ | ↕↕ | ↗ |
| Volume (vph) | 146 | 381 | 98 | 145 | 914 | 160 | 196 | 721 | 324 | 42 | 378 | 437 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.969 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4928 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4928 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 74 | | | | 232 | | | 352 | | | 300 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | | 40 |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | | 2451 |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | | 41.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 159 | 414 | 107 | 158 | 993 | 174 | 213 | 784 | 352 | 46 | 411 | 475 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 159 | 521 | 0 | 158 | 993 | 174 | 213 | 784 | 352 | 46 | 411 | 475 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

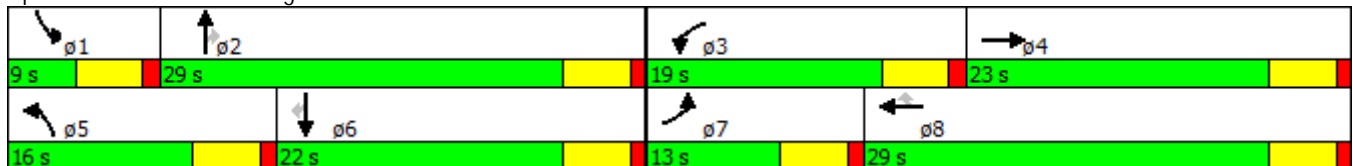


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 13.0 | 23.0 | | 19.0 | 29.0 | 29.0 | 16.0 | 29.0 | 29.0 | 9.0 | 22.0 | 22.0 |
| Total Split (%) | 16.3% | 28.8% | | 23.8% | 36.3% | 36.3% | 20.0% | 36.3% | 36.3% | 11.3% | 27.5% | 27.5% |
| Maximum Green (s) | 8.0 | 18.0 | | 14.0 | 24.0 | 24.0 | 11.0 | 24.0 | 24.0 | 4.0 | 17.0 | 17.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 8.0 | 20.3 | | 11.7 | 24.0 | 24.0 | 11.0 | 27.6 | 27.6 | 4.0 | 17.0 | 17.0 |
| Actuated g/C Ratio | 0.10 | 0.25 | | 0.15 | 0.30 | 0.30 | 0.14 | 0.34 | 0.34 | 0.05 | 0.21 | 0.21 |
| v/c Ratio | 0.90 | 0.40 | | 0.61 | 0.94 | 0.27 | 0.88 | 0.64 | 0.45 | 0.52 | 0.55 | 0.83 |
| Control Delay | 84.3 | 22.7 | | 42.2 | 44.5 | 2.4 | 69.6 | 26.0 | 4.7 | 59.5 | 31.2 | 25.5 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 84.3 | 22.7 | | 42.2 | 44.5 | 2.4 | 69.6 | 26.0 | 4.7 | 59.5 | 31.2 | 25.5 |
| LOS | F | C | | D | D | A | E | C | A | E | C | C |
| Approach Delay | | 37.1 | | | 38.7 | | | 27.3 | | | 29.7 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Natural Cycle: | 80 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.94 |
| Intersection Signal Delay: | 32.9 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 75.7% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings

6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↕↕↕ | | ↖ | ↕↕↕ | | ↖ | ↕↕ | | ↖ | ↕↕ | |
| Volume (vph) | 142 | 549 | 38 | 219 | 1071 | 61 | 76 | 518 | 240 | 51 | 472 | 126 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.990 | | | 0.992 | | | 0.952 | | | 0.968 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 5034 | 0 | 1770 | 5045 | 0 | 1770 | 3369 | 0 | 1770 | 3426 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 5034 | 0 | 1770 | 5045 | 0 | 1770 | 3369 | 0 | 1770 | 3426 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 16 | | | 13 | | | 111 | | | 49 | |
| Link Speed (mph) | | 45 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1251 | | | 1668 | | | 534 | | | 2341 | |
| Travel Time (s) | | 19.0 | | | 25.3 | | | 8.1 | | | 35.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 154 | 597 | 41 | 238 | 1164 | 66 | 83 | 563 | 261 | 55 | 513 | 137 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 154 | 638 | 0 | 238 | 1230 | 0 | 83 | 824 | 0 | 55 | 650 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

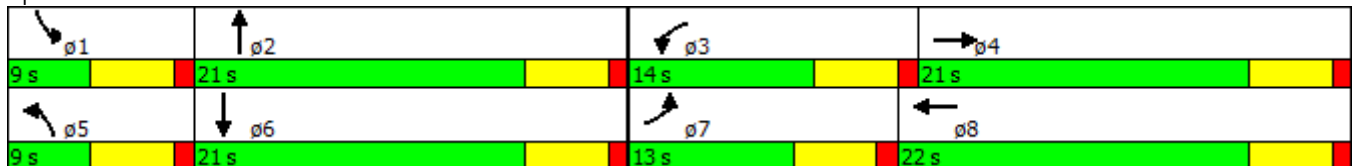


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 13.0 | 21.0 | | 14.0 | 22.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (%) | 20.0% | 32.3% | | 21.5% | 33.8% | | 13.8% | 32.3% | | 13.8% | 32.3% | |
| Maximum Green (s) | 8.0 | 16.0 | | 9.0 | 17.0 | | 4.0 | 16.0 | | 4.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 7.8 | 15.8 | | 9.0 | 17.1 | | 4.0 | 17.8 | | 4.0 | 16.1 | |
| Actuated g/C Ratio | 0.12 | 0.25 | | 0.14 | 0.27 | | 0.06 | 0.28 | | 0.06 | 0.26 | |
| v/c Ratio | 0.70 | 0.50 | | 0.94 | 0.89 | | 0.74 | 0.80 | | 0.49 | 0.71 | |
| Control Delay | 47.3 | 21.7 | | 75.0 | 33.0 | | 70.7 | 27.0 | | 46.4 | 25.5 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 47.3 | 21.7 | | 75.0 | 33.0 | | 70.7 | 27.0 | | 46.4 | 25.5 | |
| LOS | D | C | | E | C | | E | C | | D | C | |
| Approach Delay | | 26.7 | | | 39.8 | | | 31.0 | | | 27.1 | |
| Approach LOS | | C | | | D | | | C | | | C | |

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 63
 Natural Cycle: 65
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 32.8
 Intersection LOS: C
 Intersection Capacity Utilization 71.9%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

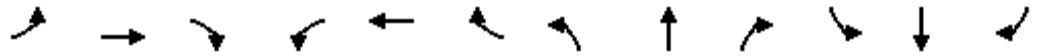
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 851 | 0 | 0 | 1312 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 155 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 1863 | 3539 | 1863 | 1863 | 3539 | 0 | 1770 | 1770 | 1863 | 1863 | 1770 | 1770 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 1863 | 3539 | 1863 | 1863 | 3539 | 0 | 1770 | 1770 | 1863 | 1863 | 1770 | 1770 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | 45 | | | 25 | | | | 50 |
| Link Distance (ft) | | 1668 | | | 3009 | | | 694 | | | | 308 |
| Travel Time (s) | | 25.3 | | | 45.6 | | | 18.9 | | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 925 | 0 | 0 | 1426 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | 0% | | | | | 0% |
| Lane Group Flow (vph) | 0 | 925 | 0 | 0 | 1426 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Split | | Perm | Perm | | Perm |
| Protected Phases | | 4 | | | 8 | | 2 | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | 2 | 6 | 6 | 6 |

Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019

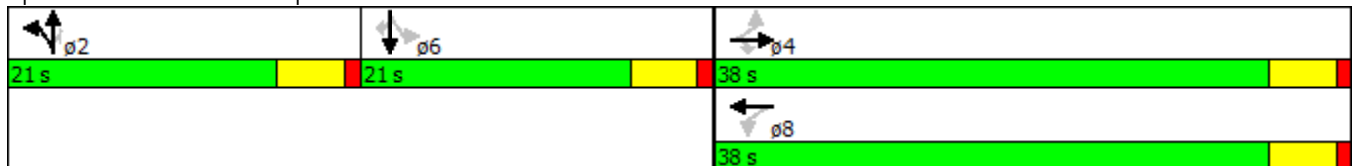


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 47.5% | 47.5% | 47.5% | 47.5% | 47.5% | | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% |
| Maximum Green (s) | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | 33.0 | | | 33.0 | | | | | | | |
| Actuated g/C Ratio | | 0.41 | | | 0.41 | | | | | | | |
| v/c Ratio | | 0.63 | | | 0.98 | | | | | | | |
| Control Delay | | 21.1 | | | 43.3 | | | | | | | |
| Queue Delay | | 0.0 | | | 0.0 | | | | | | | |
| Total Delay | | 21.1 | | | 43.3 | | | | | | | |
| LOS | | C | | | D | | | | | | | |
| Approach Delay | | 21.1 | | | 43.3 | | | | | | | |
| Approach LOS | | C | | | D | | | | | | | |

Intersection Summary

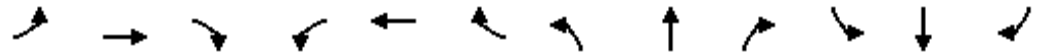
| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Natural Cycle: | 80 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.98 |
| Intersection Signal Delay: | 34.6 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 40.4% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 7: Stamps Dr & E Del Amo Blvd



Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

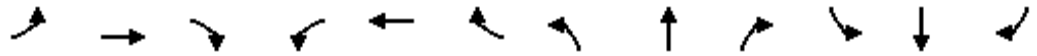
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 262 | 540 | 62 | 175 | 805 | 98 | 256 | 886 | 135 | 166 | 588 | 212 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 1 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | 0.960 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4882 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4882 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 206 | | | 206 | | | 147 | | 89 | |
| Link Speed (mph) | | 45 | | 45 | | | 35 | | | 35 | | |
| Link Distance (ft) | | 3009 | | 3520 | | | 2946 | | | 3936 | | |
| Travel Time (s) | | 45.6 | | 53.3 | | | 57.4 | | | 76.7 | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 285 | 587 | 67 | 190 | 875 | 107 | 278 | 963 | 147 | 180 | 639 | 230 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 285 | 587 | 67 | 190 | 875 | 107 | 278 | 963 | 147 | 180 | 869 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | 12 | | | 24 | | | 24 | | |
| Link Offset(ft) | | 0 | | 0 | | | 0 | | | 0 | | |
| Crosswalk Width(ft) | | 12 | | 12 | | | 12 | | | 12 | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | 94 | | | 94 | | | 94 | | |
| Detector 2 Size(ft) | | 6 | | 6 | | | 6 | | | 6 | | |
| Detector 2 Type | | Cl+Ex | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
 8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

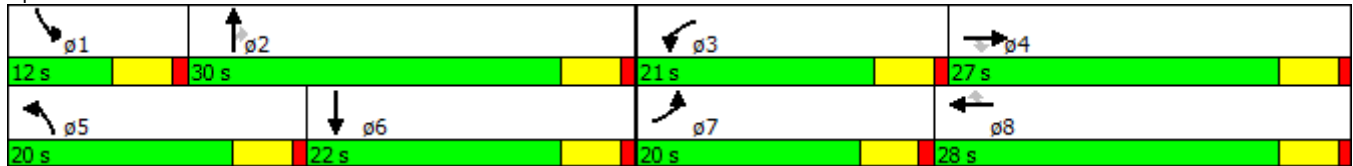


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 20.0 | 27.0 | 27.0 | 21.0 | 28.0 | 28.0 | 20.0 | 30.0 | 30.0 | 12.0 | 22.0 | 22.0 |
| Total Split (%) | 22.2% | 30.0% | 30.0% | 23.3% | 31.1% | 31.1% | 22.2% | 33.3% | 33.3% | 13.3% | 24.4% | 24.4% |
| Maximum Green (s) | 15.0 | 22.0 | 22.0 | 16.0 | 23.0 | 23.0 | 15.0 | 25.0 | 25.0 | 7.0 | 17.0 | 17.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 15.0 | 24.3 | 24.3 | 13.7 | 23.0 | 23.0 | 15.0 | 25.0 | 25.0 | 7.0 | 17.0 | 17.0 |
| Actuated g/C Ratio | 0.17 | 0.27 | 0.27 | 0.15 | 0.26 | 0.26 | 0.17 | 0.28 | 0.28 | 0.08 | 0.19 | 0.19 |
| v/c Ratio | 0.97 | 0.62 | 0.12 | 0.70 | 0.97 | 0.19 | 0.94 | 0.68 | 0.27 | 0.67 | 0.87 | 0.87 |
| Control Delay | 84.0 | 32.7 | 0.4 | 50.4 | 57.5 | 0.8 | 78.8 | 31.9 | 5.9 | 53.9 | 43.0 | 43.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 84.0 | 32.7 | 0.4 | 50.4 | 57.5 | 0.8 | 78.8 | 31.9 | 5.9 | 53.9 | 43.0 | 43.0 |
| LOS | F | C | A | D | E | A | E | C | A | D | D | D |
| Approach Delay | | 46.0 | | | 51.2 | | | 38.5 | | | 44.9 | |
| Approach LOS | | D | | | D | | | D | | | D | |

Intersection Summary

| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.97 |
| Intersection Signal Delay: | 44.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 83.7% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 569 | 310 | 653 | 688 | 474 | 138 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | 235 | | | 250 |
| Storage Lanes | 2 | 0 | 2 | | | 1 |
| Taper Length (ft) | 25 | | 25 | | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 |
| Frt | 0.947 | | | | | 0.850 |
| Flt Protected | 0.969 | | 0.950 | | | |
| Satd. Flow (prot) | 3316 | 0 | 3433 | 3539 | 3539 | 1583 |
| Flt Permitted | 0.969 | | 0.462 | | | |
| Satd. Flow (perm) | 3316 | 0 | 1670 | 3539 | 3539 | 1583 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | 201 | | | | | 150 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 170 | | | 828 | 791 | |
| Travel Time (s) | 2.9 | | | 14.1 | 13.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 618 | 337 | 710 | 748 | 515 | 150 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 955 | 0 | 710 | 748 | 515 | 150 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 24 | | | 24 | 24 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 12 | | | 12 | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Number of Detectors | 1 | | 1 | 2 | 2 | 1 |
| Detector Template | Left | | Left | Thru | Thru | Right |
| Leading Detector (ft) | 20 | | 20 | 100 | 100 | 20 |
| Trailing Detector (ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 20 | 6 | 6 | 20 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | | 94 | 94 | |
| Detector 2 Size(ft) | | | | 6 | 6 | |
| Detector 2 Type | | | | Cl+Ex | Cl+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | | 2 | | | 6 |
| Detector Phase | 4 | | 2 | 2 | 6 | 6 |

Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019

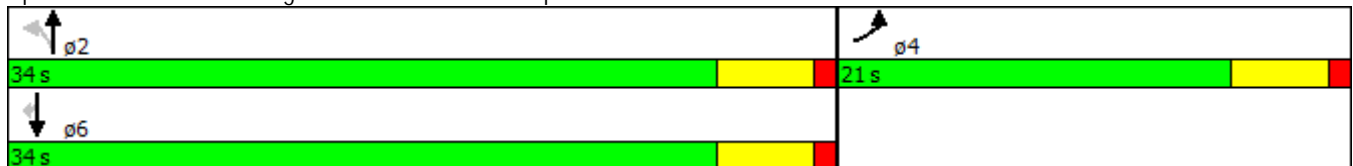


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|-------|-----|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 34.0 | 34.0 | 34.0 | 34.0 |
| Total Split (%) | 38.2% | | 61.8% | 61.8% | 61.8% | 61.8% |
| Maximum Green (s) | 16.0 | | 29.0 | 29.0 | 29.0 | 29.0 |
| Yellow Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 15.4 | | 29.0 | 29.0 | 29.0 | 29.0 |
| Actuated g/C Ratio | 0.28 | | 0.53 | 0.53 | 0.53 | 0.53 |
| v/c Ratio | 0.88 | | 0.80 | 0.40 | 0.27 | 0.16 |
| Control Delay | 26.4 | | 19.8 | 8.4 | 7.6 | 2.0 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 26.4 | | 19.8 | 8.4 | 7.6 | 2.0 |
| LOS | C | | B | A | A | A |
| Approach Delay | 26.4 | | | 14.0 | 6.3 | |
| Approach LOS | C | | | B | A | |

Intersection Summary














Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 54.4
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 16.2
 Intersection Capacity Utilization 70.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 9: S Figueroa St & I-110 NB Ramps



Lanes, Volumes, Timings
10: S Main St & Lenardo Rd

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|--|---|---|--|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  |  |   | |  |   |
| Volume (vph) | 0 | 0 | 856 | 0 | 0 | 726 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 145 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 1863 | 1863 | 3539 | 0 | 1863 | 3539 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 1863 | 1863 | 3539 | 0 | 1863 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 25 | | 45 | | | 45 |
| Link Distance (ft) | 479 | | 971 | | | 534 |
| Travel Time (s) | 13.1 | | 14.7 | | | 8.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 930 | 0 | 0 | 789 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 930 | 0 | 0 | 789 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | Perm | NA | | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Detector Phase | 8 | 8 | 2 | | 6 | 6 |

Lanes, Volumes, Timings
 10: S Main St & Lenardo Rd

1/3/2019

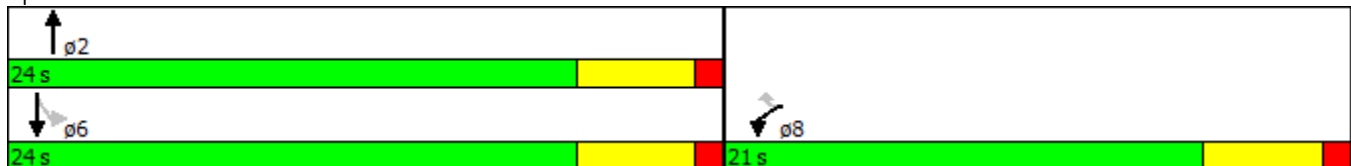


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 24.0 | | 24.0 | 24.0 |
| Total Split (%) | 46.7% | 46.7% | 53.3% | | 53.3% | 53.3% |
| Maximum Green (s) | 16.0 | 16.0 | 19.0 | | 19.0 | 19.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | None | Max | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | | | 39.0 | | | 39.0 |
| Actuated g/C Ratio | | | 1.00 | | | 1.00 |
| v/c Ratio | | | 0.26 | | | 0.22 |
| Control Delay | | | 0.2 | | | 0.1 |
| Queue Delay | | | 0.0 | | | 0.0 |
| Total Delay | | | 0.2 | | | 0.1 |
| LOS | | | A | | | A |
| Approach Delay | | | 0.2 | | | 0.1 |
| Approach LOS | | | A | | | A |

Intersection Summary

Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 39
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.26
 Intersection Signal Delay: 0.2
 Intersection Capacity Utilization 27.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 10: S Main St & Lenardo Rd



Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 600 | 446 | 159 | 59 | 463 | 151 | 179 | 588 | 58 | 55 | 324 | 426 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 180 | | 0 | 115 | | 0 | 255 | | 0 | 185 | | 185 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.91 | 0.91 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.974 | | | | 0.850 | | 0.987 | | | | 0.850 |
| Flt Protected | 0.950 | 0.984 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1610 | 3682 | 0 | 1770 | 3539 | 1583 | 1770 | 3959 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.467 | 0.680 | | 0.211 | | | 0.541 | | | 0.286 | | |
| Satd. Flow (perm) | 792 | 2545 | 0 | 393 | 3539 | 1583 | 1008 | 3959 | 0 | 533 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 65 | | | | 58 | | 19 | | | | 317 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 368 | | | 1713 | | | 3767 | | | | 828 |
| Travel Time (s) | | 6.3 | | | 29.2 | | | 64.2 | | | | 14.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 652 | 485 | 173 | 64 | 503 | 164 | 195 | 639 | 63 | 60 | 352 | 463 |
| Shared Lane Traffic (%) | 50% | | | | | | | | | | | |
| Lane Group Flow (vph) | 326 | 984 | 0 | 64 | 503 | 164 | 195 | 702 | 0 | 60 | 352 | 463 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019

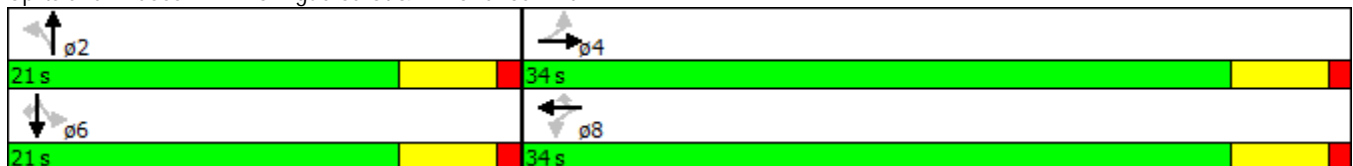


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | 34.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 61.8% | 61.8% | | 61.8% | 61.8% | 61.8% | 38.2% | 38.2% | | 38.2% | 38.2% | 38.2% |
| Maximum Green (s) | 29.0 | 29.0 | | 29.0 | 29.0 | 29.0 | 16.0 | 16.0 | | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | 25.5 | 25.5 | | 25.5 | 25.5 | 25.5 | 16.2 | 16.2 | | 16.2 | 16.2 | 16.2 |
| Actuated g/C Ratio | 0.49 | 0.49 | | 0.49 | 0.49 | 0.49 | 0.31 | 0.31 | | 0.31 | 0.31 | 0.31 |
| v/c Ratio | 0.84 | 0.77 | | 0.33 | 0.29 | 0.20 | 0.62 | 0.56 | | 0.36 | 0.32 | 0.65 |
| Control Delay | 33.2 | 14.4 | | 13.2 | 8.0 | 5.4 | 28.5 | 17.4 | | 23.1 | 15.7 | 10.8 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.2 | 14.4 | | 13.2 | 8.0 | 5.4 | 28.5 | 17.4 | | 23.1 | 15.7 | 10.8 |
| LOS | C | B | | B | A | A | C | B | | C | B | B |
| Approach Delay | | 19.0 | | | 7.9 | | | 19.8 | | | 13.6 | |
| Approach LOS | | B | | | A | | | B | | | B | |

Intersection Summary

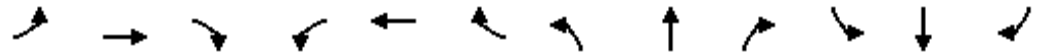
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 51.8 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.84 |
| Intersection Signal Delay: | 15.8 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 74.1% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 11: S Figueroa St & W Torrance Blvd



Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

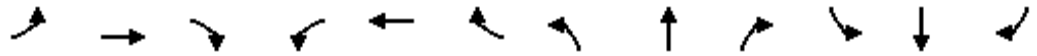
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕ | ↗ | | ↕ | | ↗ | ↕ | | ↗ | ↕ | ↗ |
| Volume (vph) | 251 | 23 | 226 | 10 | 75 | 35 | 361 | 591 | 9 | 12 | 460 | 251 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 190 | | 0 | 145 | | 45 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 2 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.961 | | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.956 | | | 0.996 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1781 | 1583 | 0 | 2021 | 0 | 3433 | 4003 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | | 0.653 | | | 0.961 | | 0.469 | | | 0.389 | | |
| Satd. Flow (perm) | 0 | 1216 | 1583 | 0 | 1950 | 0 | 1695 | 4003 | 0 | 725 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 213 | | 38 | | | 4 | | | | 273 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 45 |
| Link Distance (ft) | | 1713 | | | 375 | | | 2482 | | | | 971 |
| Travel Time (s) | | 29.2 | | | 6.4 | | | 42.3 | | | | 14.7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 273 | 25 | 246 | 11 | 82 | 38 | 392 | 642 | 10 | 13 | 500 | 273 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 298 | 246 | 0 | 131 | 0 | 392 | 652 | 0 | 13 | 500 | 273 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 6 | | | 6 |

Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019

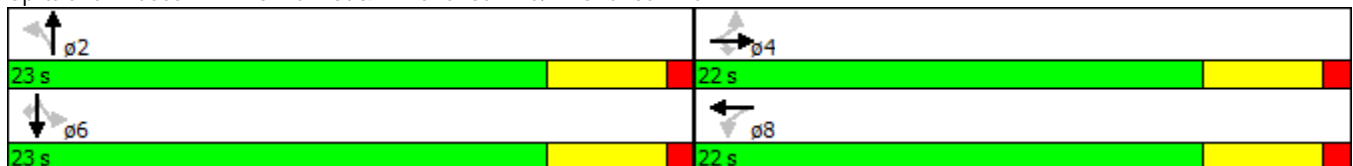


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | 48.9% | 48.9% | 48.9% | | 51.1% | 51.1% | | 51.1% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | | 14.3 | 14.3 | | 14.3 | | 18.9 | 18.9 | | 18.9 | 18.9 | 18.9 |
| Actuated g/C Ratio | | 0.33 | 0.33 | | 0.33 | | 0.44 | 0.44 | | 0.44 | 0.44 | 0.44 |
| v/c Ratio | | 0.74 | 0.37 | | 0.19 | | 0.53 | 0.37 | | 0.04 | 0.32 | 0.32 |
| Control Delay | | 25.5 | 4.4 | | 8.0 | | 13.2 | 9.6 | | 8.8 | 9.5 | 2.8 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | | 25.5 | 4.4 | | 8.0 | | 13.2 | 9.6 | | 8.8 | 9.5 | 2.8 |
| LOS | | C | A | | A | | B | A | | A | A | A |
| Approach Delay | | 16.0 | | | 8.0 | | | 11.0 | | | 7.2 | |
| Approach LOS | | B | | | A | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 43.2 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.74 |
| Intersection Signal Delay: | 10.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 57.3% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 12: S Main St & W Torrance Blvd/E Torrance Blvd



Lanes, Volumes, Timings
13: Lenardo Rd/I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 244 | 918 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | | 0 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 2 | 1 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.97 | 1.00 |
| Flt | | | | 0.850 | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 1863 | 3539 | 1863 | 1583 | 3433 | 1863 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 1863 | 3539 | 1863 | 1583 | 3433 | 1863 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 1091 | | |
| Link Speed (mph) | | 35 | 40 | | 40 | |
| Link Distance (ft) | | 701 | 533 | | 434 | |
| Travel Time (s) | | 13.7 | 9.1 | | 7.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 265 | 998 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 265 | 998 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 12 | 12 | | 24 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 12 | 12 | | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector (ft) | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | 94 | | | |
| Detector 2 Size(ft) | | 6 | 6 | | | |
| Detector 2 Type | | Cl+Ex | Cl+Ex | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | 0.0 | 0.0 | | | |
| Turn Type | Perm | | | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |

Lanes, Volumes, Timings
 13: Lenardo Rd/I-405 SB Ramps

1/3/2019

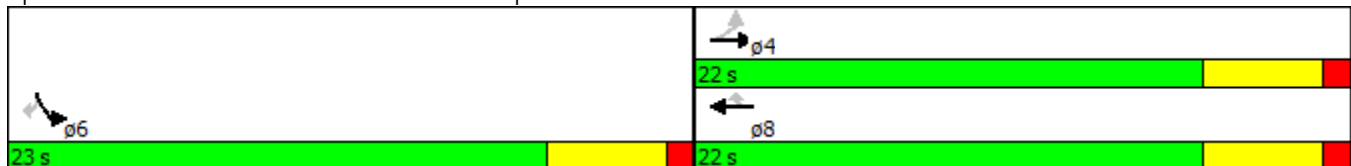


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | 48.9% | 48.9% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | | | 5.6 | 21.3 | |
| Actuated g/C Ratio | | | | 0.15 | 0.57 | |
| v/c Ratio | | | | 0.23 | 0.51 | |
| Control Delay | | | | 0.5 | 6.0 | |
| Queue Delay | | | | 0.0 | 0.0 | |
| Total Delay | | | | 0.5 | 6.0 | |
| LOS | | | | A | A | |
| Approach Delay | | | | | 6.0 | |
| Approach LOS | | | | | A | |

Intersection Summary

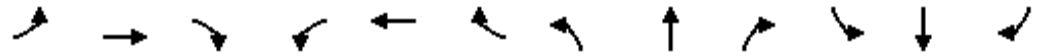
Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 37.1
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 4.8
 Intersection LOS: A
 Intersection Capacity Utilization 30.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 13: Lenardo Rd/I-405 SB Ramps



Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 456 | 3 | 459 | 0 | 0 | 0 | 0 | 1010 | 121 | 0 | 673 | 244 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 200 | | 150 | 0 | | 0 | 160 | | 0 | 0 | | 120 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Flt | | | 0.850 | | | | | 0.984 | | | | 0.850 |
| Flt Protected | 0.950 | | | | | | | | | | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1863 | 3483 | 0 | 0 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | | | | | | | | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1863 | 3483 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 121 | | | | | 33 | | | | 265 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 533 | | | 422 | | | 1230 | | | | 386 |
| Travel Time (s) | | 9.1 | | | 7.2 | | | 24.0 | | | | 7.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 496 | 3 | 499 | 0 | 0 | 0 | 0 | 1098 | 132 | 0 | 732 | 265 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 496 | 3 | 499 | 0 | 0 | 0 | 0 | 1230 | 0 | 0 | 732 | 265 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | | | | 1 | 2 | | | 2 | 1 |
| Detector Template | Left | Thru | Right | | | | Left | Thru | | | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | | | | 20 | 100 | | | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | | | | 20 | 6 | | | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex | Cl+Ex | | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | | | | Perm | NA | | | NA | Perm |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | | 2 | | | | | 6 |
| Detector Phase | 4 | 4 | 4 | | | | 2 | 2 | | | 6 | 6 |

Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019

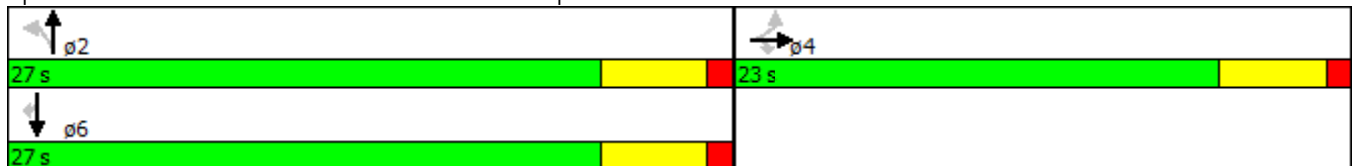


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-----|-----|-----|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | | | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | 23.0 | 23.0 | 23.0 | | | | 27.0 | 27.0 | | | 27.0 | 27.0 |
| Total Split (%) | 46.0% | 46.0% | 46.0% | | | | 54.0% | 54.0% | | | 54.0% | 54.0% |
| Maximum Green (s) | 18.0 | 18.0 | 18.0 | | | | 22.0 | 22.0 | | | 22.0 | 22.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | | | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | None | None | None | | | | Max | Max | | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | | | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Act Effct Green (s) | 15.9 | 15.9 | 15.9 | | | | | 22.1 | | | 22.1 | 22.1 |
| Actuated g/C Ratio | 0.33 | 0.33 | 0.33 | | | | | 0.46 | | | 0.46 | 0.46 |
| v/c Ratio | 0.44 | 0.00 | 0.82 | | | | | 0.76 | | | 0.45 | 0.30 |
| Control Delay | 13.7 | 10.3 | 24.9 | | | | | 15.2 | | | 10.5 | 2.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | | | | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 13.7 | 10.3 | 24.9 | | | | | 15.2 | | | 10.5 | 2.6 |
| LOS | B | B | C | | | | | B | | | B | A |
| Approach Delay | | 19.3 | | | | | | 15.2 | | | 8.4 | |
| Approach LOS | | B | | | | | | B | | | A | |

Intersection Summary

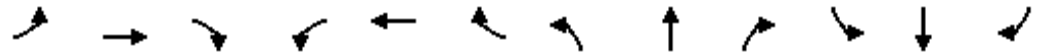
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 50 |
| Actuated Cycle Length: | 48.1 |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.82 |
| Intersection Signal Delay: | 14.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 55.4% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 14: S Avalon Blvd & I-405 SB Ramps



Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | ↙ | ↖ | ↗ | ↘ | ↙ | ↖ | | ↗ | ↘ |
| Volume (vph) | 0 | 0 | 0 | 90 | 2 | 540 | 321 | 1158 | 0 | 0 | 785 | 222 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 1 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 |
| Frt | | | | | | 0.850 | | | | | | 0.850 |
| Flt Protected | | | | 0.950 | 0.954 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1681 | 1688 | 1583 | 3433 | 3539 | 0 | 0 | 5085 | 1583 |
| Flt Permitted | | | | 0.950 | 0.954 | | 0.304 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1681 | 1688 | 1583 | 1099 | 3539 | 0 | 0 | 5085 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 44 | | | | | | 241 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 346 | | | 390 | | | 386 | | | | 2946 |
| Travel Time (s) | | 5.9 | | | 6.6 | | | 7.5 | | | | 57.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 98 | 2 | 587 | 349 | 1259 | 0 | 0 | 853 | 241 |
| Shared Lane Traffic (%) | | | | 49% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 50 | 50 | 587 | 349 | 1259 | 0 | 0 | 853 | 241 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | 1 | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | Right | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | 20 | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | 20 | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | Perm | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | 8 | 2 | | | | | 6 |
| Detector Phase | | | | 8 | 8 | 8 | 2 | 2 | | | | 6 |

Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019

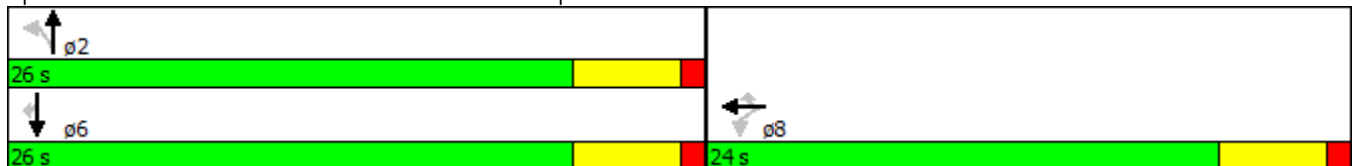


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | | | | 24.0 | 24.0 | 24.0 | 26.0 | 26.0 | | | 26.0 | 26.0 |
| Total Split (%) | | | | 48.0% | 48.0% | 48.0% | 52.0% | 52.0% | | | 52.0% | 52.0% |
| Maximum Green (s) | | | | 19.0 | 19.0 | 19.0 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | | | | None | None | None | Max | Max | | | Max | Max |
| Walk Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | | | | 18.8 | 18.8 | 18.8 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Actuated g/C Ratio | | | | 0.38 | 0.38 | 0.38 | 0.42 | 0.42 | | | 0.42 | 0.42 |
| v/c Ratio | | | | 0.08 | 0.08 | 0.94 | 0.75 | 0.84 | | | 0.40 | 0.30 |
| Control Delay | | | | 10.4 | 10.4 | 42.2 | 26.1 | 20.3 | | | 10.7 | 2.8 |
| Queue Delay | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | | | | 10.4 | 10.4 | 42.2 | 26.1 | 20.3 | | | 10.7 | 2.8 |
| LOS | | | | B | B | D | C | C | | | B | A |
| Approach Delay | | | | | 37.6 | | | 21.5 | | | 9.0 | |
| Approach LOS | | | | | D | | | C | | | A | |

Intersection Summary











Area Type: Other
 Cycle Length: 50
 Actuated Cycle Length: 49.8
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 20.7
 Intersection Capacity Utilization 73.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 15: S Avalon Blvd & I-405 NB Ramps



Lanes, Volumes, Timings
16: S Main St & E 213th St

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Volume (vph) | 292 | 303 | 670 | 161 | 119 | 537 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 16 | 16 | 16 | 16 | 12 | 12 |
| Storage Length (ft) | 0 | 0 | | 0 | 90 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | 0.931 | | 0.971 | | | |
| Flt Protected | 0.976 | | | | 0.950 | |
| Satd. Flow (prot) | 1918 | 0 | 3895 | 0 | 1770 | 3539 |
| Flt Permitted | 0.976 | | | | 0.249 | |
| Satd. Flow (perm) | 1918 | 0 | 3895 | 0 | 464 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 117 | | 75 | | | |
| Link Speed (mph) | 30 | | 35 | | | 45 |
| Link Distance (ft) | 4544 | | 1360 | | | 2482 |
| Travel Time (s) | 103.3 | | 26.5 | | | 37.6 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 317 | 329 | 728 | 175 | 129 | 584 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 646 | 0 | 903 | 0 | 129 | 584 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 28 | | 24 | | | 24 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | | 2 | | 1 | 2 |
| Detector Template | Left | | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Perm | | NA | | Perm | NA |
| Protected Phases | | | 2 | | | 6 |
| Permitted Phases | 8 | | | | 6 | |

Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019

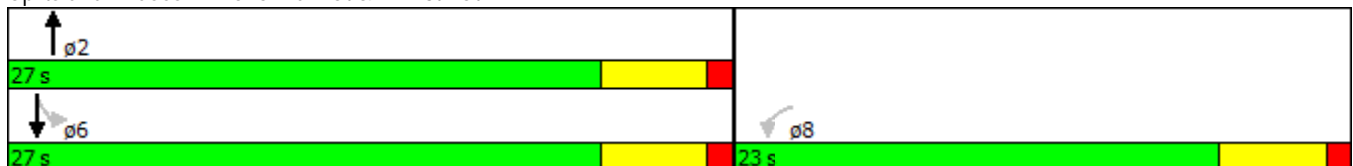


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-----|-------|-----|-------|-------|
| Detector Phase | 8 | | 2 | | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 23.0 | | 27.0 | | 27.0 | 27.0 |
| Total Split (%) | 46.0% | | 54.0% | | 54.0% | 54.0% |
| Maximum Green (s) | 18.0 | | 22.0 | | 22.0 | 22.0 |
| Yellow Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | | Max | | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | | 0 | 0 |
| Act Effect Green (s) | 16.8 | | 22.1 | | 22.1 | 22.1 |
| Actuated g/C Ratio | 0.34 | | 0.45 | | 0.45 | 0.45 |
| v/c Ratio | 0.88 | | 0.50 | | 0.62 | 0.37 |
| Control Delay | 28.4 | | 10.1 | | 28.9 | 10.0 |
| Queue Delay | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Delay | 28.4 | | 10.1 | | 28.9 | 10.0 |
| LOS | C | | B | | C | A |
| Approach Delay | 28.4 | | 10.1 | | | 13.4 |
| Approach LOS | C | | B | | | B |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 50 |
| Actuated Cycle Length: | 48.9 |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.88 |
| Intersection Signal Delay: | 16.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 77.5% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 16: S Main St & E 213th St



Lanes, Volumes, Timings
17: S Avalon Blvd & E 213th St

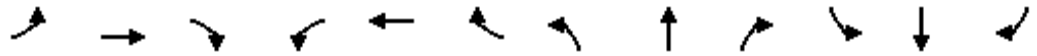
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 237 | 201 | 85 | 123 | 236 | 66 | 105 | 821 | 135 | 57 | 871 | 173 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 70 | | 0 | 120 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.955 | | | 0.967 | | | 0.979 | | | 0.975 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 2016 | 0 | 1770 | 3879 | 0 | 1770 | 5642 | 0 | 1770 | 5619 | 0 |
| Flt Permitted | 0.553 | | | 0.490 | | | 0.214 | | | 0.246 | | |
| Satd. Flow (perm) | 1030 | 2016 | 0 | 913 | 3879 | 0 | 399 | 5642 | 0 | 458 | 5619 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 45 | | | 72 | | | 87 | | | 114 | |
| Link Speed (mph) | | 30 | | | 30 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4544 | | | 967 | | | 1397 | | | 1230 | |
| Travel Time (s) | | 103.3 | | | 22.0 | | | 27.2 | | | 24.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 258 | 218 | 92 | 134 | 257 | 72 | 114 | 892 | 147 | 62 | 947 | 188 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 258 | 310 | 0 | 134 | 329 | 0 | 114 | 1039 | 0 | 62 | 1135 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |

Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

1/3/2019

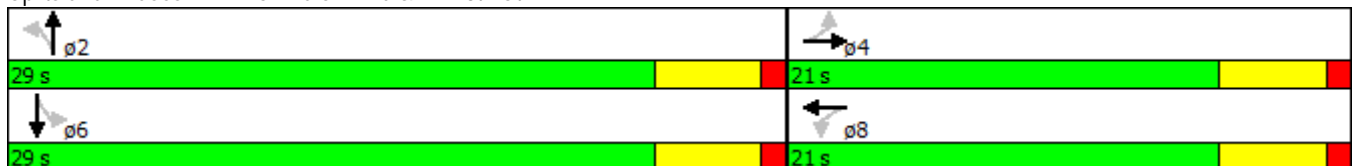


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Total Split (%) | 42.0% | 42.0% | | 42.0% | 42.0% | | 58.0% | 58.0% | | 58.0% | 58.0% | |
| Maximum Green (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 14.7 | 14.7 | | 14.7 | 14.7 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Actuated g/C Ratio | 0.30 | 0.30 | | 0.30 | 0.30 | | 0.49 | 0.49 | | 0.49 | 0.49 | |
| v/c Ratio | 0.83 | 0.48 | | 0.49 | 0.27 | | 0.58 | 0.37 | | 0.28 | 0.40 | |
| Control Delay | 41.7 | 14.6 | | 20.8 | 10.5 | | 26.4 | 7.7 | | 11.9 | 7.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 41.7 | 14.6 | | 20.8 | 10.5 | | 26.4 | 7.7 | | 11.9 | 7.7 | |
| LOS | D | B | | C | B | | C | A | | B | A | |
| Approach Delay | | 26.9 | | | 13.4 | | | 9.5 | | | 7.9 | |
| Approach LOS | | C | | | B | | | A | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 50 |
| Actuated Cycle Length: | 48.8 |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.83 |
| Intersection Signal Delay: | 12.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 65.7% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 17: S Avalon Blvd & E 213th St



Lanes, Volumes, Timings
18: S Figueroa St & W Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 144 | 324 | 435 | 37 | 426 | 46 | 344 | 517 | 144 | 44 | 367 | 309 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 213 | | 75 | 152 | | 0 | 230 | | 0 | 240 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 2 | | 0 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 |
| Frt | | | 0.850 | | 0.985 | | | 0.967 | | | 0.931 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3486 | 0 | 3433 | 3422 | 0 | 3433 | 3295 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3486 | 0 | 3433 | 3422 | 0 | 3433 | 3295 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 346 | | 17 | | | 56 | | | 243 | |
| Link Speed (mph) | | 35 | | | 35 | | | 40 | | | 40 | |
| Link Distance (ft) | | 1243 | | | 2441 | | | 713 | | | 3767 | |
| Travel Time (s) | | 24.2 | | | 47.6 | | | 12.2 | | | 64.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 157 | 352 | 473 | 40 | 463 | 50 | 374 | 562 | 157 | 48 | 399 | 336 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 157 | 352 | 473 | 40 | 513 | 0 | 374 | 719 | 0 | 48 | 735 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 18: S Figueroa St & W Carson St

1/3/2019

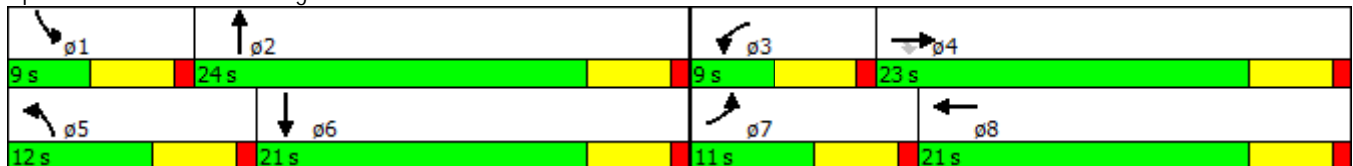


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 11.0 | 23.0 | 23.0 | 9.0 | 21.0 | | 12.0 | 24.0 | | 9.0 | 21.0 | |
| Total Split (%) | 16.9% | 35.4% | 35.4% | 13.8% | 32.3% | | 18.5% | 36.9% | | 13.8% | 32.3% | |
| Maximum Green (s) | 6.0 | 18.0 | 18.0 | 4.0 | 16.0 | | 7.0 | 19.0 | | 4.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 6.0 | 21.3 | 21.3 | 4.0 | 13.8 | | 7.0 | 22.8 | | 4.0 | 16.0 | |
| Actuated g/C Ratio | 0.10 | 0.34 | 0.34 | 0.06 | 0.22 | | 0.11 | 0.36 | | 0.06 | 0.25 | |
| v/c Ratio | 0.93 | 0.29 | 0.62 | 0.36 | 0.66 | | 0.98 | 0.56 | | 0.22 | 0.72 | |
| Control Delay | 87.8 | 17.1 | 9.8 | 38.2 | 26.0 | | 73.3 | 18.4 | | 31.4 | 19.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 87.8 | 17.1 | 9.8 | 38.2 | 26.0 | | 73.3 | 18.4 | | 31.4 | 19.1 | |
| LOS | F | B | A | D | C | | E | B | | C | B | |
| Approach Delay | | 24.9 | | | 26.9 | | | 37.2 | | | 19.8 | |
| Approach LOS | | C | | | C | | | D | | | B | |

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 62.9
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 28.0
 Intersection LOS: C
 Intersection Capacity Utilization 67.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 18: S Figueroa St & W Carson St



Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

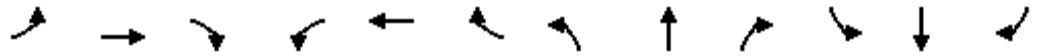
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↘ | ↑↑ | ↗ | ↘ | ↑↑ | ↗ | ↘ | ↑↑↑ | | ↘ | ↑↑↑ | |
| Volume (vph) | 82 | 324 | 99 | 50 | 314 | 56 | 131 | 727 | 114 | 53 | 524 | 76 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 210 | | 70 | 220 | | 70 | 115 | | 0 | 175 | | 500 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | | 0.850 | | 0.980 | | | 0.981 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 4984 | 0 | 1770 | 4989 | 0 |
| Flt Permitted | 0.547 | | | 0.541 | | | 0.392 | | | 0.300 | | |
| Satd. Flow (perm) | 1019 | 3539 | 1583 | 1008 | 3539 | 1583 | 730 | 4984 | 0 | 559 | 4989 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 108 | | | 61 | | 81 | | | | 74 |
| Link Speed (mph) | | 35 | | | 35 | | | 35 | | | | 35 |
| Link Distance (ft) | | 2441 | | | 4293 | | | 978 | | | | 1360 |
| Travel Time (s) | | 47.6 | | | 83.6 | | | 19.1 | | | | 26.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 89 | 352 | 108 | 54 | 341 | 61 | 142 | 790 | 124 | 58 | 570 | 83 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 89 | 352 | 108 | 54 | 341 | 61 | 142 | 914 | 0 | 58 | 653 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | | 6 | | |

Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019

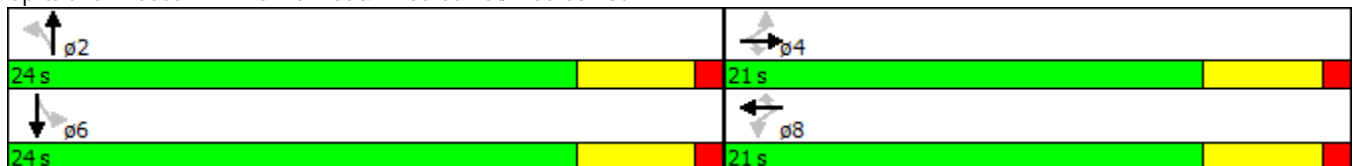


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | 46.7% | 46.7% | 46.7% | 46.7% | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 19.1 | 19.1 | | 19.1 | 19.1 | |
| Actuated g/C Ratio | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.48 | 0.48 | | 0.48 | 0.48 | |
| v/c Ratio | 0.33 | 0.38 | 0.22 | 0.20 | 0.37 | 0.13 | 0.40 | 0.37 | | 0.21 | 0.27 | |
| Control Delay | 15.0 | 12.9 | 4.2 | 12.8 | 12.7 | 4.5 | 12.4 | 6.9 | | 9.9 | 6.3 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 15.0 | 12.9 | 4.2 | 12.8 | 12.7 | 4.5 | 12.4 | 6.9 | | 9.9 | 6.3 | |
| LOS | B | B | A | B | B | A | B | A | | A | A | |
| Approach Delay | | 11.5 | | | 11.6 | | | 7.7 | | | 6.6 | |
| Approach LOS | | B | | | B | | | A | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 39.6 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.40 |
| Intersection Signal Delay: | 8.8 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 49.8% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 19: S Main St & W Carson St/E Carson St



Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 115 | 457 | 65 | 383 | 318 | 96 | 60 | 727 | 503 | 134 | 733 | 54 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 2 | | 0 | 2 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.981 | | | 0.965 | | | 0.939 | | | 0.990 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3472 | 0 | 3433 | 3415 | 0 | 1770 | 4775 | 0 | 1770 | 5034 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3472 | 0 | 3433 | 3415 | 0 | 1770 | 4775 | 0 | 1770 | 5034 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 21 | | | 56 | | | 244 | | | 16 | |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | 1397 | |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | 27.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 125 | 497 | 71 | 416 | 346 | 104 | 65 | 790 | 547 | 146 | 797 | 59 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 125 | 568 | 0 | 416 | 450 | 0 | 65 | 1337 | 0 | 146 | 856 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |

Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019

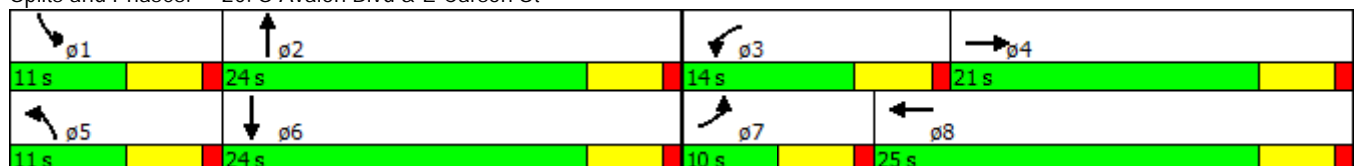


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 10.0 | 21.0 | | 14.0 | 25.0 | | 11.0 | 24.0 | | 11.0 | 24.0 | |
| Total Split (%) | 14.3% | 30.0% | | 20.0% | 35.7% | | 15.7% | 34.3% | | 15.7% | 34.3% | |
| Maximum Green (s) | 5.0 | 16.0 | | 9.0 | 20.0 | | 6.0 | 19.0 | | 6.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 5.0 | 14.7 | | 9.0 | 20.8 | | 5.9 | 19.0 | | 6.0 | 23.5 | |
| Actuated g/C Ratio | 0.07 | 0.21 | | 0.13 | 0.30 | | 0.09 | 0.28 | | 0.09 | 0.34 | |
| v/c Ratio | 0.50 | 0.75 | | 0.92 | 0.42 | | 0.43 | 0.89 | | 0.95 | 0.49 | |
| Control Delay | 38.5 | 31.3 | | 60.0 | 18.8 | | 39.6 | 29.1 | | 97.0 | 20.2 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 38.5 | 31.3 | | 60.0 | 18.8 | | 39.6 | 29.1 | | 97.0 | 20.2 | |
| LOS | D | C | | E | B | | D | C | | F | C | |
| Approach Delay | | 32.6 | | | 38.6 | | | 29.6 | | | 31.4 | |
| Approach LOS | | C | | | D | | | C | | | C | |

Intersection Summary

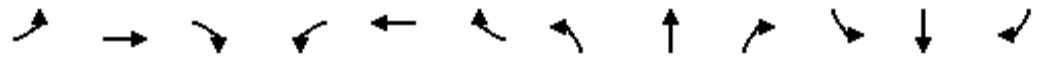
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 68.7 |
| Natural Cycle: | 70 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 32.5 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 75.0% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St



Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | ↘ | ↑↑ | ↗ | ↘ | ↑↑↑ | | ↘ | | ↗ | | | ↗ |
| Volume (vph) | 7 | 570 | 610 | 108 | 1035 | 0 | 95 | 0 | 216 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 50 | | 180 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | 0.850 | | | | | | 0.850 | | | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (prot) | 1593 | 3185 | 1425 | 1593 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Fl _t Permitted | 0.235 | | | 0.417 | | | 0.950 | | | | | |
| Satd. Flow (perm) | 394 | 3185 | 1425 | 699 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 663 | | | | | | 201 | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 2121 | | | 469 | | | 428 | | | | 162 |
| Travel Time (s) | | 36.2 | | | 8.0 | | | 7.3 | | | | 2.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 8 | 620 | 663 | 117 | 1125 | 0 | 103 | 0 | 235 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 8 | 620 | 663 | 117 | 1125 | 0 | 103 | 0 | 235 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | | 1 | | | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | | Right | | | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | | 20 | | | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | | 20 | | | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | | | | | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | | Perm | | | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | | 2 | | | 6 |

Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019

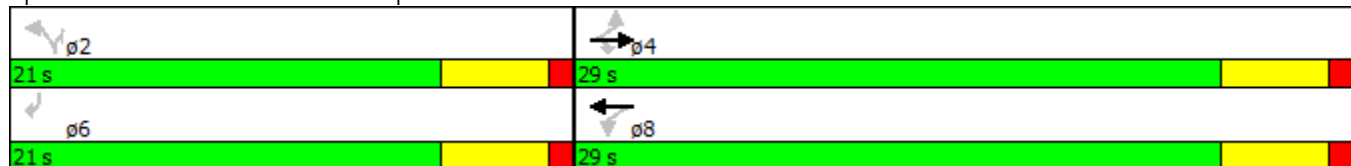


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|-----|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (s) | 29.0 | 29.0 | 29.0 | 29.0 | 29.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (%) | 58.0% | 58.0% | 58.0% | 58.0% | 58.0% | | 42.0% | | 42.0% | | | 42.0% |
| Maximum Green (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | | 16.0 | | 16.0 | | | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | | 1.0 | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | 3.0 |
| Recall Mode | None | None | None | None | None | | Min | | Min | | | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | | 11.0 | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Act Effect Green (s) | 17.6 | 17.6 | 17.6 | 17.6 | 17.6 | | 8.2 | | 8.2 | | | |
| Actuated g/C Ratio | 0.49 | 0.49 | 0.49 | 0.49 | 0.49 | | 0.23 | | 0.23 | | | |
| v/c Ratio | 0.04 | 0.40 | 0.64 | 0.34 | 0.50 | | 0.29 | | 0.49 | | | |
| Control Delay | 5.9 | 6.9 | 4.0 | 9.4 | 7.2 | | 15.2 | | 7.9 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | |
| Total Delay | 5.9 | 6.9 | 4.0 | 9.4 | 7.2 | | 15.2 | | 7.9 | | | |
| LOS | A | A | A | A | A | | B | | A | | | |
| Approach Delay | | 5.4 | | | | | | | | | | 7.4 |
| Approach LOS | | A | | | | | | | | | | A |

Intersection Summary

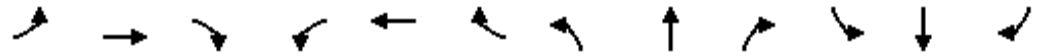
Area Type: CBD
 Cycle Length: 50
 Actuated Cycle Length: 36.2
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 6.8
 Intersection Capacity Utilization 56.9%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 21: I-405 SB Ramps & E Carson St



Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 83 | 658 | 39 | 14 | 751 | 245 | 7 | 4 | 4 | 21 | 15 | 422 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 70 | | 0 | 100 | | 180 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.992 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.968 | | | 0.971 | |
| Satd. Flow (prot) | 1770 | 3511 | 0 | 1770 | 3539 | 1583 | 0 | 1803 | 1583 | 0 | 1809 | 1583 |
| Flt Permitted | 0.261 | | | 0.293 | | | | 0.898 | | | 0.888 | |
| Satd. Flow (perm) | 486 | 3511 | 0 | 546 | 3539 | 1583 | 0 | 1673 | 1583 | 0 | 1654 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 15 | | | | 266 | | | 48 | | | 61 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 469 | | | 2039 | | | 158 | | | 364 | |
| Travel Time (s) | | 8.0 | | | 34.8 | | | 2.7 | | | 6.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 90 | 715 | 42 | 15 | 816 | 266 | 8 | 4 | 4 | 23 | 16 | 459 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 90 | 757 | 0 | 15 | 816 | 266 | 0 | 12 | 4 | 0 | 39 | 459 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | 6 |

Lanes, Volumes, Timings

22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019

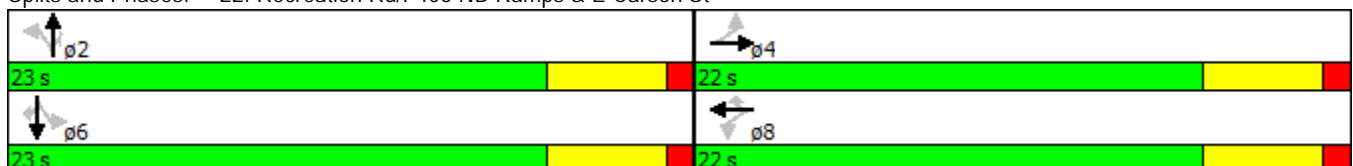


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | | 22.0 | 22.0 | 22.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | | 48.9% | 48.9% | 48.9% | 51.1% | 51.1% | 51.1% | 51.1% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 15.3 | 15.3 | | 15.3 | 15.3 | 15.3 | | 18.1 | 18.1 | | 18.1 | 18.1 |
| Actuated g/C Ratio | 0.35 | 0.35 | | 0.35 | 0.35 | 0.35 | | 0.42 | 0.42 | | 0.42 | 0.42 |
| v/c Ratio | 0.53 | 0.61 | | 0.08 | 0.65 | 0.36 | | 0.02 | 0.01 | | 0.06 | 0.66 |
| Control Delay | 25.1 | 13.6 | | 10.3 | 14.6 | 3.4 | | 8.4 | 0.0 | | 8.6 | 15.5 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 25.1 | 13.6 | | 10.3 | 14.6 | 3.4 | | 8.4 | 0.0 | | 8.6 | 15.5 |
| LOS | C | B | | B | B | A | | A | A | | A | B |
| Approach Delay | | 14.8 | | | 11.8 | | | 6.3 | | | 15.0 | |
| Approach LOS | | B | | | B | | | A | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 43.4 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.66 |
| Intersection Signal Delay: | 13.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 62.7% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 22: Recreation Rd/I-405 NB Ramps & E Carson St



Lanes, Volumes, Timings
 1: S Figueroa St & I-405 SB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | ↑↑ | | ↑ | ↑↑ |
| Volume (vph) | 0 | 0 | 738 | 115 | 592 | 1175 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 220 | |
| Storage Lanes | 0 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | | | 0.980 | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 3468 | 0 | 1770 | 3539 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 3468 | 0 | 1770 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 607 | | 2451 | | | 246 |
| Travel Time (s) | 10.3 | | 41.8 | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 802 | 125 | 643 | 1277 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 927 | 0 | 643 | 1277 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Yield | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 63.5% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings
 2: S Figueroa St & I-405 NB Ramps

1/3/2019



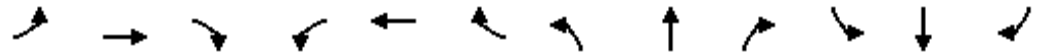
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 77 | 131 | 747 | 0 | 0 | 1675 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | | 0.850 | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 724 | | 246 | | | 1243 |
| Travel Time (s) | 12.3 | | 4.2 | | | 21.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 84 | 142 | 812 | 0 | 0 | 1821 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 84 | 142 | 812 | 0 | 0 | 1821 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 63.5% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings
3: S Main St & I-405 SB Ramps

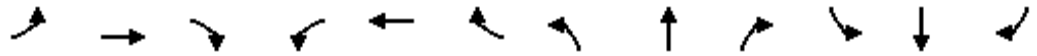
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 17 | 636 | 45 | 0 | 0 | 0 | 0 | 598 | 120 | 226 | 1072 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 250 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr't | | 0.990 | | | | | | 0.975 | | | | |
| Flt Protected | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1844 | 0 | 0 | 0 | 0 | 0 | 3451 | 0 | 1770 | 3539 | 0 |
| Flt Permitted | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1844 | 0 | 0 | 0 | 0 | 0 | 3451 | 0 | 1770 | 3539 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 5 | | | | | | 28 | | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 607 | | | 169 | | | 2341 | | | 290 | |
| Travel Time (s) | | 10.3 | | | 2.9 | | | 35.5 | | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 18 | 691 | 49 | 0 | 0 | 0 | 0 | 650 | 130 | 246 | 1165 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 18 | 740 | 0 | 0 | 0 | 0 | 0 | 780 | 0 | 246 | 1165 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | | | | | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | | | | | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | | | | | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 4 | | | | | | | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 3: S Main St & I-405 SB Ramps

1/3/2019

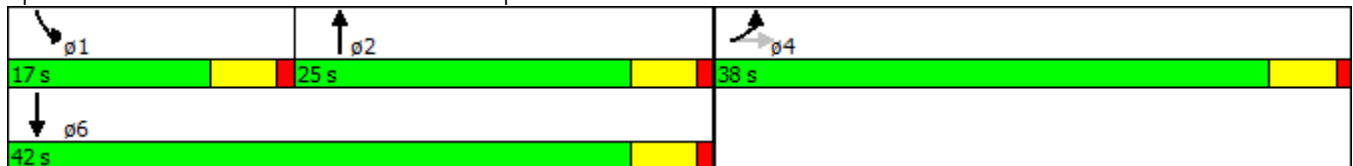


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 38.0 | 38.0 | | | | | | 25.0 | | 17.0 | 42.0 | |
| Total Split (%) | 47.5% | 47.5% | | | | | | 31.3% | | 21.3% | 52.5% | |
| Maximum Green (s) | 33.0 | 33.0 | | | | | | 20.0 | | 12.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | | | | | Max | | None | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | 0 | |
| Act Effct Green (s) | 32.9 | 32.9 | | | | | | 20.0 | | 12.0 | 37.0 | |
| Actuated g/C Ratio | 0.41 | 0.41 | | | | | | 0.25 | | 0.15 | 0.46 | |
| v/c Ratio | 0.02 | 0.97 | | | | | | 0.88 | | 0.93 | 0.71 | |
| Control Delay | 14.2 | 51.4 | | | | | | 41.2 | | 75.8 | 20.2 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 49.3 | |
| Total Delay | 14.2 | 51.4 | | | | | | 41.2 | | 75.8 | 69.5 | |
| LOS | B | D | | | | | | D | | E | E | |
| Approach Delay | | 50.5 | | | | | | 41.2 | | | 70.6 | |
| Approach LOS | | D | | | | | | D | | | E | |

Intersection Summary

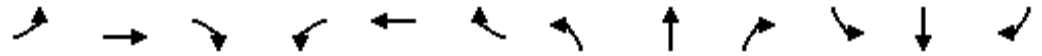
Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 79.9
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 57.7
 Intersection LOS: E
 Intersection Capacity Utilization 81.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: S Main St & I-405 SB Ramps



Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

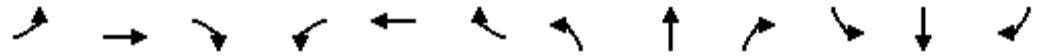
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | ↔ | | ↗ | ↕ | | | ↕ | |
| Volume (vph) | 0 | 0 | 0 | 59 | 120 | 235 | 24 | 605 | 0 | 0 | 1223 | 60 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.915 | | | | | | 0.993 | |
| Flt Protected | | | | | 0.993 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3216 | 0 | 1770 | 3539 | 0 | 0 | 3514 | 0 |
| Flt Permitted | | | | | 0.993 | | 0.166 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3216 | 0 | 309 | 3539 | 0 | 0 | 3514 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 181 | | | | | | 13 | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 724 | | | 336 | | | 290 | | | 724 | |
| Travel Time (s) | | 12.3 | | | 5.7 | | | 4.4 | | | 11.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 64 | 130 | 255 | 26 | 658 | 0 | 0 | 1329 | 65 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 449 | 0 | 26 | 658 | 0 | 0 | 1394 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | | 2 | | | | | |
| Detector Phase | | | | 8 | 8 | | 2 | 2 | | | | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | | 21.0 | 21.0 | | | | 21.0 |

Lanes, Volumes, Timings
 4: S Main St & I-405 NB Ramps

1/3/2019

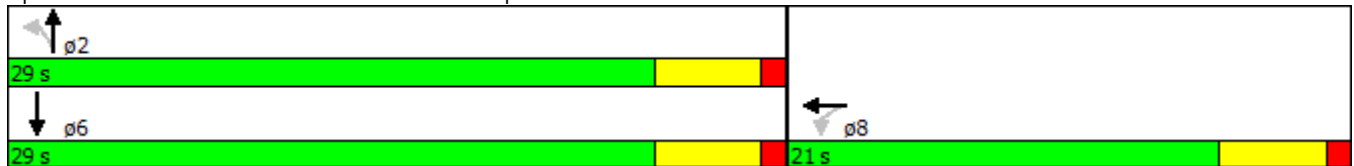


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-------|-------|-----|-----|-------|-----|
| Total Split (s) | | | | 21.0 | 21.0 | | 29.0 | 29.0 | | | 29.0 | |
| Total Split (%) | | | | 42.0% | 42.0% | | 58.0% | 58.0% | | | 58.0% | |
| Maximum Green (s) | | | | 16.0 | 16.0 | | 24.0 | 24.0 | | | 24.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | | 1.0 | 1.0 | | | 1.0 | |
| Lost Time Adjust (s) | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | None | | Max | Max | | | Max | |
| Walk Time (s) | | | | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | | 11.0 | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | | 0 | 0 | | | 0 | |
| Act Effect Green (s) | | | | | 9.4 | | 24.1 | 24.1 | | | 24.1 | |
| Actuated g/C Ratio | | | | | 0.22 | | 0.55 | 0.55 | | | 0.55 | |
| v/c Ratio | | | | | 0.54 | | 0.15 | 0.34 | | | 0.71 | |
| Control Delay | | | | | 11.1 | | 8.7 | 6.4 | | | 10.5 | |
| Queue Delay | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Delay | | | | | 11.1 | | 8.7 | 6.4 | | | 10.5 | |
| LOS | | | | | B | | A | A | | | B | |
| Approach Delay | | | | | 11.1 | | | 6.5 | | | 10.5 | |
| Approach LOS | | | | | B | | | A | | | B | |

Intersection Summary

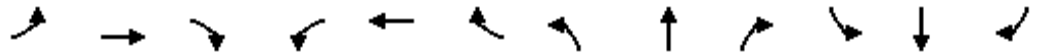
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 50 |
| Actuated Cycle Length: | 43.5 |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.71 |
| Intersection Signal Delay: | 9.5 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 81.6% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 4: S Main St & I-405 NB Ramps



Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↕↕↕ | | ↖ | ↕↕ | ↖ | ↖ | ↕↕ | ↖ | ↖ | ↕↕ | ↖ |
| Volume (vph) | 58 | 842 | 164 | 201 | 665 | 117 | 53 | 442 | 355 | 195 | 576 | 226 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.976 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4963 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4963 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 53 | | | | 187 | | | 199 | | | 246 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | | 40 |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | | 2451 |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | | 41.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 63 | 915 | 178 | 218 | 723 | 127 | 58 | 480 | 386 | 212 | 626 | 246 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 63 | 1093 | 0 | 218 | 723 | 127 | 58 | 480 | 386 | 212 | 626 | 246 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

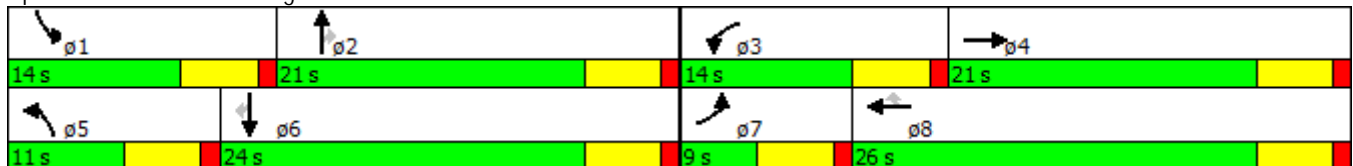


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 9.0 | 21.0 | | 14.0 | 26.0 | 26.0 | 11.0 | 21.0 | 21.0 | 14.0 | 24.0 | 24.0 |
| Total Split (%) | 12.9% | 30.0% | | 20.0% | 37.1% | 37.1% | 15.7% | 30.0% | 30.0% | 20.0% | 34.3% | 34.3% |
| Maximum Green (s) | 4.0 | 16.0 | | 9.0 | 21.0 | 21.0 | 6.0 | 16.0 | 16.0 | 9.0 | 19.0 | 19.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 4.0 | 16.0 | | 9.0 | 22.8 | 22.8 | 5.9 | 16.0 | 16.0 | 9.0 | 23.4 | 23.4 |
| Actuated g/C Ratio | 0.06 | 0.23 | | 0.13 | 0.33 | 0.33 | 0.08 | 0.23 | 0.23 | 0.13 | 0.33 | 0.33 |
| v/c Ratio | 0.62 | 0.93 | | 0.96 | 0.63 | 0.20 | 0.39 | 0.59 | 0.75 | 0.93 | 0.53 | 0.36 |
| Control Delay | 61.2 | 40.7 | | 85.1 | 23.6 | 1.9 | 38.4 | 27.6 | 22.9 | 79.2 | 22.2 | 4.8 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 61.2 | 40.7 | | 85.1 | 23.6 | 1.9 | 38.4 | 27.6 | 22.9 | 79.2 | 22.2 | 4.8 |
| LOS | E | D | | F | C | A | D | C | C | E | C | A |
| Approach Delay | | 41.8 | | | 33.6 | | | 26.3 | | | 29.4 | |
| Approach LOS | | D | | | C | | | C | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Natural Cycle: | 70 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.96 |
| Intersection Signal Delay: | 33.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 70.7% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

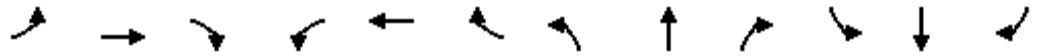
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 164 | 1097 | 116 | 242 | 789 | 60 | 42 | 404 | 295 | 128 | 753 | 151 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.986 | | | 0.989 | | | 0.937 | | | 0.975 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 5014 | 0 | 1770 | 5029 | 0 | 1770 | 3316 | 0 | 1770 | 3451 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 5014 | 0 | 1770 | 5029 | 0 | 1770 | 3316 | 0 | 1770 | 3451 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 19 | | | 13 | | | 195 | | | 27 | |
| Link Speed (mph) | | 45 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1251 | | | 1668 | | | 534 | | | 2341 | |
| Travel Time (s) | | 19.0 | | | 25.3 | | | 8.1 | | | 35.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 178 | 1192 | 126 | 263 | 858 | 65 | 46 | 439 | 321 | 139 | 818 | 164 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 178 | 1318 | 0 | 263 | 923 | 0 | 46 | 760 | 0 | 139 | 982 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

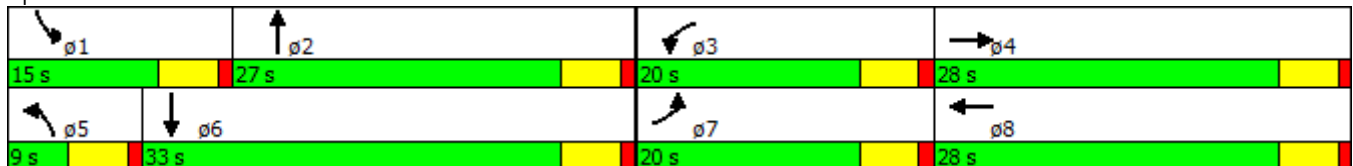


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 20.0 | 28.0 | | 20.0 | 28.0 | | 9.0 | 27.0 | | 15.0 | 33.0 | |
| Total Split (%) | 22.2% | 31.1% | | 22.2% | 31.1% | | 10.0% | 30.0% | | 16.7% | 36.7% | |
| Maximum Green (s) | 15.0 | 23.0 | | 15.0 | 23.0 | | 4.0 | 22.0 | | 10.0 | 28.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 13.0 | 23.0 | | 14.8 | 24.8 | | 4.0 | 22.0 | | 9.6 | 29.4 | |
| Actuated g/C Ratio | 0.15 | 0.26 | | 0.17 | 0.28 | | 0.04 | 0.25 | | 0.11 | 0.33 | |
| v/c Ratio | 0.69 | 1.01 | | 0.90 | 0.66 | | 0.58 | 0.79 | | 0.74 | 0.85 | |
| Control Delay | 50.6 | 61.4 | | 70.6 | 31.3 | | 72.3 | 30.3 | | 62.4 | 36.6 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 50.6 | 61.4 | | 70.6 | 31.3 | | 72.3 | 30.3 | | 62.4 | 36.6 | |
| LOS | D | E | | E | C | | E | C | | E | D | |
| Approach Delay | | 60.1 | | | 40.0 | | | 32.7 | | | 39.8 | |
| Approach LOS | | E | | | D | | | C | | | D | |

Intersection Summary

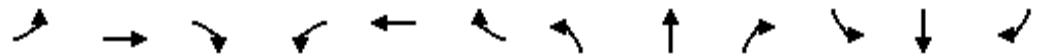
Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 89.4
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 45.2
 Intersection LOS: D
 Intersection Capacity Utilization 82.8%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

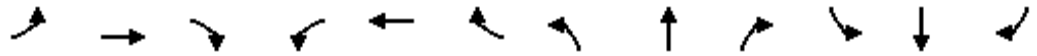
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1434 | 0 | 0 | 1083 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 155 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 1863 | 3539 | 1863 | 1863 | 3539 | 0 | 1770 | 1770 | 1863 | 1863 | 1770 | 1770 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 1863 | 3539 | 1863 | 1863 | 3539 | 0 | 1770 | 1770 | 1863 | 1863 | 1770 | 1770 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | 45 | | | 25 | | | | 50 |
| Link Distance (ft) | | 1668 | | | 3009 | | | 694 | | | | 308 |
| Travel Time (s) | | 25.3 | | | 45.6 | | | 18.9 | | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1559 | 0 | 0 | 1177 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | 0% | | | | | 0% |
| Lane Group Flow (vph) | 0 | 1559 | 0 | 0 | 1177 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Split | | Perm | Perm | | Perm |
| Protected Phases | | 4 | | | 8 | | 2 | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | 2 | 6 | 6 | 6 |

Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019

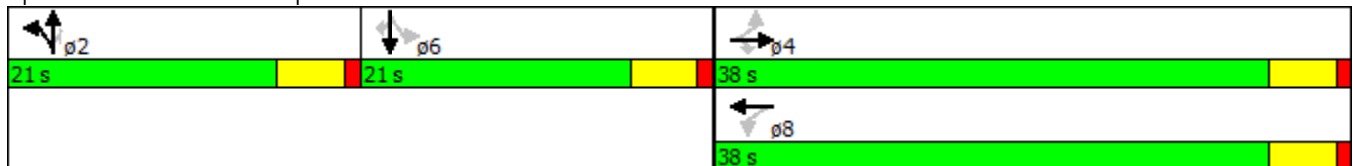


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 47.5% | 47.5% | 47.5% | 47.5% | 47.5% | | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% |
| Maximum Green (s) | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | 33.0 | | | 33.0 | | | | | | | |
| Actuated g/C Ratio | | 0.41 | | | 0.41 | | | | | | | |
| v/c Ratio | | 1.07 | | | 0.81 | | | | | | | |
| Control Delay | | 69.2 | | | 26.1 | | | | | | | |
| Queue Delay | | 0.0 | | | 0.0 | | | | | | | |
| Total Delay | | 69.2 | | | 26.1 | | | | | | | |
| LOS | | E | | | C | | | | | | | |
| Approach Delay | | 69.2 | | | 26.1 | | | | | | | |
| Approach LOS | | E | | | C | | | | | | | |

Intersection Summary
































| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Natural Cycle: | 80 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.07 |
| Intersection Signal Delay: | 50.6 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 43.8% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 7: Stamps Dr & E Del Amo Blvd



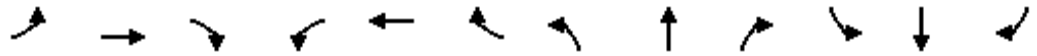
Lanes, Volumes, Timings
 8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|--|---|---|--|---|---|---|---|--|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |   |  |  |   |  |  |    |  |   |    |  |
| Volume (vph) | 203 | 907 | 237 | 253 | 638 | 143 | 179 | 941 | 204 | 337 | 885 | 260 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 1 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | 0.966 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4912 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4912 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 258 | | | 155 | | | 222 | | 78 | |
| Link Speed (mph) | | 45 | | 45 | | | 35 | | | 35 | | |
| Link Distance (ft) | | 3009 | | 3520 | | | 2946 | | | 3936 | | |
| Travel Time (s) | | 45.6 | | 53.3 | | | 57.4 | | | 76.7 | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 221 | 986 | 258 | 275 | 693 | 155 | 195 | 1023 | 222 | 366 | 962 | 283 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 221 | 986 | 258 | 275 | 693 | 155 | 195 | 1023 | 222 | 366 | 1245 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | 12 | | | 24 | | | 24 | | |
| Link Offset(ft) | | 0 | | 0 | | | 0 | | | 0 | | |
| Crosswalk Width(ft) | | 12 | | 12 | | | 12 | | | 12 | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | 94 | | | 94 | | | 94 | | |
| Detector 2 Size(ft) | | 6 | | 6 | | | 6 | | | 6 | | |
| Detector 2 Type | | Cl+Ex | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
 8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

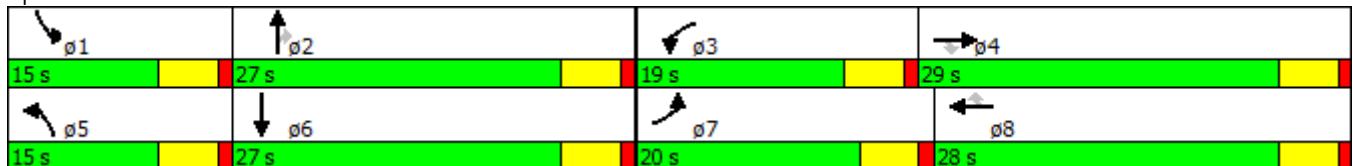


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 20.0 | 29.0 | 29.0 | 19.0 | 28.0 | 28.0 | 15.0 | 27.0 | 27.0 | 15.0 | 27.0 | 27.0 |
| Total Split (%) | 22.2% | 32.2% | 32.2% | 21.1% | 31.1% | 31.1% | 16.7% | 30.0% | 30.0% | 16.7% | 30.0% | 30.0% |
| Maximum Green (s) | 15.0 | 24.0 | 24.0 | 14.0 | 23.0 | 23.0 | 10.0 | 22.0 | 22.0 | 10.0 | 22.0 | 22.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 14.1 | 24.0 | 24.0 | 14.0 | 23.9 | 23.9 | 10.0 | 22.0 | 22.0 | 10.0 | 22.0 | 22.0 |
| Actuated g/C Ratio | 0.16 | 0.27 | 0.27 | 0.16 | 0.27 | 0.27 | 0.11 | 0.24 | 0.24 | 0.11 | 0.24 | 0.24 |
| v/c Ratio | 0.80 | 1.05 | 0.42 | 1.00 | 0.74 | 0.29 | 0.99 | 0.82 | 0.40 | 0.96 | 0.99 | 0.99 |
| Control Delay | 58.3 | 75.5 | 5.9 | 94.7 | 36.0 | 6.2 | 105.8 | 38.8 | 6.4 | 78.8 | 55.7 | 55.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 58.3 | 75.5 | 5.9 | 94.7 | 36.0 | 6.2 | 105.8 | 38.8 | 6.4 | 78.8 | 55.7 | 55.7 |
| LOS | E | E | A | F | D | A | F | D | A | E | E | E |
| Approach Delay | | 60.7 | | | 46.3 | | | 42.9 | | | | 60.9 |
| Approach LOS | | E | | | D | | | D | | | | E |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.05 |
| Intersection Signal Delay: | 53.3 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 88.6% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 350 | 189 | 627 | 453 | 742 | 217 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | 235 | | | 250 |
| Storage Lanes | 2 | 0 | 2 | | | 1 |
| Taper Length (ft) | 25 | | 25 | | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 |
| Frt | 0.947 | | | | | 0.850 |
| Flt Protected | 0.969 | | 0.950 | | | |
| Satd. Flow (prot) | 3316 | 0 | 3433 | 3539 | 3539 | 1583 |
| Flt Permitted | 0.969 | | 0.329 | | | |
| Satd. Flow (perm) | 3316 | 0 | 1189 | 3539 | 3539 | 1583 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | 129 | | | | | 236 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 170 | | | 828 | 791 | |
| Travel Time (s) | 2.9 | | | 14.1 | 13.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 380 | 205 | 682 | 492 | 807 | 236 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 585 | 0 | 682 | 492 | 807 | 236 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 24 | | | 24 | 24 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 12 | | | 12 | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Number of Detectors | 1 | | 1 | 2 | 2 | 1 |
| Detector Template | Left | | Left | Thru | Thru | Right |
| Leading Detector (ft) | 20 | | 20 | 100 | 100 | 20 |
| Trailing Detector (ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 20 | 6 | 6 | 20 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | | 94 | 94 | |
| Detector 2 Size(ft) | | | | 6 | 6 | |
| Detector 2 Type | | | | Cl+Ex | Cl+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | | 2 | | | 6 |
| Detector Phase | 4 | | 2 | 2 | 6 | 6 |

Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|-------|-----|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 54.0 | 54.0 | 54.0 | 54.0 |
| Total Split (%) | 28.0% | | 72.0% | 72.0% | 72.0% | 72.0% |
| Maximum Green (s) | 16.0 | | 49.0 | 49.0 | 49.0 | 49.0 |
| Yellow Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 14.3 | | 49.0 | 49.0 | 49.0 | 49.0 |
| Actuated g/C Ratio | 0.20 | | 0.67 | 0.67 | 0.67 | 0.67 |
| v/c Ratio | 0.78 | | 0.86 | 0.21 | 0.34 | 0.21 |
| Control Delay | 29.7 | | 24.0 | 5.2 | 5.9 | 1.2 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 29.7 | | 24.0 | 5.2 | 5.9 | 1.2 |
| LOS | C | | C | A | A | A |
| Approach Delay | 29.7 | | | 16.1 | 4.9 | |
| Approach LOS | C | | | B | A | |

Intersection Summary












Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 73.3
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 14.8
 Intersection LOS: B
 Intersection Capacity Utilization 66.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 9: S Figueroa St & I-110 NB Ramps



Lanes, Volumes, Timings
10: S Main St & Lenardo Rd

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  |  |  | |  |  |
| Volume (vph) | 0 | 0 | 745 | 0 | 0 | 1104 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 145 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 1863 | 1863 | 3539 | 0 | 1863 | 3539 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 1863 | 1863 | 3539 | 0 | 1863 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 25 | | 45 | | | 45 |
| Link Distance (ft) | 479 | | 971 | | | 534 |
| Travel Time (s) | 13.1 | | 14.7 | | | 8.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 810 | 0 | 0 | 1200 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 810 | 0 | 0 | 1200 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | Perm | NA | | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Detector Phase | 8 | 8 | 2 | | 6 | 6 |

Lanes, Volumes, Timings
 10: S Main St & Lenardo Rd

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 109.0 | | 109.0 | 109.0 |
| Total Split (%) | 16.2% | 16.2% | 83.8% | | 83.8% | 83.8% |
| Maximum Green (s) | 16.0 | 16.0 | 104.0 | | 104.0 | 104.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | None | Max | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | | | 120.0 | | | 120.0 |
| Actuated g/C Ratio | | | 1.00 | | | 1.00 |
| v/c Ratio | | | 0.23 | | | 0.34 |
| Control Delay | | | 0.2 | | | 0.3 |
| Queue Delay | | | 0.0 | | | 0.0 |
| Total Delay | | | 0.2 | | | 0.3 |
| LOS | | | A | | | A |
| Approach Delay | | | 0.2 | | | 0.3 |
| Approach LOS | | | A | | | A |

Intersection Summary

| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 130 |
| Actuated Cycle Length: | 120 |
| Natural Cycle: | 45 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.34 |
| Intersection Signal Delay: | 0.2 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 34.7% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 10: S Main St & Lenardo Rd



Lanes, Volumes, Timings

11: S Figueroa St & W Torrance Blvd

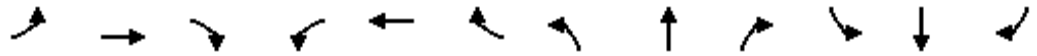
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 600 | 684 | 158 | 48 | 369 | 161 | 85 | 330 | 50 | 115 | 439 | 370 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 180 | | 0 | 115 | | 0 | 255 | | 0 | 185 | | 185 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.91 | 0.91 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.978 | | | | 0.850 | | 0.980 | | | | 0.850 |
| Flt Protected | 0.950 | 0.989 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1610 | 3716 | 0 | 1770 | 3539 | 1583 | 1770 | 3931 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.516 | 0.754 | | 0.149 | | | 0.437 | | | 0.495 | | |
| Satd. Flow (perm) | 875 | 2833 | 0 | 278 | 3539 | 1583 | 814 | 3931 | 0 | 922 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 48 | | | | 175 | | 28 | | | | 402 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 368 | | | 1713 | | | 3767 | | | | 828 |
| Travel Time (s) | | 6.3 | | | 29.2 | | | 64.2 | | | | 14.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 652 | 743 | 172 | 52 | 401 | 175 | 92 | 359 | 54 | 125 | 477 | 402 |
| Shared Lane Traffic (%) | 41% | | | | | | | | | | | |
| Lane Group Flow (vph) | 385 | 1182 | 0 | 52 | 401 | 175 | 92 | 413 | 0 | 125 | 477 | 402 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019

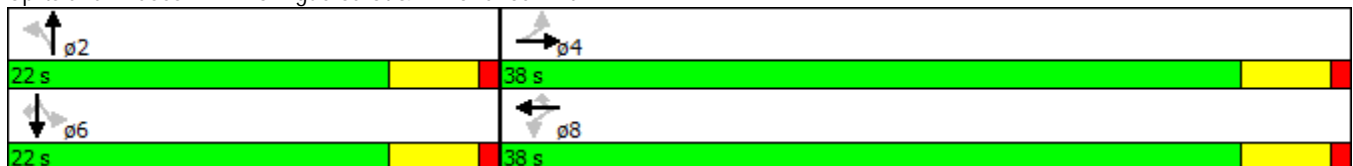


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 38.0 | | 38.0 | 38.0 | 38.0 | 22.0 | 22.0 | | 22.0 | 22.0 | 22.0 |
| Total Split (%) | 63.3% | 63.3% | | 63.3% | 63.3% | 63.3% | 36.7% | 36.7% | | 36.7% | 36.7% | 36.7% |
| Maximum Green (s) | 33.0 | 33.0 | | 33.0 | 33.0 | 33.0 | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | 30.1 | 30.1 | | 30.1 | 30.1 | 30.1 | 17.1 | 17.1 | | 17.1 | 17.1 | 17.1 |
| Actuated g/C Ratio | 0.53 | 0.53 | | 0.53 | 0.53 | 0.53 | 0.30 | 0.30 | | 0.30 | 0.30 | 0.30 |
| v/c Ratio | 0.84 | 0.78 | | 0.36 | 0.22 | 0.19 | 0.38 | 0.35 | | 0.45 | 0.45 | 0.53 |
| Control Delay | 30.9 | 14.8 | | 16.0 | 7.4 | 1.9 | 22.9 | 16.4 | | 24.3 | 18.8 | 5.2 |
| Queue Delay | 0.0 | 0.4 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 30.9 | 15.1 | | 16.0 | 7.4 | 1.9 | 22.9 | 16.4 | | 24.3 | 18.8 | 5.2 |
| LOS | C | B | | B | A | A | C | B | | C | B | A |
| Approach Delay | | 19.0 | | | 6.6 | | | 17.6 | | | 14.0 | |
| Approach LOS | | B | | | A | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 57.3 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.84 |
| Intersection Signal Delay: | 15.3 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 71.5% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 11: S Figueroa St & W Torrance Blvd



Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕ | ↗ | | ↕ | | ↗ | ↕ | | ↗ | ↕ | ↗ |
| Volume (vph) | 286 | 70 | 500 | 11 | 43 | 25 | 276 | 438 | 9 | 45 | 759 | 293 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 190 | | 0 | 145 | | 45 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 2 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.958 | | | 0.997 | | | | 0.850 |
| Flt Protected | | 0.961 | | | 0.993 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1790 | 1583 | 0 | 2008 | 0 | 3433 | 3999 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | | 0.710 | | | 0.933 | | 0.280 | | | 0.475 | | |
| Satd. Flow (perm) | 0 | 1323 | 1583 | 0 | 1887 | 0 | 1012 | 3999 | 0 | 885 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 80 | | 27 | | | 5 | | | | 255 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 45 |
| Link Distance (ft) | | 1713 | | | 375 | | | 2482 | | | | 971 |
| Travel Time (s) | | 29.2 | | | 6.4 | | | 42.3 | | | | 14.7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 311 | 76 | 543 | 12 | 47 | 27 | 300 | 476 | 10 | 49 | 825 | 318 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 387 | 543 | 0 | 86 | 0 | 300 | 486 | 0 | 49 | 825 | 318 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 6 | | | 6 |

Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019

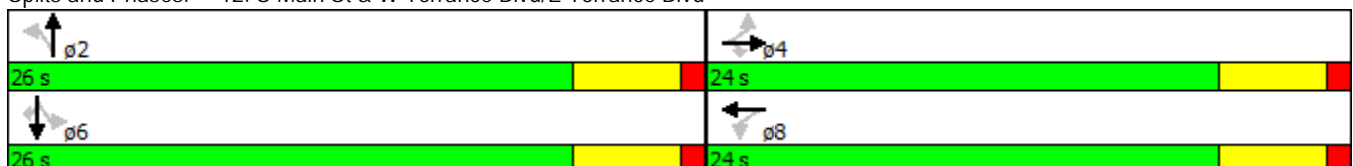


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | | 26.0 | 26.0 | | 26.0 | 26.0 | 26.0 |
| Total Split (%) | 48.0% | 48.0% | 48.0% | 48.0% | 48.0% | | 52.0% | 52.0% | | 52.0% | 52.0% | 52.0% |
| Maximum Green (s) | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | | 17.6 | 17.6 | | 17.6 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Actuated g/C Ratio | | 0.36 | 0.36 | | 0.36 | | 0.43 | 0.43 | | 0.43 | 0.43 | 0.43 |
| v/c Ratio | | 0.81 | 0.87 | | 0.12 | | 0.69 | 0.28 | | 0.13 | 0.54 | 0.38 |
| Control Delay | | 30.3 | 30.0 | | 8.1 | | 23.0 | 9.8 | | 10.1 | 12.3 | 4.2 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | | 30.3 | 30.0 | | 8.1 | | 23.0 | 9.8 | | 10.1 | 12.3 | 4.2 |
| LOS | | C | C | | A | | C | A | | B | B | A |
| Approach Delay | | 30.1 | | | 8.1 | | | 14.8 | | | 10.0 | |
| Approach LOS | | C | | | A | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 50 |
| Actuated Cycle Length: | 48.7 |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.87 |
| Intersection Signal Delay: | 17.5 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 68.8% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 12: S Main St & W Torrance Blvd/E Torrance Blvd



Lanes, Volumes, Timings
13: Lenardo Rd/I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 382 | 563 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | | 0 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 2 | 1 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.97 | 1.00 |
| Flt | | | | 0.850 | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 1863 | 3539 | 1863 | 1583 | 3433 | 1863 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 1863 | 3539 | 1863 | 1583 | 3433 | 1863 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 1091 | | |
| Link Speed (mph) | | 35 | 40 | | 40 | |
| Link Distance (ft) | | 701 | 533 | | 434 | |
| Travel Time (s) | | 13.7 | 9.1 | | 7.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 415 | 612 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 415 | 612 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 12 | 12 | | 24 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 12 | 12 | | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector (ft) | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | 94 | | | |
| Detector 2 Size(ft) | | 6 | 6 | | | |
| Detector 2 Type | | Cl+Ex | Cl+Ex | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | 0.0 | 0.0 | | | |
| Turn Type | Perm | | | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |

Lanes, Volumes, Timings
 13: Lenardo Rd/I-405 SB Ramps

1/3/2019

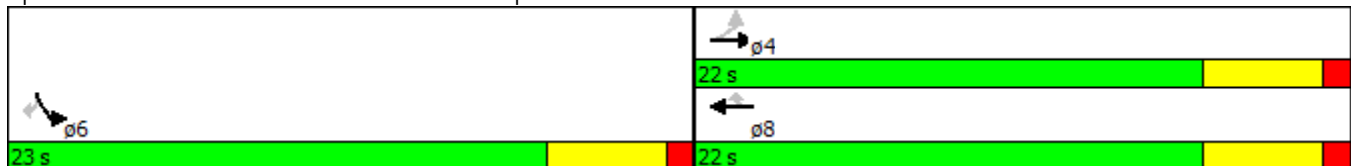


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | 48.9% | 48.9% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | | | 5.5 | 18.7 | |
| Actuated g/C Ratio | | | | 0.16 | 0.55 | |
| v/c Ratio | | | | 0.35 | 0.33 | |
| Control Delay | | | | 0.8 | 4.9 | |
| Queue Delay | | | | 0.0 | 0.0 | |
| Total Delay | | | | 0.8 | 4.9 | |
| LOS | | | | A | A | |
| Approach Delay | | | | | 4.9 | |
| Approach LOS | | | | | A | |

Intersection Summary

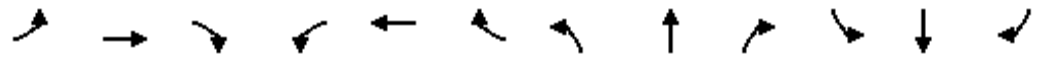
Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 34.2
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 3.3
 Intersection Capacity Utilization 27.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 13: Lenardo Rd/I-405 SB Ramps



Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 171 | 128 | 264 | 0 | 0 | 0 | 0 | 1145 | 189 | 0 | 932 | 382 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 200 | | 150 | 0 | | 0 | 160 | | 0 | 0 | | 120 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr _t | | | 0.850 | | | | | 0.979 | | | | 0.850 |
| Fl _t Protected | 0.950 | | | | | | | | | | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1863 | 3465 | 0 | 0 | 3539 | 1583 |
| Fl _t Permitted | 0.950 | | | | | | | | | | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1863 | 3465 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 85 | | | | | 51 | | | | 415 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 533 | | | 422 | | | 1230 | | | | 386 |
| Travel Time (s) | | 9.1 | | | 7.2 | | | 24.0 | | | | 7.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 186 | 139 | 287 | 0 | 0 | 0 | 0 | 1245 | 205 | 0 | 1013 | 415 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 186 | 139 | 287 | 0 | 0 | 0 | 0 | 1450 | 0 | 0 | 1013 | 415 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | | | | 1 | 2 | | | 2 | 1 |
| Detector Template | Left | Thru | Right | | | | Left | Thru | | | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | | | | 20 | 100 | | | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | | | | 20 | 6 | | | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex | Cl+Ex | | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | | | | Perm | NA | | | NA | Perm |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | | 2 | | | | | 6 |
| Detector Phase | 4 | 4 | 4 | | | | 2 | 2 | | | 6 | 6 |

Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019

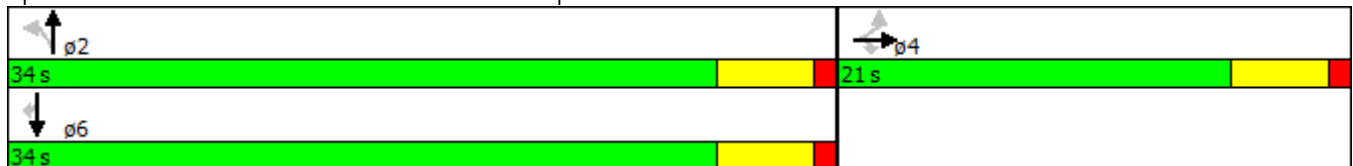


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-----|-----|-----|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | | | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 21.0 | | | | 34.0 | 34.0 | | | 34.0 | 34.0 |
| Total Split (%) | 38.2% | 38.2% | 38.2% | | | | 61.8% | 61.8% | | | 61.8% | 61.8% |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | | | | 29.0 | 29.0 | | | 29.0 | 29.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | | | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | None | None | None | | | | Max | Max | | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | | | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Act Effct Green (s) | 12.0 | 12.0 | 12.0 | | | | | 29.9 | | | 29.9 | 29.9 |
| Actuated g/C Ratio | 0.23 | 0.23 | 0.23 | | | | | 0.58 | | | 0.58 | 0.58 |
| v/c Ratio | 0.24 | 0.17 | 0.67 | | | | | 0.72 | | | 0.50 | 0.38 |
| Control Delay | 16.2 | 15.5 | 20.3 | | | | | 11.1 | | | 8.3 | 2.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | | | | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 16.2 | 15.5 | 20.3 | | | | | 11.1 | | | 8.3 | 2.1 |
| LOS | B | B | C | | | | | B | | | A | A |
| Approach Delay | | 18.0 | | | | | | 11.1 | | | 6.5 | |
| Approach LOS | | B | | | | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 51.9 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 10.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 50.9% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 14: S Avalon Blvd & I-405 SB Ramps



Lanes, Volumes, Timings

15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | ↙ | ↖ | ↗ | ↖ | ↖ | | | ↖ | ↖ |
| Volume (vph) | 0 | 0 | 0 | 91 | 0 | 385 | 374 | 932 | 0 | 0 | 1226 | 506 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 1 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 |
| Frt | | | | | | 0.850 | | | | | | 0.850 |
| Flt Protected | | | | 0.950 | 0.950 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1681 | 1681 | 1583 | 3433 | 3539 | 0 | 0 | 5085 | 1583 |
| Flt Permitted | | | | 0.950 | 0.950 | | 0.178 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1681 | 1681 | 1583 | 643 | 3539 | 0 | 0 | 5085 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 163 | | | | | | 550 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 346 | | | 390 | | | 386 | | | | 2946 |
| Travel Time (s) | | 5.9 | | | 6.6 | | | 7.5 | | | | 57.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 99 | 0 | 418 | 407 | 1013 | 0 | 0 | 1333 | 550 |
| Shared Lane Traffic (%) | | | | 50% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 49 | 50 | 418 | 407 | 1013 | 0 | 0 | 1333 | 550 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | 1 | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | Right | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | 20 | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | 20 | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | Perm | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | 8 | 2 | | | | | 6 |
| Detector Phase | | | | 8 | 8 | 8 | 2 | 2 | | | | 6 |

Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | | | | 22.0 | 22.0 | 22.0 | 68.0 | 68.0 | | | 68.0 | 68.0 |
| Total Split (%) | | | | 24.4% | 24.4% | 24.4% | 75.6% | 75.6% | | | 75.6% | 75.6% |
| Maximum Green (s) | | | | 17.0 | 17.0 | 17.0 | 63.0 | 63.0 | | | 63.0 | 63.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | | | | None | None | None | Max | Max | | | Max | Max |
| Walk Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | | | | 17.0 | 17.0 | 17.0 | 63.0 | 63.0 | | | 63.0 | 63.0 |
| Actuated g/C Ratio | | | | 0.19 | 0.19 | 0.19 | 0.70 | 0.70 | | | 0.70 | 0.70 |
| v/c Ratio | | | | 0.15 | 0.16 | 0.97 | 0.90 | 0.41 | | | 0.37 | 0.43 |
| Control Delay | | | | 32.0 | 32.1 | 60.6 | 38.9 | 6.3 | | | 5.8 | 1.5 |
| Queue Delay | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | | | 0.0 | 0.0 |
| Total Delay | | | | 32.0 | 32.1 | 60.6 | 38.9 | 7.0 | | | 5.8 | 1.5 |
| LOS | | | | C | C | E | D | A | | | A | A |
| Approach Delay | | | | | | 55.1 | | 16.2 | | | 4.6 | |
| Approach LOS | | | | | | E | | B | | | A | |

Intersection Summary











| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.97 |
| Intersection Signal Delay: | 15.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 57.9% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 15: S Avalon Blvd & I-405 NB Ramps



Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Volume (vph) | 228 | 165 | 496 | 263 | 360 | 877 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 16 | 16 | 16 | 16 | 12 | 12 |
| Storage Length (ft) | 0 | 0 | | 0 | 90 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | 0.943 | | 0.948 | | | |
| Flt Protected | 0.972 | | | | 0.950 | |
| Satd. Flow (prot) | 1935 | 0 | 3803 | 0 | 1770 | 3539 |
| Flt Permitted | 0.972 | | | | 0.318 | |
| Satd. Flow (perm) | 1935 | 0 | 3803 | 0 | 592 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 44 | | 268 | | | |
| Link Speed (mph) | 30 | | 35 | | | 45 |
| Link Distance (ft) | 4544 | | 1360 | | | 2482 |
| Travel Time (s) | 103.3 | | 26.5 | | | 37.6 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 248 | 179 | 539 | 286 | 391 | 953 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 427 | 0 | 825 | 0 | 391 | 953 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 28 | | 24 | | | 24 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | | 2 | | 1 | 2 |
| Detector Template | Left | | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Perm | | NA | | Perm | NA |
| Protected Phases | | | 2 | | | 6 |
| Permitted Phases | 8 | | | | 6 | |

Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019

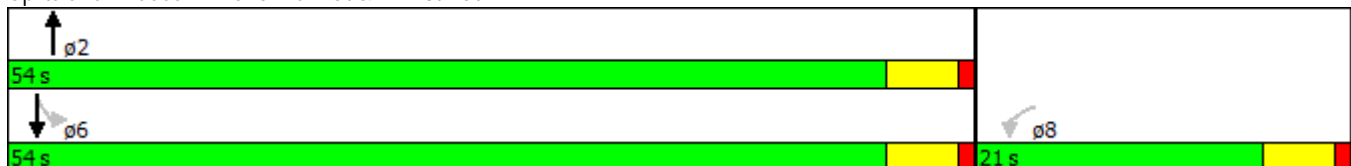


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-----|-------|-----|-------|-------|
| Detector Phase | 8 | | 2 | | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 54.0 | | 54.0 | 54.0 |
| Total Split (%) | 28.0% | | 72.0% | | 72.0% | 72.0% |
| Maximum Green (s) | 16.0 | | 49.0 | | 49.0 | 49.0 |
| Yellow Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | | Max | | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | | 0 | 0 |
| Act Effect Green (s) | 16.0 | | 49.0 | | 49.0 | 49.0 |
| Actuated g/C Ratio | 0.21 | | 0.65 | | 0.65 | 0.65 |
| v/c Ratio | 0.96 | | 0.32 | | 1.01 | 0.41 |
| Control Delay | 61.6 | | 4.0 | | 67.0 | 6.8 |
| Queue Delay | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Delay | 61.6 | | 4.0 | | 67.0 | 6.8 |
| LOS | E | | A | | E | A |
| Approach Delay | 61.6 | | 4.0 | | | 24.3 |
| Approach LOS | E | | A | | | C |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 75 |
| Actuated Cycle Length: | 75 |
| Natural Cycle: | 75 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.01 |
| Intersection Signal Delay: | 24.0 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 77.3% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 16: S Main St & E 213th St



Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

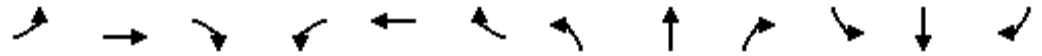
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 255 | 295 | 110 | 122 | 205 | 72 | 144 | 983 | 126 | 90 | 900 | 183 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 70 | | 0 | 120 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.959 | | | 0.961 | | | 0.983 | | | 0.975 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 2025 | 0 | 1770 | 3855 | 0 | 1770 | 5665 | 0 | 1770 | 5619 | 0 |
| Flt Permitted | 0.568 | | | 0.349 | | | 0.209 | | | 0.209 | | |
| Satd. Flow (perm) | 1058 | 2025 | 0 | 650 | 3855 | 0 | 389 | 5665 | 0 | 389 | 5619 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 46 | | | 36 | | | 62 | | | 119 | |
| Link Speed (mph) | | 30 | | | 30 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4544 | | | 967 | | | 1397 | | | 1230 | |
| Travel Time (s) | | 103.3 | | | 22.0 | | | 27.2 | | | 24.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 277 | 321 | 120 | 133 | 223 | 78 | 157 | 1068 | 137 | 98 | 978 | 199 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 277 | 441 | 0 | 133 | 301 | 0 | 157 | 1205 | 0 | 98 | 1177 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |

Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

1/3/2019

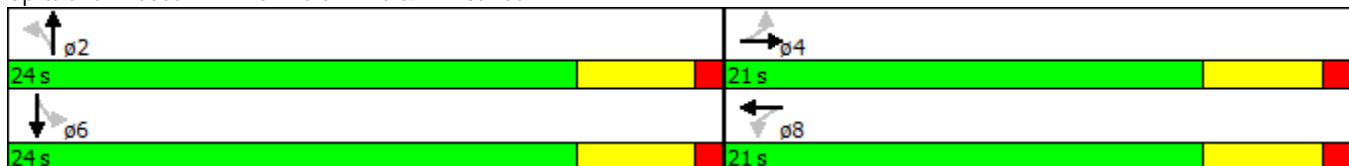


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | | 46.7% | 46.7% | | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 14.4 | 14.4 | | 14.4 | 14.4 | | 19.1 | 19.1 | | 19.1 | 19.1 | |
| Actuated g/C Ratio | 0.33 | 0.33 | | 0.33 | 0.33 | | 0.44 | 0.44 | | 0.44 | 0.44 | |
| v/c Ratio | 0.79 | 0.63 | | 0.62 | 0.23 | | 0.92 | 0.48 | | 0.58 | 0.46 | |
| Control Delay | 33.3 | 15.5 | | 28.2 | 9.5 | | 74.9 | 9.3 | | 29.5 | 8.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 33.3 | 15.5 | | 28.2 | 9.5 | | 74.9 | 9.3 | | 29.5 | 8.7 | |
| LOS | C | B | | C | A | | E | A | | C | A | |
| Approach Delay | | 22.4 | | | 15.3 | | | 16.9 | | | 10.3 | |
| Approach LOS | | C | | | B | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 43.5 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.92 |
| Intersection Signal Delay: | 15.5 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 75.1% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 17: S Avalon Blvd & E 213th St



Lanes, Volumes, Timings
18: S Figueroa St & W Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 127 | 541 | 500 | 58 | 395 | 33 | 229 | 342 | 117 | 88 | 432 | 167 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 213 | | 75 | 152 | | 0 | 230 | | 0 | 240 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 2 | | 0 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 |
| Frt | | | 0.850 | | 0.988 | | | 0.962 | | | | 0.958 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3497 | 0 | 3433 | 3405 | 0 | 3433 | 3391 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3497 | 0 | 3433 | 3405 | 0 | 3433 | 3391 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 306 | | 14 | | | 76 | | | | 92 |
| Link Speed (mph) | | 35 | | | 35 | | | 40 | | | | 40 |
| Link Distance (ft) | | 1243 | | | 2441 | | | 713 | | | | 3767 |
| Travel Time (s) | | 24.2 | | | 47.6 | | | 12.2 | | | | 64.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 138 | 588 | 543 | 63 | 429 | 36 | 249 | 372 | 127 | 96 | 470 | 182 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 138 | 588 | 543 | 63 | 465 | 0 | 249 | 499 | 0 | 96 | 652 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 18: S Figueroa St & W Carson St

1/3/2019

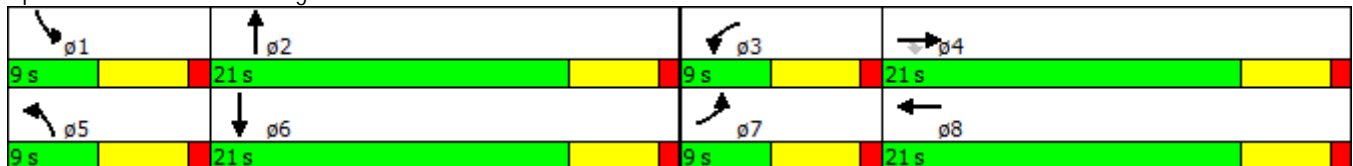


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (%) | 15.0% | 35.0% | 35.0% | 15.0% | 35.0% | | 15.0% | 35.0% | | 15.0% | 35.0% | |
| Maximum Green (s) | 4.0 | 16.0 | 16.0 | 4.0 | 16.0 | | 4.0 | 16.0 | | 4.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 4.0 | 17.2 | 17.2 | 4.0 | 13.4 | | 4.0 | 18.0 | | 4.0 | 16.0 | |
| Actuated g/C Ratio | 0.07 | 0.30 | 0.30 | 0.07 | 0.23 | | 0.07 | 0.31 | | 0.07 | 0.28 | |
| v/c Ratio | 1.12 | 0.55 | 0.79 | 0.51 | 0.56 | | 1.04 | 0.45 | | 0.40 | 0.64 | |
| Control Delay | 151.0 | 20.3 | 19.6 | 44.0 | 21.5 | | 103.0 | 16.2 | | 31.9 | 19.5 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 151.0 | 20.3 | 19.6 | 44.0 | 21.5 | | 103.0 | 16.2 | | 31.9 | 19.5 | |
| LOS | F | C | B | D | C | | F | B | | C | B | |
| Approach Delay | | 34.2 | | | 24.2 | | | 45.1 | | | 21.1 | |
| Approach LOS | | C | | | C | | | D | | | C | |

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 57.5
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.12
 Intersection Signal Delay: 32.1
 Intersection LOS: C
 Intersection Capacity Utilization 64.1%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 18: S Figueroa St & W Carson St



Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

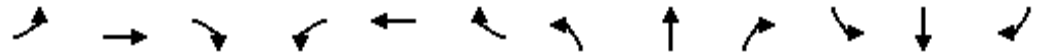
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 114 | 482 | 42 | 101 | 324 | 51 | 156 | 530 | 97 | 159 | 770 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 210 | | 70 | 220 | | 70 | 115 | | 0 | 175 | | 500 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | | 0.850 | | 0.977 | | | 0.982 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 4968 | 0 | 1770 | 4994 | 0 |
| Flt Permitted | 0.541 | | | 0.417 | | | 0.281 | | | 0.381 | | |
| Satd. Flow (perm) | 1008 | 3539 | 1583 | 777 | 3539 | 1583 | 523 | 4968 | 0 | 710 | 4994 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 46 | | | 55 | | 101 | | | | 70 |
| Link Speed (mph) | | 35 | | | 35 | | | 35 | | | | 35 |
| Link Distance (ft) | | 2441 | | | 4293 | | | 978 | | | | 1360 |
| Travel Time (s) | | 47.6 | | | 83.6 | | | 19.1 | | | | 26.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 124 | 524 | 46 | 110 | 352 | 55 | 170 | 576 | 105 | 173 | 837 | 117 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 124 | 524 | 46 | 110 | 352 | 55 | 170 | 681 | 0 | 173 | 954 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | | 6 | | |

Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019

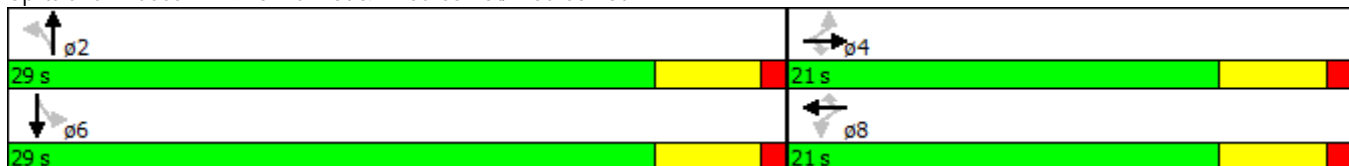


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Total Split (%) | 42.0% | 42.0% | 42.0% | 42.0% | 42.0% | 42.0% | 58.0% | 58.0% | | 58.0% | 58.0% | |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 24.1 | 24.1 | | 24.1 | 24.1 | |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.51 | 0.51 | | 0.51 | 0.51 | |
| v/c Ratio | 0.45 | 0.54 | 0.10 | 0.51 | 0.36 | 0.12 | 0.64 | 0.26 | | 0.48 | 0.37 | |
| Control Delay | 19.5 | 16.5 | 5.3 | 23.6 | 14.6 | 5.1 | 25.3 | 6.2 | | 14.2 | 7.3 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 19.5 | 16.5 | 5.3 | 23.6 | 14.6 | 5.1 | 25.3 | 6.2 | | 14.2 | 7.3 | |
| LOS | B | B | A | C | B | A | C | A | | B | A | |
| Approach Delay | | 16.3 | | | 15.5 | | | 10.0 | | | 8.4 | |
| Approach LOS | | B | | | B | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 50 |
| Actuated Cycle Length: | 47.1 |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.64 |
| Intersection Signal Delay: | 11.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 61.5% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 19: S Main St & W Carson St/E Carson St



Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔↔ | ↕↔ | | ↔↔ | ↕↔ | | ↔ | ↕↕↔ | | ↔ | ↕↕↔ | |
| Volume (vph) | 166 | 621 | 71 | 380 | 356 | 101 | 75 | 754 | 464 | 227 | 780 | 97 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 2 | | 0 | 2 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.985 | | | 0.967 | | | 0.943 | | | 0.983 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3486 | 0 | 3433 | 3422 | 0 | 1770 | 4795 | 0 | 1770 | 4999 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3486 | 0 | 3433 | 3422 | 0 | 1770 | 4795 | 0 | 1770 | 4999 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 38 | | | 173 | | | 26 | |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | 1397 | |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | 27.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 180 | 675 | 77 | 413 | 387 | 110 | 82 | 820 | 504 | 247 | 848 | 105 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 180 | 752 | 0 | 413 | 497 | 0 | 82 | 1324 | 0 | 247 | 953 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |

Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019

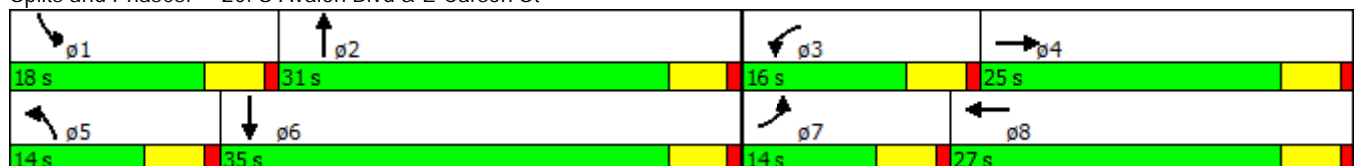


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 14.0 | 25.0 | | 16.0 | 27.0 | | 14.0 | 31.0 | | 18.0 | 35.0 | |
| Total Split (%) | 15.6% | 27.8% | | 17.8% | 30.0% | | 15.6% | 34.4% | | 20.0% | 38.9% | |
| Maximum Green (s) | 9.0 | 20.0 | | 11.0 | 22.0 | | 9.0 | 26.0 | | 13.0 | 30.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 8.6 | 20.0 | | 11.0 | 22.4 | | 8.2 | 26.0 | | 13.0 | 33.0 | |
| Actuated g/C Ratio | 0.10 | 0.22 | | 0.12 | 0.25 | | 0.09 | 0.29 | | 0.14 | 0.37 | |
| v/c Ratio | 0.55 | 0.96 | | 0.99 | 0.57 | | 0.51 | 0.88 | | 0.97 | 0.52 | |
| Control Delay | 45.4 | 58.9 | | 81.8 | 30.3 | | 50.2 | 34.5 | | 89.6 | 23.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 45.4 | 58.9 | | 81.8 | 30.3 | | 50.2 | 34.5 | | 89.6 | 23.7 | |
| LOS | D | E | | F | C | | D | C | | F | C | |
| Approach Delay | | 56.3 | | | 53.6 | | | 35.4 | | | 37.2 | |
| Approach LOS | | E | | | D | | | D | | | D | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.99 |
| Intersection Signal Delay: | 44.0 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 84.5% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St



Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | ↘ | ↑↑ | ↗ | ↘ | ↑↑↑ | | ↘ | | ↗ | | | ↗ |
| Volume (vph) | 15 | 1021 | 786 | 106 | 954 | 0 | 31 | 0 | 55 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 50 | | 180 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (prot) | 1593 | 3185 | 1425 | 1593 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Flt Permitted | 0.264 | | | 0.230 | | | 0.950 | | | | | |
| Satd. Flow (perm) | 443 | 3185 | 1425 | 386 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 854 | | | | | | 60 | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 2121 | | | 469 | | | 428 | | | | 162 |
| Travel Time (s) | | 36.2 | | | 8.0 | | | 7.3 | | | | 2.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 16 | 1110 | 854 | 115 | 1037 | 0 | 34 | 0 | 60 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 16 | 1110 | 854 | 115 | 1037 | 0 | 34 | 0 | 60 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | | 1 | | | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | | Right | | | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | | 20 | | | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | | 20 | | | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | | | | | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | | Perm | | | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | | 2 | | | 6 |

Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|-----|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (s) | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (%) | 65.0% | 65.0% | 65.0% | 65.0% | 65.0% | | 35.0% | | 35.0% | | | 35.0% |
| Maximum Green (s) | 34.0 | 34.0 | 34.0 | 34.0 | 34.0 | | 16.0 | | 16.0 | | | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | | 1.0 | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | 3.0 |
| Recall Mode | None | None | None | None | None | | Min | | Min | | | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | | 11.0 | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Act Effect Green (s) | 28.7 | 28.7 | 28.7 | 28.7 | 28.7 | | 6.7 | | 6.7 | | | |
| Actuated g/C Ratio | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | | 0.15 | | 0.15 | | | |
| v/c Ratio | 0.06 | 0.55 | 0.70 | 0.48 | 0.36 | | 0.15 | | 0.23 | | | |
| Control Delay | 3.8 | 5.9 | 4.1 | 12.3 | 4.3 | | 20.8 | | 9.2 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | |
| Total Delay | 3.8 | 5.9 | 4.1 | 12.3 | 4.3 | | 20.8 | | 9.2 | | | |
| LOS | A | A | A | B | A | | C | | A | | | |
| Approach Delay | | 5.1 | | | 5.1 | | | | | | | |
| Approach LOS | | A | | | A | | | | | | | |

Intersection Summary

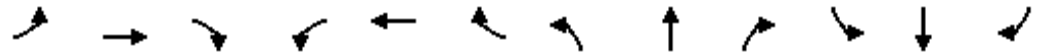
Area Type: CBD
 Cycle Length: 60
 Actuated Cycle Length: 45.7
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 5.4
 Intersection Capacity Utilization 68.9%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 21: I-405 SB Ramps & E Carson St



Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

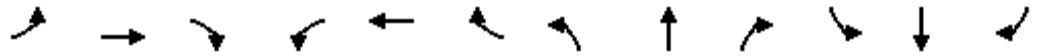
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 118 | 932 | 35 | 23 | 652 | 379 | 35 | 20 | 20 | 38 | 8 | 398 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 70 | | 0 | 100 | | 180 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.969 | | | 0.961 | |
| Satd. Flow (prot) | 1770 | 3522 | 0 | 1770 | 3539 | 1583 | 0 | 1805 | 1583 | 0 | 1790 | 1583 |
| Flt Permitted | 0.330 | | | 0.208 | | | | 0.846 | | | 0.804 | |
| Satd. Flow (perm) | 615 | 3522 | 0 | 387 | 3539 | 1583 | 0 | 1576 | 1583 | 0 | 1498 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 9 | | | | 412 | | | 44 | | | 117 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 469 | | | 2039 | | | 158 | | | 364 | |
| Travel Time (s) | | 8.0 | | | 34.8 | | | 2.7 | | | 6.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 128 | 1013 | 38 | 25 | 709 | 412 | 38 | 22 | 22 | 41 | 9 | 433 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 128 | 1051 | 0 | 25 | 709 | 412 | 0 | 60 | 22 | 0 | 50 | 433 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | 6 |

Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019

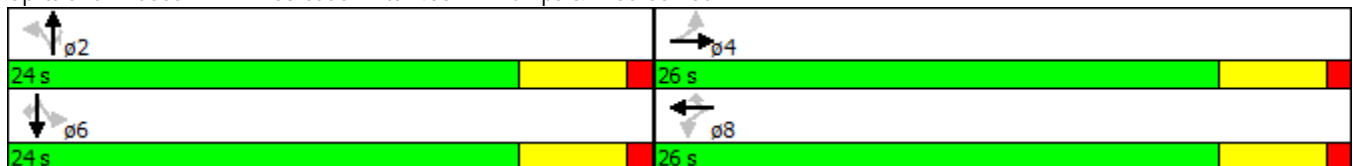


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 26.0 | 26.0 | | 26.0 | 26.0 | 26.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |
| Total Split (%) | 52.0% | 52.0% | | 52.0% | 52.0% | 52.0% | 48.0% | 48.0% | 48.0% | 48.0% | 48.0% | 48.0% |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 19.2 | 19.2 | | 19.2 | 19.2 | 19.2 | | 19.1 | 19.1 | | 19.1 | 19.1 |
| Actuated g/C Ratio | 0.40 | 0.40 | | 0.40 | 0.40 | 0.40 | | 0.40 | 0.40 | | 0.40 | 0.40 |
| v/c Ratio | 0.52 | 0.75 | | 0.16 | 0.50 | 0.47 | | 0.10 | 0.03 | | 0.08 | 0.62 |
| Control Delay | 20.1 | 16.2 | | 12.3 | 12.3 | 3.3 | | 10.5 | 2.1 | | 10.5 | 13.7 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 20.1 | 16.2 | | 12.3 | 12.3 | 3.3 | | 10.5 | 2.1 | | 10.5 | 13.7 |
| LOS | C | B | | B | B | A | | B | A | | B | B |
| Approach Delay | | 16.6 | | | 9.1 | | | 8.3 | | | 13.3 | |
| Approach LOS | | B | | | A | | | A | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 50 |
| Actuated Cycle Length: | 48.3 |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.75 |
| Intersection Signal Delay: | 12.8 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 58.5% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 22: Recreation Rd/I-405 NB Ramps & E Carson St



Existing + Development

Lanes, Volumes, Timings
 1: S Figueroa St & I-405 SB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | ↑↑ | | ↑ | ↑↑ |
| Volume (vph) | 0 | 0 | 853 | 63 | 83 | 875 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 220 | |
| Storage Lanes | 0 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Fr _t | | | 0.990 | | | |
| Fl _t Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 3504 | 0 | 1770 | 3539 |
| Fl _t Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 3504 | 0 | 1770 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 607 | | 2451 | | | 246 |
| Travel Time (s) | 10.3 | | 41.8 | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 927 | 68 | 90 | 951 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 995 | 0 | 90 | 951 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Yield | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 2: S Figueroa St & I-405 NB Ramps

1/3/2019



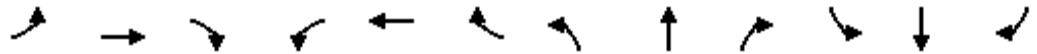
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 197 | 292 | 913 | 0 | 0 | 706 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | | 0.850 | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 724 | | 246 | | | 1243 |
| Travel Time (s) | 12.3 | | 4.2 | | | 21.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 214 | 317 | 992 | 0 | 0 | 767 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 214 | 317 | 992 | 0 | 0 | 767 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
3: S Main St & I-405 SB Ramps

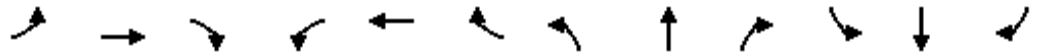
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 26 | 96 | 11 | 0 | 0 | 0 | 0 | 749 | 81 | 89 | 755 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 250 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr _t | | 0.984 | | | | | | 0.985 | | | | |
| Fl _t Protected | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1833 | 0 | 0 | 0 | 0 | 0 | 3486 | 0 | 1770 | 3539 | 0 |
| Fl _t Permitted | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1833 | 0 | 0 | 0 | 0 | 0 | 3486 | 0 | 1770 | 3539 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 11 | | | | | | 23 | | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 607 | | | 169 | | | 2341 | | | 290 | |
| Travel Time (s) | | 10.3 | | | 2.9 | | | 35.5 | | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 28 | 104 | 12 | 0 | 0 | 0 | 0 | 814 | 88 | 97 | 821 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 28 | 116 | 0 | 0 | 0 | 0 | 0 | 902 | 0 | 97 | 821 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | | | | | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | | | | | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | | | | | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 4 | | | | | | | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 3: S Main St & I-405 SB Ramps

1/3/2019

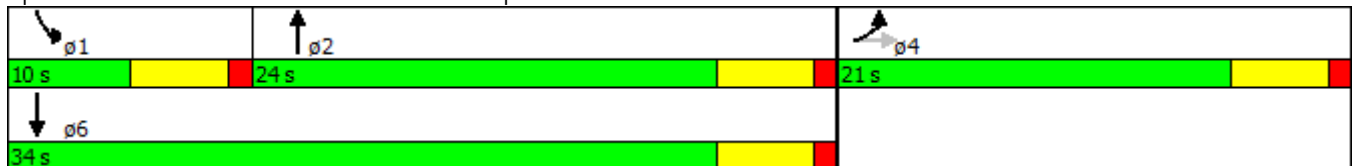


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | | | | | 24.0 | | 10.0 | 34.0 | |
| Total Split (%) | 38.2% | 38.2% | | | | | | 43.6% | | 18.2% | 61.8% | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 19.0 | | 5.0 | 29.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | | | | | Max | | None | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | 0 | |
| Act Effct Green (s) | 8.1 | 8.1 | | | | | | 25.4 | | 5.0 | 33.4 | |
| Actuated g/C Ratio | 0.17 | 0.17 | | | | | | 0.52 | | 0.10 | 0.69 | |
| v/c Ratio | 0.09 | 0.37 | | | | | | 0.49 | | 0.53 | 0.34 | |
| Control Delay | 16.8 | 19.3 | | | | | | 11.5 | | 34.1 | 4.9 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.2 | |
| Total Delay | 16.8 | 19.3 | | | | | | 11.5 | | 34.1 | 5.1 | |
| LOS | B | B | | | | | | B | | C | A | |
| Approach Delay | | 18.8 | | | | | | 11.5 | | | 8.1 | |
| Approach LOS | | B | | | | | | B | | | A | |

Intersection Summary

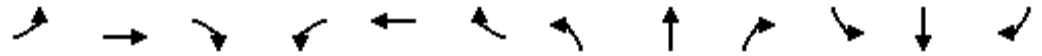
| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 48.5 |
| Natural Cycle: | 55 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.53 |
| Intersection Signal Delay: | 10.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 59.3% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 3: S Main St & I-405 SB Ramps



Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | ↕↕ | | ↕ | ↕↕ | | | ↕↕ | |
| Volume (vph) | 0 | 0 | 0 | 87 | 377 | 194 | 29 | 746 | 0 | 0 | 782 | 83 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.956 | | | | | | 0.986 | |
| Flt Protected | | | | | 0.993 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3360 | 0 | 1770 | 3539 | 0 | 0 | 3490 | 0 |
| Flt Permitted | | | | | 0.993 | | 0.243 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3360 | 0 | 453 | 3539 | 0 | 0 | 3490 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 85 | | | | | | 31 | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 724 | | | 336 | | | 290 | | | 724 | |
| Travel Time (s) | | 12.3 | | | 5.7 | | | 4.4 | | | 11.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 95 | 410 | 211 | 32 | 811 | 0 | 0 | 850 | 90 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 716 | 0 | 32 | 811 | 0 | 0 | 940 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | | 2 | | | | | |
| Detector Phase | | | | 8 | 8 | | 2 | 2 | | | | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | | 21.0 | 21.0 | | | | 21.0 |

Lanes, Volumes, Timings
 4: S Main St & I-405 NB Ramps

1/3/2019

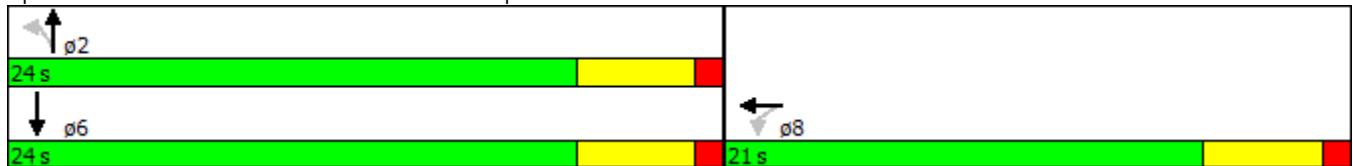


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-------|-------|-----|-----|-------|-----|
| Total Split (s) | | | | 21.0 | 21.0 | | 24.0 | 24.0 | | | 24.0 | |
| Total Split (%) | | | | 46.7% | 46.7% | | 53.3% | 53.3% | | | 53.3% | |
| Maximum Green (s) | | | | 16.0 | 16.0 | | 19.0 | 19.0 | | | 19.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | | 1.0 | 1.0 | | | 1.0 | |
| Lost Time Adjust (s) | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | None | | Max | Max | | | Max | |
| Walk Time (s) | | | | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | | 11.0 | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | | 0 | 0 | | | 0 | |
| Act Effect Green (s) | | | | | 13.3 | | 19.1 | 19.1 | | | 19.1 | |
| Actuated g/C Ratio | | | | | 0.31 | | 0.45 | 0.45 | | | 0.45 | |
| v/c Ratio | | | | | 0.64 | | 0.16 | 0.51 | | | 0.59 | |
| Control Delay | | | | | 13.8 | | 10.4 | 10.3 | | | 10.9 | |
| Queue Delay | | | | | 0.0 | | 0.0 | 0.1 | | | 0.0 | |
| Total Delay | | | | | 13.8 | | 10.4 | 10.4 | | | 10.9 | |
| LOS | | | | | B | | B | B | | | B | |
| Approach Delay | | | | | 13.8 | | | 10.4 | | | 10.9 | |
| Approach LOS | | | | | B | | | B | | | B | |

Intersection Summary

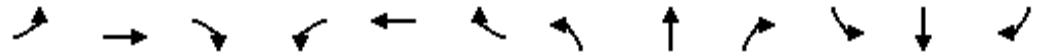
| | |
|-----------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 42.4 |
| Natural Cycle: | 45 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.64 |
| Intersection Signal Delay: | 11.6 |
| Intersection Capacity Utilization | 59.3% |
| Analysis Period (min) | 15 |
| Intersection LOS: | B |
| ICU Level of Service | B |

Splits and Phases: 4: S Main St & I-405 NB Ramps



Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 150 | 691 | 98 | 275 | 1162 | 166 | 196 | 725 | 490 | 57 | 379 | 437 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.981 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4989 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4989 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 28 | | | | 206 | | | 400 | | | 267 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | | 40 |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | | 2451 |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | | 41.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 163 | 751 | 107 | 299 | 1263 | 180 | 213 | 788 | 533 | 62 | 412 | 475 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 163 | 858 | 0 | 299 | 1263 | 180 | 213 | 788 | 533 | 62 | 412 | 475 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

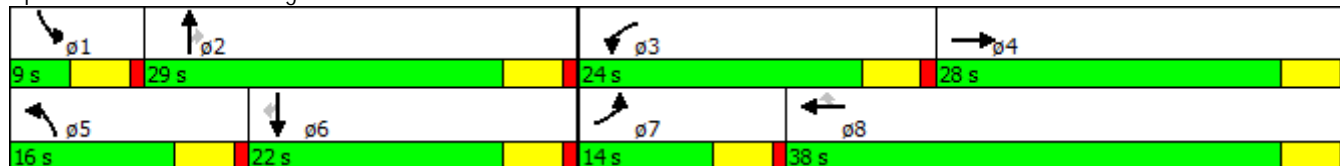


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 14.0 | 28.0 | | 24.0 | 38.0 | 38.0 | 16.0 | 29.0 | 29.0 | 9.0 | 22.0 | 22.0 |
| Total Split (%) | 15.6% | 31.1% | | 26.7% | 42.2% | 42.2% | 17.8% | 32.2% | 32.2% | 10.0% | 24.4% | 24.4% |
| Maximum Green (s) | 9.0 | 23.0 | | 19.0 | 33.0 | 33.0 | 11.0 | 24.0 | 24.0 | 4.0 | 17.0 | 17.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 9.0 | 24.1 | | 17.9 | 33.0 | 33.0 | 11.0 | 25.8 | 25.8 | 4.0 | 17.0 | 17.0 |
| Actuated g/C Ratio | 0.10 | 0.27 | | 0.20 | 0.37 | 0.37 | 0.12 | 0.29 | 0.29 | 0.04 | 0.19 | 0.19 |
| v/c Ratio | 0.92 | 0.63 | | 0.85 | 0.97 | 0.25 | 0.99 | 0.78 | 0.72 | 0.79 | 0.62 | 0.92 |
| Control Delay | 92.4 | 30.8 | | 57.8 | 48.7 | 3.0 | 99.9 | 36.6 | 14.2 | 101.7 | 38.1 | 41.7 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 92.4 | 30.8 | | 57.8 | 48.7 | 3.0 | 99.9 | 36.6 | 14.2 | 101.7 | 38.1 | 41.7 |
| LOS | F | C | | E | D | A | F | D | B | F | D | D |
| Approach Delay | | 40.6 | | | 45.5 | | | 37.6 | | | 44.0 | |
| Approach LOS | | D | | | D | | | D | | | D | |

Intersection Summary

| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.99 |
| Intersection Signal Delay: | 42.0 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 82.5% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings

6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↕↕↕ | | ↖ | ↕↕↕ | | ↖ | ↕↕ | | ↖ | ↕↕ | |
| Volume (vph) | 199 | 865 | 211 | 221 | 1201 | 72 | 176 | 574 | 246 | 68 | 523 | 186 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.971 | | | 0.992 | | | 0.955 | | | 0.961 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4938 | 0 | 1770 | 5045 | 0 | 1770 | 3380 | 0 | 1770 | 3401 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4938 | 0 | 1770 | 5045 | 0 | 1770 | 3380 | 0 | 1770 | 3401 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 61 | | | 10 | | | 77 | | | 53 | |
| Link Speed (mph) | | 45 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1251 | | | 1668 | | | 534 | | | 2341 | |
| Travel Time (s) | | 19.0 | | | 25.3 | | | 8.1 | | | 35.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 216 | 940 | 229 | 240 | 1305 | 78 | 191 | 624 | 267 | 74 | 568 | 202 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 216 | 1169 | 0 | 240 | 1383 | 0 | 191 | 891 | 0 | 74 | 770 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

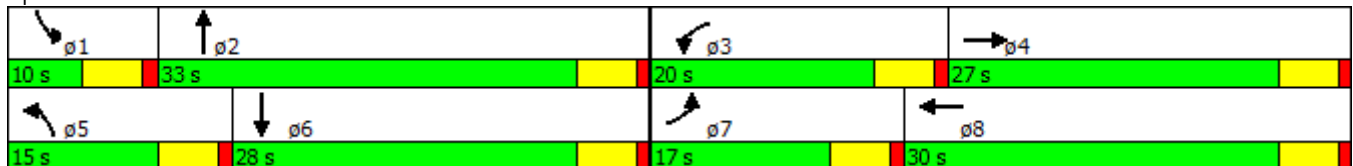


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 17.0 | 27.0 | | 20.0 | 30.0 | | 15.0 | 33.0 | | 10.0 | 28.0 | |
| Total Split (%) | 18.9% | 30.0% | | 22.2% | 33.3% | | 16.7% | 36.7% | | 11.1% | 31.1% | |
| Maximum Green (s) | 12.0 | 22.0 | | 15.0 | 25.0 | | 10.0 | 28.0 | | 5.0 | 23.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 12.0 | 22.6 | | 14.4 | 25.0 | | 10.0 | 30.0 | | 5.0 | 23.0 | |
| Actuated g/C Ratio | 0.13 | 0.25 | | 0.16 | 0.28 | | 0.11 | 0.33 | | 0.06 | 0.26 | |
| v/c Ratio | 0.92 | 0.91 | | 0.85 | 0.98 | | 0.97 | 0.76 | | 0.76 | 0.85 | |
| Control Delay | 81.0 | 43.2 | | 63.4 | 53.1 | | 100.6 | 30.0 | | 85.8 | 40.0 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 81.0 | 43.2 | | 63.4 | 53.1 | | 100.6 | 30.0 | | 85.8 | 40.0 | |
| LOS | F | D | | E | D | | F | C | | F | D | |
| Approach Delay | | 49.1 | | | 54.7 | | | 42.5 | | | 44.0 | |
| Approach LOS | | D | | | D | | | D | | | D | |

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 48.6
 Intersection LOS: D
 Intersection Capacity Utilization 82.7%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1042 | 73 | 23 | 1390 | 0 | 57 | 0 | 36 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 155 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Fr _t | | | 0.850 | | | | | | 0.850 | | | |
| Fl _t Protected | | | | 0.950 | | | 0.950 | 0.950 | | | | |
| Satd. Flow (prot) | 1863 | 3539 | 1583 | 1770 | 3539 | 0 | 1681 | 1681 | 1583 | 1863 | 1770 | 1770 |
| Fl _t Permitted | | | | 0.121 | | | 0.950 | 0.950 | | | | |
| Satd. Flow (perm) | 1863 | 3539 | 1583 | 225 | 3539 | 0 | 1681 | 1681 | 1583 | 1863 | 1770 | 1770 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 95 | | | | | | 95 | | | |
| Link Speed (mph) | | 45 | | | 45 | | | 25 | | | 50 | |
| Link Distance (ft) | | 1668 | | | 3009 | | | 694 | | | 308 | |
| Travel Time (s) | | 25.3 | | | 45.6 | | | 18.9 | | | 4.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1133 | 79 | 25 | 1511 | 0 | 62 | 0 | 39 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | 50% | | | | | 0% |
| Lane Group Flow (vph) | 0 | 1133 | 79 | 25 | 1511 | 0 | 31 | 31 | 39 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Split | NA | Perm | Perm | | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | 2 | 6 | 6 | 6 |

Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019

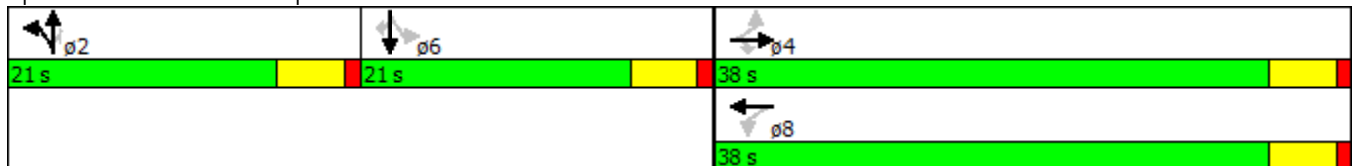


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 47.5% | 47.5% | 47.5% | 47.5% | 47.5% | | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% |
| Maximum Green (s) | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | 33.0 | 33.0 | 33.0 | 33.0 | | 16.0 | 16.0 | 16.0 | | | |
| Actuated g/C Ratio | | 0.41 | 0.41 | 0.41 | 0.41 | | 0.20 | 0.20 | 0.20 | | | |
| v/c Ratio | | 0.78 | 0.11 | 0.27 | 1.04 | | 0.09 | 0.09 | 0.10 | | | |
| Control Delay | | 24.8 | 3.0 | 25.1 | 58.3 | | 27.0 | 27.0 | 0.5 | | | |
| Queue Delay | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total Delay | | 24.8 | 3.0 | 25.1 | 58.3 | | 27.0 | 27.0 | 0.5 | | | |
| LOS | | C | A | C | E | | C | C | A | | | |
| Approach Delay | | 23.4 | | | 57.8 | | 16.8 | | | | | |
| Approach LOS | | C | | | E | | B | | | | | |

Intersection Summary

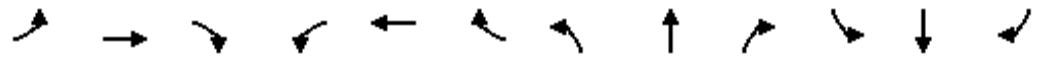
Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Natural Cycle: 80
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 41.7
 Intersection Capacity Utilization 50.1%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service A

Splits and Phases: 7: Stamps Dr & E Del Amo Blvd



Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

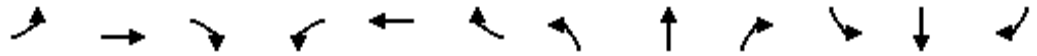
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 384 | 637 | 97 | 181 | 845 | 98 | 297 | 1079 | 297 | 166 | 678 | 384 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 1 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | 0.946 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4811 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4811 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 169 | | | 218 | | | 323 | | 123 | |
| Link Speed (mph) | | 45 | | | 45 | | | 35 | | | 35 | |
| Link Distance (ft) | | 3009 | | | 3520 | | | 2946 | | | 3936 | |
| Travel Time (s) | | 45.6 | | | 53.3 | | | 57.4 | | | 76.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 417 | 692 | 105 | 197 | 918 | 107 | 323 | 1173 | 323 | 180 | 737 | 417 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 417 | 692 | 105 | 197 | 918 | 107 | 323 | 1173 | 323 | 180 | 1154 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
 8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

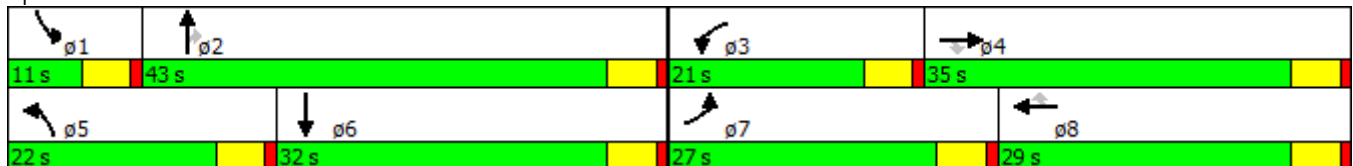


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 27.0 | 35.0 | 35.0 | 21.0 | 29.0 | 29.0 | 22.0 | 43.0 | 43.0 | 11.0 | 32.0 | 32.0 |
| Total Split (%) | 24.5% | 31.8% | 31.8% | 19.1% | 26.4% | 26.4% | 20.0% | 39.1% | 39.1% | 10.0% | 29.1% | 29.1% |
| Maximum Green (s) | 22.0 | 30.0 | 30.0 | 16.0 | 24.0 | 24.0 | 17.0 | 38.0 | 38.0 | 6.0 | 27.0 | 27.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 22.0 | 30.9 | 30.9 | 15.1 | 24.0 | 24.0 | 17.0 | 38.0 | 38.0 | 6.0 | 27.0 | 27.0 |
| Actuated g/C Ratio | 0.20 | 0.28 | 0.28 | 0.14 | 0.22 | 0.22 | 0.15 | 0.35 | 0.35 | 0.05 | 0.25 | 0.25 |
| v/c Ratio | 1.18 | 0.70 | 0.19 | 0.81 | 1.19 | 0.21 | 1.18 | 0.67 | 0.43 | 0.96 | 0.91 | 0.91 |
| Control Delay | 145.3 | 40.0 | 1.3 | 71.7 | 136.4 | 0.9 | 154.8 | 32.9 | 4.7 | 109.5 | 47.2 | 47.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 145.3 | 40.0 | 1.3 | 71.7 | 136.4 | 0.9 | 154.8 | 32.9 | 4.7 | 109.5 | 47.2 | 47.2 |
| LOS | F | D | A | E | F | A | F | C | A | F | D | D |
| Approach Delay | | 72.8 | | | 114.1 | | | 49.5 | | | | 55.6 |
| Approach LOS | | E | | | F | | | D | | | | E |

Intersection Summary

| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 110 |
| Actuated Cycle Length: | 110 |
| Natural Cycle: | 120 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.19 |
| Intersection Signal Delay: | 70.1 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 99.4% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 671 | 333 | 702 | 756 | 485 | 253 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | 235 | | | 250 |
| Storage Lanes | 2 | 0 | 2 | | | 1 |
| Taper Length (ft) | 25 | | 25 | | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 |
| Frt | 0.950 | | | | | 0.850 |
| Flt Protected | 0.968 | | 0.950 | | | |
| Satd. Flow (prot) | 3323 | 0 | 3433 | 3539 | 3539 | 1583 |
| Flt Permitted | 0.968 | | 0.456 | | | |
| Satd. Flow (perm) | 3323 | 0 | 1648 | 3539 | 3539 | 1583 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | 192 | | | | | 275 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 170 | | | 828 | 791 | |
| Travel Time (s) | 2.9 | | | 14.1 | 13.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 729 | 362 | 763 | 822 | 527 | 275 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1091 | 0 | 763 | 822 | 527 | 275 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 24 | | | 24 | 24 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 12 | | | 12 | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Number of Detectors | 1 | | 1 | 2 | 2 | 1 |
| Detector Template | Left | | Left | Thru | Thru | Right |
| Leading Detector (ft) | 20 | | 20 | 100 | 100 | 20 |
| Trailing Detector (ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 20 | 6 | 6 | 20 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | | 94 | 94 | |
| Detector 2 Size(ft) | | | | 6 | 6 | |
| Detector 2 Type | | | | Cl+Ex | Cl+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | | 2 | | | 6 |
| Detector Phase | 4 | | 2 | 2 | 6 | 6 |

Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|-------|-----|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 29.0 | 29.0 | 29.0 | 29.0 |
| Total Split (%) | 42.0% | | 58.0% | 58.0% | 58.0% | 58.0% |
| Maximum Green (s) | 16.0 | | 24.0 | 24.0 | 24.0 | 24.0 |
| Yellow Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 15.8 | | 24.0 | 24.0 | 24.0 | 24.0 |
| Actuated g/C Ratio | 0.32 | | 0.48 | 0.48 | 0.48 | 0.48 |
| v/c Ratio | 0.92 | | 0.96 | 0.48 | 0.31 | 0.30 |
| Control Delay | 28.7 | | 40.3 | 10.0 | 8.5 | 2.3 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 28.7 | | 40.3 | 10.0 | 8.5 | 2.3 |
| LOS | C | | D | A | A | A |
| Approach Delay | 28.7 | | | 24.6 | 6.4 | |
| Approach LOS | C | | | C | A | |

Intersection Summary












Area Type: Other
 Cycle Length: 50
 Actuated Cycle Length: 49.8
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 21.7
 Intersection LOS: C
 Intersection Capacity Utilization 75.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 9: S Figueroa St & I-110 NB Ramps



Lanes, Volumes, Timings
10: S Main St & Lenardo Rd

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  |  |  | |  |  |
| Volume (vph) | 25 | 32 | 920 | 61 | 59 | 918 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 145 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Fr _t | | 0.850 | 0.991 | | | |
| Fl _t Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 1583 | 3507 | 0 | 1770 | 3539 |
| Fl _t Permitted | 0.950 | | | | 0.263 | |
| Satd. Flow (perm) | 1770 | 1583 | 3507 | 0 | 490 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | 35 | 18 | | | |
| Link Speed (mph) | 25 | | 45 | | | 45 |
| Link Distance (ft) | 479 | | 971 | | | 534 |
| Travel Time (s) | 13.1 | | 14.7 | | | 8.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 27 | 35 | 1000 | 66 | 64 | 998 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 27 | 35 | 1066 | 0 | 64 | 998 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | Perm | NA | | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Detector Phase | 8 | 8 | 2 | | 6 | 6 |

Lanes, Volumes, Timings
 10: S Main St & Lenardo Rd

1/3/2019

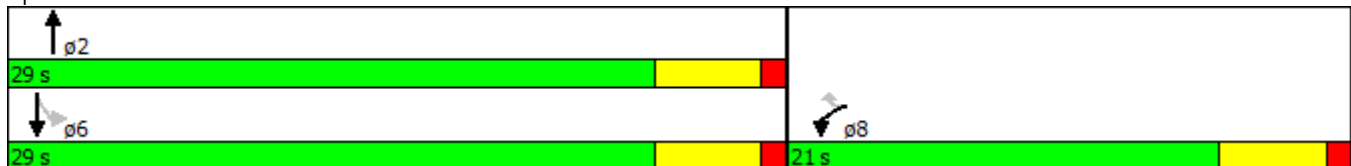


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 29.0 | | 29.0 | 29.0 |
| Total Split (%) | 42.0% | 42.0% | 58.0% | | 58.0% | 58.0% |
| Maximum Green (s) | 16.0 | 16.0 | 24.0 | | 24.0 | 24.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | None | Max | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 6.3 | 6.3 | 39.3 | | 39.3 | 39.3 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.86 | | 0.86 | 0.86 |
| v/c Ratio | 0.11 | 0.14 | 0.35 | | 0.15 | 0.33 |
| Control Delay | 18.5 | 9.1 | 2.8 | | 4.0 | 2.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 18.5 | 9.1 | 2.8 | | 4.0 | 2.7 |
| LOS | B | A | A | | A | A |
| Approach Delay | 13.2 | | 2.8 | | | 2.8 |
| Approach LOS | B | | A | | | A |

Intersection Summary

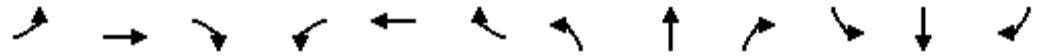
Area Type: Other
 Cycle Length: 50
 Actuated Cycle Length: 45.8
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 3.1
 Intersection LOS: A
 Intersection Capacity Utilization 46.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 10: S Main St & Lenardo Rd



Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 646 | 529 | 159 | 59 | 537 | 3 | 179 | 604 | 58 | 81 | 334 | 428 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 180 | | 0 | 115 | | 0 | 255 | | 0 | 185 | | 185 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.91 | 0.91 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.976 | | | | 0.850 | | 0.987 | | | | 0.850 |
| Flt Protected | 0.950 | 0.984 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1610 | 3690 | 0 | 1770 | 3539 | 1583 | 1770 | 3959 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.427 | 0.655 | | 0.183 | | | 0.535 | | | 0.248 | | |
| Satd. Flow (perm) | 724 | 2456 | 0 | 341 | 3539 | 1583 | 997 | 3959 | 0 | 462 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 56 | | | | 36 | | 16 | | | | 286 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 368 | | | 1713 | | | 3767 | | | | 828 |
| Travel Time (s) | | 6.3 | | | 29.2 | | | 64.2 | | | | 14.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 702 | 575 | 173 | 64 | 584 | 3 | 195 | 657 | 63 | 88 | 363 | 465 |
| Shared Lane Traffic (%) | 50% | | | | | | | | | | | |
| Lane Group Flow (vph) | 351 | 1099 | 0 | 64 | 584 | 3 | 195 | 720 | 0 | 88 | 363 | 465 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 39.0 | 39.0 | | 39.0 | 39.0 | 39.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 65.0% | 65.0% | | 65.0% | 65.0% | 65.0% | 35.0% | 35.0% | | 35.0% | 35.0% | 35.0% |
| Maximum Green (s) | 34.0 | 34.0 | | 34.0 | 34.0 | 34.0 | 16.0 | 16.0 | | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | 31.4 | 31.4 | | 31.4 | 31.4 | 31.4 | 16.1 | 16.1 | | 16.1 | 16.1 | 16.1 |
| Actuated g/C Ratio | 0.55 | 0.55 | | 0.55 | 0.55 | 0.55 | 0.28 | 0.28 | | 0.28 | 0.28 | 0.28 |
| v/c Ratio | 0.89 | 0.81 | | 0.34 | 0.30 | 0.00 | 0.70 | 0.64 | | 0.68 | 0.37 | 0.72 |
| Control Delay | 40.2 | 15.5 | | 13.3 | 7.4 | 0.0 | 37.0 | 21.7 | | 51.6 | 18.8 | 15.7 |
| Queue Delay | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 40.2 | 15.7 | | 13.3 | 7.4 | 0.0 | 37.0 | 21.7 | | 51.6 | 18.8 | 15.7 |
| LOS | D | B | | B | A | A | D | C | | D | B | B |
| Approach Delay | | 21.6 | | | 8.0 | | | 24.9 | | | 20.4 | |
| Approach LOS | | C | | | A | | | C | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 57.6 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.89 |
| Intersection Signal Delay: | 19.9 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 80.2% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 11: S Figueroa St & W Torrance Blvd



Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕ | ↗ | | ↕ | | ↗ | ↕ | | ↗ | ↕ | ↗ |
| Volume (vph) | 328 | 23 | 253 | 10 | 75 | 35 | 383 | 694 | 9 | 12 | 553 | 302 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 190 | | 0 | 145 | | 45 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 2 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.961 | | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.955 | | | 0.996 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1779 | 1583 | 0 | 2021 | 0 | 3433 | 4003 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | | 0.711 | | | 0.960 | | 0.401 | | | 0.311 | | |
| Satd. Flow (perm) | 0 | 1324 | 1583 | 0 | 1948 | 0 | 1449 | 4003 | 0 | 579 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 177 | | 38 | | | 3 | | | | 308 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 45 |
| Link Distance (ft) | | 1713 | | | 375 | | | 2482 | | | | 971 |
| Travel Time (s) | | 29.2 | | | 6.4 | | | 42.3 | | | | 14.7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 357 | 25 | 275 | 11 | 82 | 38 | 416 | 754 | 10 | 13 | 601 | 328 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 382 | 275 | 0 | 131 | 0 | 416 | 764 | 0 | 13 | 601 | 328 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019

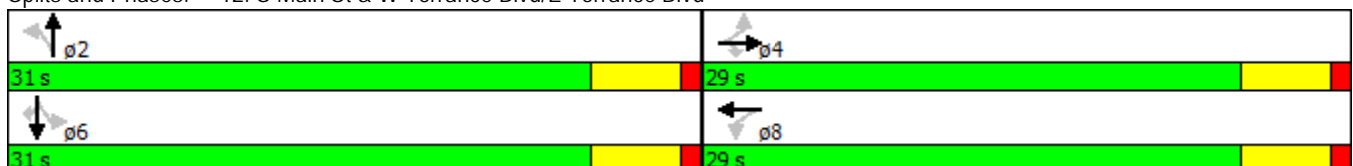


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 29.0 | 29.0 | 29.0 | 29.0 | 29.0 | | 31.0 | 31.0 | | 31.0 | 31.0 | 31.0 |
| Total Split (%) | 48.3% | 48.3% | 48.3% | 48.3% | 48.3% | | 51.7% | 51.7% | | 51.7% | 51.7% | 51.7% |
| Maximum Green (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | | 26.0 | 26.0 | | 26.0 | 26.0 | 26.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | | 20.2 | 20.2 | | 20.2 | | 26.2 | 26.2 | | 26.2 | 26.2 | 26.2 |
| Actuated g/C Ratio | | 0.36 | 0.36 | | 0.36 | | 0.46 | 0.46 | | 0.46 | 0.46 | 0.46 |
| v/c Ratio | | 0.81 | 0.40 | | 0.18 | | 0.62 | 0.41 | | 0.05 | 0.37 | 0.37 |
| Control Delay | | 31.1 | 6.9 | | 9.5 | | 17.7 | 11.6 | | 10.6 | 11.4 | 3.3 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | | 31.1 | 6.9 | | 9.5 | | 17.7 | 11.6 | | 10.6 | 11.4 | 3.3 |
| LOS | | C | A | | A | | B | B | | B | B | A |
| Approach Delay | | 21.0 | | | 9.5 | | | 13.7 | | | 8.6 | |
| Approach LOS | | C | | | A | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 56.5 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.81 |
| Intersection Signal Delay: | 13.5 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 64.8% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 12: S Main St & W Torrance Blvd/E Torrance Blvd



Lanes, Volumes, Timings
 13: Lenardo Rd/I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↗ | ↖ | ↖ | ↖ |
| Volume (vph) | 35 | 70 | 12 | 346 | 219 | 59 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | | 0 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 2 | 1 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.97 | 1.00 |
| Fr _t | | | | 0.850 | | 0.850 |
| Fl _t Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 3539 | 1863 | 1583 | 3433 | 1583 |
| Fl _t Permitted | 0.749 | | | | 0.950 | |
| Satd. Flow (perm) | 1395 | 3539 | 1863 | 1583 | 3433 | 1583 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 376 | | 64 |
| Link Speed (mph) | | 35 | 40 | | 40 | |
| Link Distance (ft) | | 701 | 533 | | 434 | |
| Travel Time (s) | | 13.7 | 9.1 | | 7.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 38 | 76 | 13 | 376 | 238 | 64 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 38 | 76 | 13 | 376 | 238 | 64 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 12 | 12 | | 24 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 12 | 12 | | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector (ft) | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | 94 | | | |
| Detector 2 Size(ft) | | 6 | 6 | | | |
| Detector 2 Type | | Cl+Ex | Cl+Ex | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | 0.0 | 0.0 | | | |
| Turn Type | Perm | NA | NA | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |

Lanes, Volumes, Timings
 13: Lenardo Rd/I-405 SB Ramps

1/3/2019

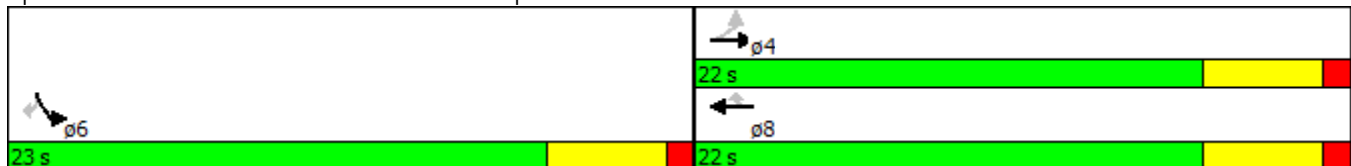


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | 48.9% | 48.9% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 7.7 | 7.7 | 7.7 | 7.7 | 19.2 | 19.2 |
| Actuated g/C Ratio | 0.21 | 0.21 | 0.21 | 0.21 | 0.52 | 0.52 |
| v/c Ratio | 0.13 | 0.10 | 0.03 | 0.60 | 0.13 | 0.08 |
| Control Delay | 11.9 | 11.1 | 10.6 | 6.3 | 5.6 | 2.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.9 | 11.1 | 10.6 | 6.3 | 5.6 | 2.6 |
| LOS | B | B | B | A | A | A |
| Approach Delay | | 11.4 | 6.4 | | 5.0 | |
| Approach LOS | | B | A | | A | |

Intersection Summary

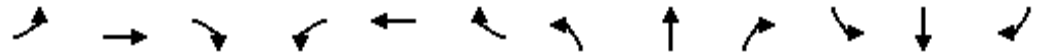
Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 36.9
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 6.6
 Intersection LOS: A
 Intersection Capacity Utilization 33.1%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 13: Lenardo Rd/I-405 SB Ramps



Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

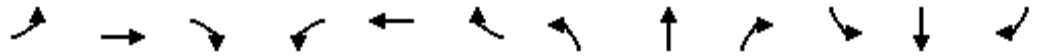
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 669 | 73 | 501 | 0 | 0 | 0 | 86 | 1230 | 153 | 0 | 846 | 470 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 200 | | 150 | 0 | | 0 | 160 | | 0 | 0 | | 120 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr _t | | | 0.850 | | | | | 0.983 | | | | 0.850 |
| Fl _t Protected | 0.950 | | | | | | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1770 | 3479 | 0 | 0 | 3539 | 1583 |
| Fl _t Permitted | 0.950 | | | | | | 0.249 | | | | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 464 | 3479 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 91 | | | | | 34 | | | | 511 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 533 | | | 422 | | | 1230 | | | | 386 |
| Travel Time (s) | | 9.1 | | | 7.2 | | | 24.0 | | | | 7.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 727 | 79 | 545 | 0 | 0 | 0 | 93 | 1337 | 166 | 0 | 920 | 511 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 727 | 79 | 545 | 0 | 0 | 0 | 93 | 1503 | 0 | 0 | 920 | 511 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | | | | 1 | 2 | | | 2 | 1 |
| Detector Template | Left | Thru | Right | | | | Left | Thru | | | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | | | | 20 | 100 | | | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | | | | 20 | 6 | | | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex | Cl+Ex | | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | | | | Perm | NA | | | NA | Perm |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | | 2 | | | | | 6 |
| Detector Phase | 4 | 4 | 4 | | | | 2 | 2 | | | 6 | 6 |

Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019

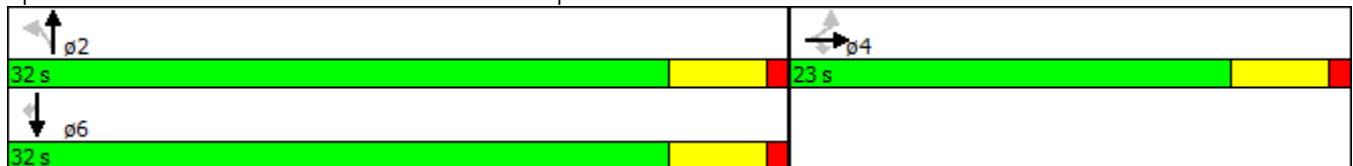


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-----|-----|-----|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | | | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | 23.0 | 23.0 | 23.0 | | | | 32.0 | 32.0 | | | 32.0 | 32.0 |
| Total Split (%) | 41.8% | 41.8% | 41.8% | | | | 58.2% | 58.2% | | | 58.2% | 58.2% |
| Maximum Green (s) | 18.0 | 18.0 | 18.0 | | | | 27.0 | 27.0 | | | 27.0 | 27.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | | | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | None | None | None | | | | Max | Max | | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | | | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Act Effct Green (s) | 18.0 | 18.0 | 18.0 | | | | 27.0 | 27.0 | | | 27.0 | 27.0 |
| Actuated g/C Ratio | 0.33 | 0.33 | 0.33 | | | | 0.49 | 0.49 | | | 0.49 | 0.49 |
| v/c Ratio | 0.65 | 0.07 | 0.94 | | | | 0.41 | 0.87 | | | 0.53 | 0.49 |
| Control Delay | 19.0 | 13.0 | 44.3 | | | | 15.9 | 19.8 | | | 11.0 | 2.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 19.0 | 13.0 | 44.3 | | | | 15.9 | 19.8 | | | 11.0 | 2.8 |
| LOS | B | B | D | | | | B | B | | | B | A |
| Approach Delay | | 28.9 | | | | | | 19.5 | | | 8.1 | |
| Approach LOS | | C | | | | | | B | | | A | |

Intersection Summary

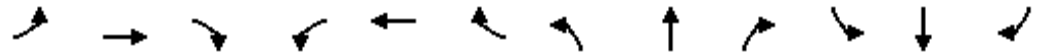
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 55 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.94 |
| Intersection Signal Delay: | 18.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 66.3% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 14: S Avalon Blvd & I-405 SB Ramps



Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | ↙ | ↖ | ↗ | ↖ | ↗ | | | ↖ | ↗ |
| Volume (vph) | 0 | 0 | 0 | 183 | 2 | 866 | 430 | 1275 | 0 | 0 | 1099 | 275 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 1 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 |
| Fr _t | | | | | | 0.850 | | | | | | 0.850 |
| Fl _t Protected | | | | 0.950 | 0.953 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1681 | 1686 | 1583 | 3433 | 3539 | 0 | 0 | 5085 | 1583 |
| Fl _t Permitted | | | | 0.950 | 0.953 | | 0.175 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1681 | 1686 | 1583 | 632 | 3539 | 0 | 0 | 5085 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 29 | | | | | | 299 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 346 | | | 390 | | | 386 | | | | 2946 |
| Travel Time (s) | | 5.9 | | | 6.6 | | | 7.5 | | | | 57.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 199 | 2 | 941 | 467 | 1386 | 0 | 0 | 1195 | 299 |
| Shared Lane Traffic (%) | | | | 50% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 99 | 102 | 941 | 467 | 1386 | 0 | 0 | 1195 | 299 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | 1 | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | Right | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | 20 | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | 20 | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | Perm | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | 8 | 2 | | | | | 6 |
| Detector Phase | | | | 8 | 8 | 8 | 2 | 2 | | | | 6 |

Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | | | | 53.0 | 53.0 | 53.0 | 67.0 | 67.0 | | | 67.0 | 67.0 |
| Total Split (%) | | | | 44.2% | 44.2% | 44.2% | 55.8% | 55.8% | | | 55.8% | 55.8% |
| Maximum Green (s) | | | | 48.0 | 48.0 | 48.0 | 62.0 | 62.0 | | | 62.0 | 62.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | | | | None | None | None | Max | Max | | | Max | Max |
| Walk Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | | | | 48.0 | 48.0 | 48.0 | 62.0 | 62.0 | | | 62.0 | 62.0 |
| Actuated g/C Ratio | | | | 0.40 | 0.40 | 0.40 | 0.52 | 0.52 | | | 0.52 | 0.52 |
| v/c Ratio | | | | 0.15 | 0.15 | 1.45 | 1.43 | 0.76 | | | 0.45 | 0.31 |
| Control Delay | | | | 23.8 | 23.8 | 239.3 | 238.2 | 26.4 | | | 19.0 | 2.6 |
| Queue Delay | | | | 0.0 | 0.0 | 0.0 | 0.0 | 48.6 | | | 0.0 | 0.0 |
| Total Delay | | | | 23.8 | 23.8 | 239.3 | 238.2 | 75.1 | | | 19.0 | 2.6 |
| LOS | | | | C | C | F | F | E | | | B | A |
| Approach Delay | | | | | 201.3 | | | 116.2 | | | 15.7 | |
| Approach LOS | | | | | F | | | F | | | B | |

Intersection Summary












| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 120 |
| Actuated Cycle Length: | 120 |
| Natural Cycle: | 120 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.45 |
| Intersection Signal Delay: | 104.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 97.2% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |

Splits and Phases: 15: S Avalon Blvd & I-405 NB Ramps



Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  |  |  |  |
| Volume (vph) | 292 | 325 | 764 | 161 | 119 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 16 | 16 | 16 | 16 | 12 | 12 |
| Storage Length (ft) | 0 | 0 | | 0 | 90 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | 0.929 | | 0.974 | | | |
| Flt Protected | 0.977 | | | | 0.950 | |
| Satd. Flow (prot) | 1916 | 0 | 3907 | 0 | 1770 | 3539 |
| Flt Permitted | 0.977 | | | | 0.206 | |
| Satd. Flow (perm) | 1916 | 0 | 3907 | 0 | 384 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 103 | | 56 | | | |
| Link Speed (mph) | 30 | | 35 | | | 45 |
| Link Distance (ft) | 4544 | | 1360 | | | 2482 |
| Travel Time (s) | 103.3 | | 26.5 | | | 37.6 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 317 | 353 | 830 | 175 | 129 | 691 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 670 | 0 | 1005 | 0 | 129 | 691 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 28 | | 24 | | | 24 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | | 2 | | 1 | 2 |
| Detector Template | Left | | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Perm | | NA | | Perm | NA |
| Protected Phases | | | 2 | | | 6 |
| Permitted Phases | 8 | | | | 6 | |

Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019

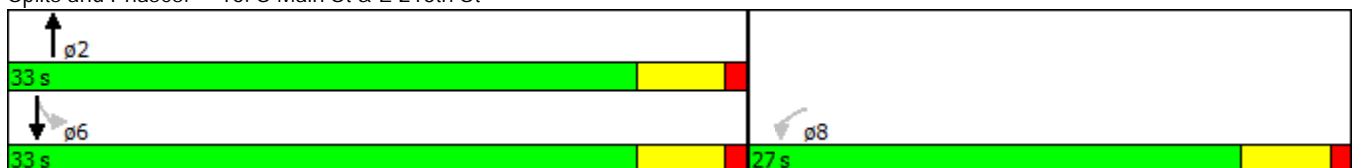


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-----|-------|-----|-------|-------|
| Detector Phase | 8 | | 2 | | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 27.0 | | 33.0 | | 33.0 | 33.0 |
| Total Split (%) | 45.0% | | 55.0% | | 55.0% | 55.0% |
| Maximum Green (s) | 22.0 | | 28.0 | | 28.0 | 28.0 |
| Yellow Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | | Max | | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | | 0 | 0 |
| Act Effect Green (s) | 20.7 | | 28.1 | | 28.1 | 28.1 |
| Actuated g/C Ratio | 0.35 | | 0.48 | | 0.48 | 0.48 |
| v/c Ratio | 0.90 | | 0.53 | | 0.70 | 0.41 |
| Control Delay | 33.8 | | 11.6 | | 39.1 | 11.2 |
| Queue Delay | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Delay | 33.8 | | 11.6 | | 39.1 | 11.2 |
| LOS | C | | B | | D | B |
| Approach Delay | 33.8 | | 11.6 | | | 15.6 |
| Approach LOS | C | | B | | | B |

Intersection Summary

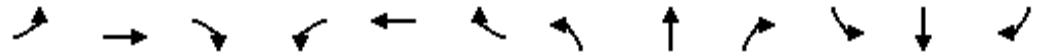
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 58.8 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.90 |
| Intersection Signal Delay: | 18.9 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 81.5% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 16: S Main St & E 213th St



Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

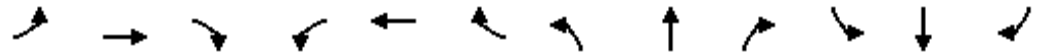
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 237 | 201 | 85 | 155 | 258 | 218 | 105 | 1014 | 145 | 59 | 1078 | 173 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 70 | | 0 | 120 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.955 | | | 0.931 | | | 0.981 | | | 0.979 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 2016 | 0 | 1770 | 3734 | 0 | 1770 | 5654 | 0 | 1770 | 5642 | 0 |
| Flt Permitted | 0.456 | | | 0.533 | | | 0.211 | | | 0.211 | | |
| Satd. Flow (perm) | 849 | 2016 | 0 | 993 | 3734 | 0 | 393 | 5654 | 0 | 393 | 5642 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 25 | | | 32 | | | 72 | | | 84 | |
| Link Speed (mph) | | 30 | | | 30 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4544 | | | 967 | | | 1397 | | | 1230 | |
| Travel Time (s) | | 103.3 | | | 22.0 | | | 27.2 | | | 24.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 258 | 218 | 92 | 168 | 280 | 237 | 114 | 1102 | 158 | 64 | 1172 | 188 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 258 | 310 | 0 | 168 | 517 | 0 | 114 | 1260 | 0 | 64 | 1360 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |

Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

1/3/2019

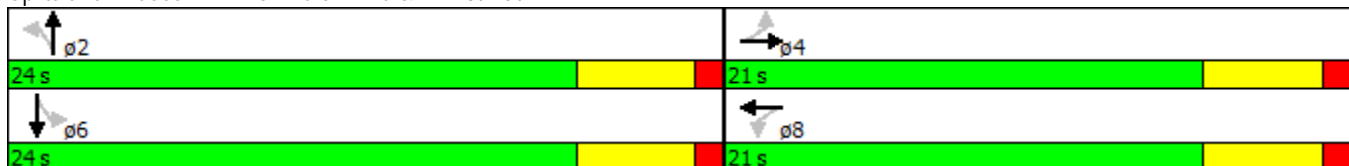


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | | 46.7% | 46.7% | | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 15.2 | 15.2 | | 15.2 | 15.2 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Actuated g/C Ratio | 0.34 | 0.34 | | 0.34 | 0.34 | | 0.43 | 0.43 | | 0.43 | 0.43 | |
| v/c Ratio | 0.89 | 0.44 | | 0.49 | 0.40 | | 0.68 | 0.51 | | 0.38 | 0.55 | |
| Control Delay | 50.2 | 12.5 | | 17.3 | 11.3 | | 37.6 | 9.7 | | 17.2 | 10.0 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 50.2 | 12.5 | | 17.3 | 11.3 | | 37.6 | 9.7 | | 17.2 | 10.0 | |
| LOS | D | B | | B | B | | D | A | | B | A | |
| Approach Delay | | 29.6 | | | 12.8 | | | 12.0 | | | 10.3 | |
| Approach LOS | | C | | | B | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 44.2 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.89 |
| Intersection Signal Delay: | 14.0 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 74.4% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 17: S Avalon Blvd & E 213th St



Lanes, Volumes, Timings
18: S Figueroa St & W Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 144 | 417 | 445 | 37 | 463 | 46 | 348 | 533 | 147 | 44 | 377 | 309 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 213 | | 75 | 152 | | 0 | 230 | | 0 | 240 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 2 | | 0 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 |
| Frt | | | 0.850 | | 0.986 | | | 0.968 | | | 0.932 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3490 | 0 | 3433 | 3426 | 0 | 3433 | 3299 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3490 | 0 | 3433 | 3426 | 0 | 3433 | 3299 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 340 | | 15 | | | 55 | | | 231 | |
| Link Speed (mph) | | 35 | | | 35 | | | 40 | | | 40 | |
| Link Distance (ft) | | 1243 | | | 2441 | | | 713 | | | 3767 | |
| Travel Time (s) | | 24.2 | | | 47.6 | | | 12.2 | | | 64.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 157 | 453 | 484 | 40 | 503 | 50 | 378 | 579 | 160 | 48 | 410 | 336 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 157 | 453 | 484 | 40 | 553 | 0 | 378 | 739 | 0 | 48 | 746 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 18: S Figueroa St & W Carson St

1/3/2019

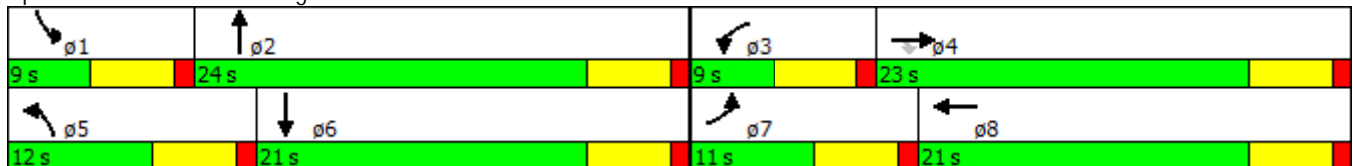


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 11.0 | 23.0 | 23.0 | 9.0 | 21.0 | | 12.0 | 24.0 | | 9.0 | 21.0 | |
| Total Split (%) | 16.9% | 35.4% | 35.4% | 13.8% | 32.3% | | 18.5% | 36.9% | | 13.8% | 32.3% | |
| Maximum Green (s) | 6.0 | 18.0 | 18.0 | 4.0 | 16.0 | | 7.0 | 19.0 | | 4.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 6.0 | 21.7 | 21.7 | 4.0 | 14.2 | | 7.0 | 22.8 | | 4.0 | 16.0 | |
| Actuated g/C Ratio | 0.09 | 0.34 | 0.34 | 0.06 | 0.22 | | 0.11 | 0.36 | | 0.06 | 0.25 | |
| v/c Ratio | 0.93 | 0.37 | 0.63 | 0.36 | 0.69 | | 0.99 | 0.58 | | 0.22 | 0.74 | |
| Control Delay | 89.6 | 17.8 | 10.5 | 38.5 | 26.9 | | 78.0 | 18.9 | | 31.5 | 20.4 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 89.6 | 17.8 | 10.5 | 38.5 | 26.9 | | 78.0 | 18.9 | | 31.5 | 20.4 | |
| LOS | F | B | B | D | C | | E | B | | C | C | |
| Approach Delay | | 24.9 | | | 27.7 | | | 38.9 | | | 21.1 | |
| Approach LOS | | C | | | C | | | D | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 65 |
| Actuated Cycle Length: | 63.3 |
| Natural Cycle: | 65 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.99 |
| Intersection Signal Delay: | 28.9 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 69.2% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 18: S Figueroa St & W Carson St



Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 100 | 351 | 123 | 121 | 375 | 58 | 135 | 778 | 125 | 62 | 590 | 102 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 210 | | 70 | 220 | | 70 | 115 | | 0 | 175 | | 500 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | | 0.850 | | 0.979 | | | 0.978 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 4979 | 0 | 1770 | 4973 | 0 |
| Flt Permitted | 0.512 | | | 0.525 | | | 0.355 | | | 0.275 | | |
| Satd. Flow (perm) | 954 | 3539 | 1583 | 978 | 3539 | 1583 | 661 | 4979 | 0 | 512 | 4973 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 134 | | | 63 | | 84 | | | 94 | |
| Link Speed (mph) | | 35 | | | 35 | | | 35 | | | 35 | |
| Link Distance (ft) | | 2441 | | | 4293 | | | 978 | | | 1360 | |
| Travel Time (s) | | 47.6 | | | 83.6 | | | 19.1 | | | 26.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 109 | 382 | 134 | 132 | 408 | 63 | 147 | 846 | 136 | 67 | 641 | 111 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 109 | 382 | 134 | 132 | 408 | 63 | 147 | 982 | 0 | 67 | 752 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | | 6 | | |

Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019

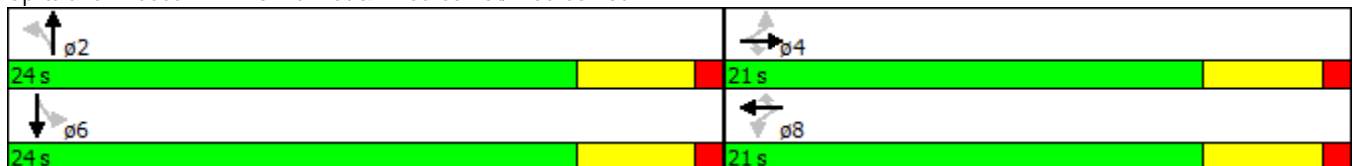


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | 46.7% | 46.7% | 46.7% | 46.7% | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 19.2 | 19.2 | | 19.2 | 19.2 | |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.47 | 0.47 | | 0.47 | 0.47 | |
| v/c Ratio | 0.41 | 0.39 | 0.25 | 0.48 | 0.41 | 0.13 | 0.47 | 0.41 | | 0.28 | 0.31 | |
| Control Delay | 16.5 | 12.6 | 4.0 | 18.3 | 12.9 | 4.3 | 15.6 | 7.6 | | 11.9 | 6.8 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 16.5 | 12.6 | 4.0 | 18.3 | 12.9 | 4.3 | 15.6 | 7.6 | | 11.9 | 6.8 | |
| LOS | B | B | A | B | B | A | B | A | | B | A | |
| Approach Delay | | 11.5 | | | 13.2 | | | 8.6 | | | 7.2 | |
| Approach LOS | | B | | | B | | | A | | | A | |

Intersection Summary

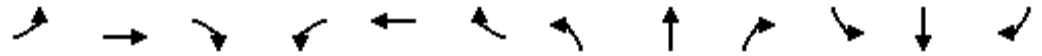
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 40.6 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.48 |
| Intersection Signal Delay: | 9.7 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 54.3% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 19: S Main St & W Carson St/E Carson St



Lanes, Volumes, Timings
 20: S Avalon Blvd & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 116 | 502 | 66 | 493 | 399 | 102 | 61 | 1034 | 503 | 138 | 925 | 57 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 2 | | 0 | 2 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.983 | | | 0.969 | | | 0.951 | | | | 0.991 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3479 | 0 | 3433 | 3429 | 0 | 1770 | 4836 | 0 | 1770 | 5040 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3479 | 0 | 3433 | 3429 | 0 | 1770 | 4836 | 0 | 1770 | 5040 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 14 | | | 34 | | | 149 | | | | 11 |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | | 1397 |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | | 27.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 126 | 546 | 72 | 536 | 434 | 111 | 66 | 1124 | 547 | 150 | 1005 | 62 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 126 | 618 | 0 | 536 | 545 | 0 | 66 | 1671 | 0 | 150 | 1067 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |

Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019

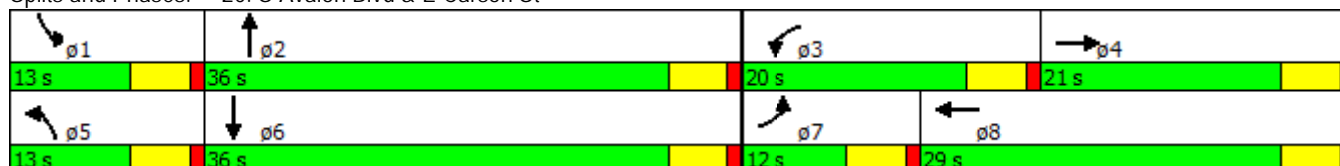


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 12.0 | 21.0 | | 20.0 | 29.0 | | 13.0 | 36.0 | | 13.0 | 36.0 | |
| Total Split (%) | 13.3% | 23.3% | | 22.2% | 32.2% | | 14.4% | 40.0% | | 14.4% | 40.0% | |
| Maximum Green (s) | 7.0 | 16.0 | | 15.0 | 24.0 | | 8.0 | 31.0 | | 8.0 | 31.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 6.9 | 16.0 | | 15.0 | 24.1 | | 7.4 | 31.0 | | 8.0 | 33.7 | |
| Actuated g/C Ratio | 0.08 | 0.18 | | 0.17 | 0.27 | | 0.08 | 0.34 | | 0.09 | 0.37 | |
| v/c Ratio | 0.48 | 0.98 | | 0.94 | 0.58 | | 0.46 | 0.95 | | 0.96 | 0.56 | |
| Control Delay | 46.4 | 69.0 | | 63.3 | 29.6 | | 49.6 | 39.1 | | 104.7 | 24.2 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 46.4 | 69.0 | | 63.3 | 29.6 | | 49.6 | 39.1 | | 104.7 | 24.2 | |
| LOS | D | E | | E | C | | D | D | | F | C | |
| Approach Delay | | 65.2 | | | 46.3 | | | 39.5 | | | 34.2 | |
| Approach LOS | | E | | | D | | | D | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.98 |
| Intersection Signal Delay: | 43.7 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 85.6% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St



Lanes, Volumes, Timings
21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | ↘ | ↑↑ | ↗ | ↘ | ↑↑↑ | | ↘ | | ↗ | | | ↗ |
| Volume (vph) | 7 | 664 | 754 | 121 | 1216 | 0 | 165 | 0 | 249 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 50 | | 180 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | 0.850 | | | | | | 0.850 | | | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (prot) | 1593 | 3185 | 1425 | 1593 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Fl _t Permitted | 0.174 | | | 0.369 | | | 0.950 | | | | | |
| Satd. Flow (perm) | 292 | 3185 | 1425 | 619 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 820 | | | | | | 206 | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 2121 | | | 469 | | | 428 | | | | 162 |
| Travel Time (s) | | 36.2 | | | 8.0 | | | 7.3 | | | | 2.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 8 | 722 | 820 | 132 | 1322 | 0 | 179 | 0 | 271 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 8 | 722 | 820 | 132 | 1322 | 0 | 179 | 0 | 271 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | | 1 | | | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | | Right | | | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | | 20 | | | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | | 20 | | | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | | | | | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | | Perm | | | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | | 2 | | | 6 |

Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|-----|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (s) | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (%) | 65.0% | 65.0% | 65.0% | 65.0% | 65.0% | | 35.0% | | 35.0% | | | 35.0% |
| Maximum Green (s) | 34.0 | 34.0 | 34.0 | 34.0 | 34.0 | | 16.0 | | 16.0 | | | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | | 1.0 | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | 3.0 |
| Recall Mode | None | None | None | None | None | | Min | | Min | | | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | | 11.0 | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Act Effect Green (s) | 23.3 | 23.3 | 23.3 | 23.3 | 23.3 | | 10.5 | | 10.5 | | | |
| Actuated g/C Ratio | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | | 0.24 | | 0.24 | | | |
| v/c Ratio | 0.05 | 0.43 | 0.72 | 0.41 | 0.55 | | 0.48 | | 0.55 | | | |
| Control Delay | 6.6 | 7.4 | 4.9 | 11.3 | 8.0 | | 21.0 | | 10.2 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | |
| Total Delay | 6.6 | 7.4 | 4.9 | 11.3 | 8.0 | | 21.0 | | 10.2 | | | |
| LOS | A | A | A | B | A | | C | | B | | | |
| Approach Delay | | 6.1 | | | 8.3 | | | | | | | |
| Approach LOS | | A | | | A | | | | | | | |

Intersection Summary

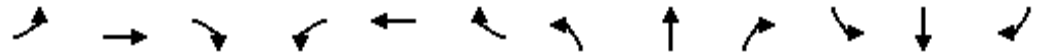
Area Type: CBD
 Cycle Length: 60
 Actuated Cycle Length: 44.4
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 8.1
 Intersection Capacity Utilization 67.7%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 21: I-405 SB Ramps & E Carson St



Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 163 | 730 | 39 | 14 | 807 | 258 | 7 | 4 | 4 | 54 | 15 | 540 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 70 | | 0 | 100 | | 180 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.992 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.968 | | | 0.962 | |
| Satd. Flow (prot) | 1770 | 3511 | 0 | 1770 | 3539 | 1583 | 0 | 1803 | 1583 | 0 | 1792 | 1583 |
| Flt Permitted | 0.247 | | | 0.267 | | | | 0.890 | | | 0.813 | |
| Satd. Flow (perm) | 460 | 3511 | 0 | 497 | 3539 | 1583 | 0 | 1658 | 1583 | 0 | 1514 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 13 | | | | 280 | | | 40 | | | 84 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 469 | | | 2039 | | | 158 | | | 364 | |
| Travel Time (s) | | 8.0 | | | 34.8 | | | 2.7 | | | 6.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 177 | 793 | 42 | 15 | 877 | 280 | 8 | 4 | 4 | 59 | 16 | 587 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 177 | 835 | 0 | 15 | 877 | 280 | 0 | 12 | 4 | 0 | 75 | 587 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | 6 |

Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019

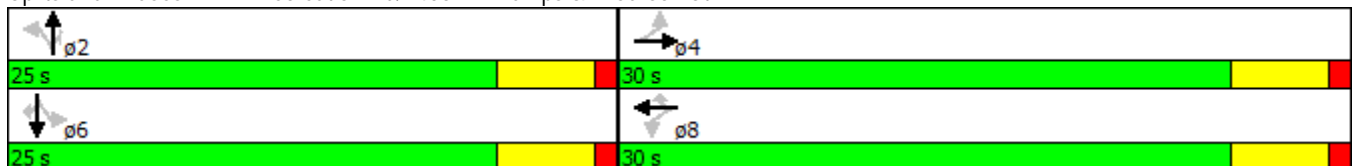


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 30.0 | 30.0 | | 30.0 | 30.0 | 30.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Total Split (%) | 54.5% | 54.5% | | 54.5% | 54.5% | 54.5% | 45.5% | 45.5% | 45.5% | 45.5% | 45.5% | 45.5% |
| Maximum Green (s) | 25.0 | 25.0 | | 25.0 | 25.0 | 25.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 22.6 | 22.6 | | 22.6 | 22.6 | 22.6 | | 20.1 | 20.1 | | 20.1 | 20.1 |
| Actuated g/C Ratio | 0.43 | 0.43 | | 0.43 | 0.43 | 0.43 | | 0.38 | 0.38 | | 0.38 | 0.38 |
| v/c Ratio | 0.90 | 0.55 | | 0.07 | 0.58 | 0.33 | | 0.02 | 0.01 | | 0.13 | 0.90 |
| Control Delay | 63.2 | 12.5 | | 9.6 | 13.0 | 2.7 | | 11.5 | 0.0 | | 12.5 | 35.0 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 63.2 | 12.5 | | 9.6 | 13.0 | 2.7 | | 11.5 | 0.0 | | 12.5 | 35.0 |
| LOS | E | B | | A | B | A | | B | A | | B | C |
| Approach Delay | | 21.4 | | | 10.5 | | | 8.6 | | | 32.4 | |
| Approach LOS | | C | | | B | | | A | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 52.8 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.90 |
| Intersection Signal Delay: | 19.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 71.6% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 22: Recreation Rd/I-405 NB Ramps & E Carson St



Lanes, Volumes, Timings
 1: S Figueroa St & I-405 SB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | ↑↑ | | ↑ | ↑↑ |
| Volume (vph) | 0 | 0 | 762 | 115 | 592 | 1192 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 220 | |
| Storage Lanes | 0 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | | | 0.980 | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 3468 | 0 | 1770 | 3539 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 3468 | 0 | 1770 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 607 | | 2451 | | | 246 |
| Travel Time (s) | 10.3 | | 41.8 | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 828 | 125 | 643 | 1296 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 953 | 0 | 643 | 1296 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Yield | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 64.2% |
| Analysis Period (min) | 15 |
| | ICU Level of Service C |

Lanes, Volumes, Timings
 2: S Figueroa St & I-405 NB Ramps

1/3/2019



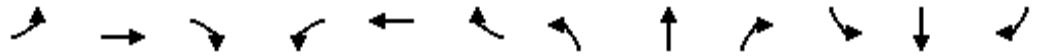
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 77 | 131 | 770 | 0 | 0 | 1692 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | | 0.850 | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 724 | | 246 | | | 1243 |
| Travel Time (s) | 12.3 | | 4.2 | | | 21.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 84 | 142 | 837 | 0 | 0 | 1839 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 84 | 142 | 837 | 0 | 0 | 1839 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 64.2% |
| Analysis Period (min) | 15 |
| | ICU Level of Service C |

Lanes, Volumes, Timings
3: S Main St & I-405 SB Ramps

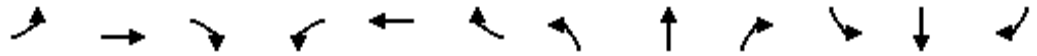
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 17 | 636 | 45 | 0 | 0 | 0 | 0 | 754 | 134 | 228 | 1193 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 250 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr _t | | 0.990 | | | | | | 0.977 | | | | |
| Fl _t Protected | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1844 | 0 | 0 | 0 | 0 | 0 | 3458 | 0 | 1770 | 3539 | 0 |
| Fl _t Permitted | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1844 | 0 | 0 | 0 | 0 | 0 | 3458 | 0 | 1770 | 3539 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 5 | | | | | | 23 | | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 607 | | | 169 | | | 2341 | | | 290 | |
| Travel Time (s) | | 10.3 | | | 2.9 | | | 35.5 | | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 18 | 691 | 49 | 0 | 0 | 0 | 0 | 820 | 146 | 248 | 1297 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 18 | 740 | 0 | 0 | 0 | 0 | 0 | 966 | 0 | 248 | 1297 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | | | | | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | | | | | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | | | | | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 4 | | | | | | | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 3: S Main St & I-405 SB Ramps

1/3/2019

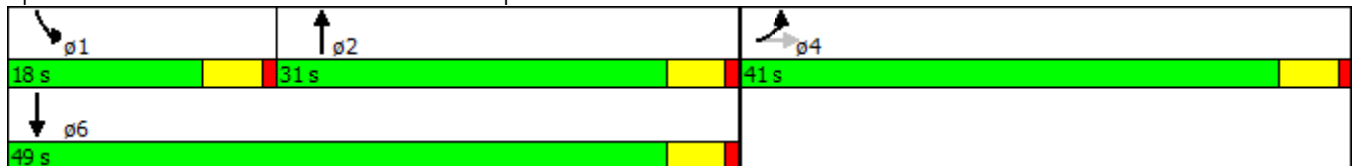


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 41.0 | 41.0 | | | | | | 31.0 | | 18.0 | 49.0 | |
| Total Split (%) | 45.6% | 45.6% | | | | | | 34.4% | | 20.0% | 54.4% | |
| Maximum Green (s) | 36.0 | 36.0 | | | | | | 26.0 | | 13.0 | 44.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | | | | | Max | | None | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | 0 | |
| Act Effct Green (s) | 36.0 | 36.0 | | | | | | 26.0 | | 13.0 | 44.0 | |
| Actuated g/C Ratio | 0.40 | 0.40 | | | | | | 0.29 | | 0.14 | 0.49 | |
| v/c Ratio | 0.03 | 1.00 | | | | | | 0.95 | | 0.97 | 0.75 | |
| Control Delay | 16.6 | 61.7 | | | | | | 50.5 | | 90.5 | 22.0 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 49.1 | |
| Total Delay | 16.6 | 61.7 | | | | | | 50.5 | | 90.5 | 71.1 | |
| LOS | B | E | | | | | | D | | F | E | |
| Approach Delay | | 60.6 | | | | | | 50.5 | | | 74.2 | |
| Approach LOS | | E | | | | | | D | | | E | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.00 |
| Intersection Signal Delay: | 64.0 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 86.4% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 3: S Main St & I-405 SB Ramps



Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | ↔↔ | | ↗ | ↕↕ | | | ↕↔ | |
| Volume (vph) | 0 | 0 | 0 | 91 | 120 | 236 | 24 | 648 | 0 | 0 | 1439 | 60 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.921 | | | | | | 0.994 | |
| Flt Protected | | | | | 0.990 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3227 | 0 | 1770 | 3539 | 0 | 0 | 3518 | 0 |
| Flt Permitted | | | | | 0.990 | | 0.117 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3227 | 0 | 218 | 3539 | 0 | 0 | 3518 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 215 | | | | | | 11 | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 724 | | | 336 | | | 290 | | | 724 | |
| Travel Time (s) | | 12.3 | | | 5.7 | | | 4.4 | | | 11.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 99 | 130 | 257 | 26 | 704 | 0 | 0 | 1564 | 65 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 486 | 0 | 26 | 704 | 0 | 0 | 1629 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | | 2 | | | | | |
| Detector Phase | | | | 8 | 8 | | 2 | 2 | | | | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | | 21.0 | 21.0 | | | | 21.0 |

Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

1/3/2019

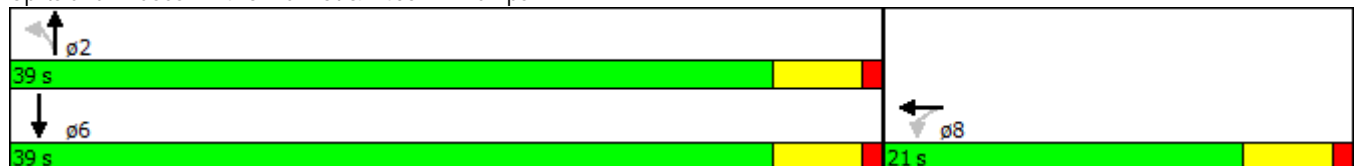


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-------|-------|-----|-----|-------|-----|
| Total Split (s) | | | | 21.0 | 21.0 | | 39.0 | 39.0 | | | 39.0 | |
| Total Split (%) | | | | 35.0% | 35.0% | | 65.0% | 65.0% | | | 65.0% | |
| Maximum Green (s) | | | | 16.0 | 16.0 | | 34.0 | 34.0 | | | 34.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | | 1.0 | 1.0 | | | 1.0 | |
| Lost Time Adjust (s) | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | None | | Max | Max | | | Max | |
| Walk Time (s) | | | | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | | 11.0 | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | | 0 | 0 | | | 0 | |
| Act Effect Green (s) | | | | | 10.4 | | 34.1 | 34.1 | | | 34.1 | |
| Actuated g/C Ratio | | | | | 0.19 | | 0.62 | 0.62 | | | 0.62 | |
| v/c Ratio | | | | | 0.61 | | 0.19 | 0.32 | | | 0.74 | |
| Control Delay | | | | | 14.3 | | 9.9 | 5.8 | | | 10.5 | |
| Queue Delay | | | | | 0.0 | | 0.0 | 0.3 | | | 0.0 | |
| Total Delay | | | | | 14.3 | | 9.9 | 6.1 | | | 10.5 | |
| LOS | | | | | B | | A | A | | | B | |
| Approach Delay | | | | | 14.3 | | | 6.3 | | | 10.5 | |
| Approach LOS | | | | | B | | | A | | | B | |

Intersection Summary
























| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 54.6 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.74 |
| Intersection Signal Delay: | 10.1 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 86.4% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 4: S Main St & I-405 NB Ramps



Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  |  |  |  |  |  |  |
| Volume (vph) | 59 | 1336 | 164 | 669 | 1193 | 133 | 53 | 445 | 510 | 213 | 579 | 226 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.984 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 5004 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 5004 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 14 | | | | 124 | | | 530 | | | 172 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | 40 | |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | 2451 | |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | 41.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 64 | 1452 | 178 | 727 | 1297 | 145 | 58 | 484 | 554 | 232 | 629 | 246 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 64 | 1630 | 0 | 727 | 1297 | 145 | 58 | 484 | 554 | 232 | 629 | 246 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

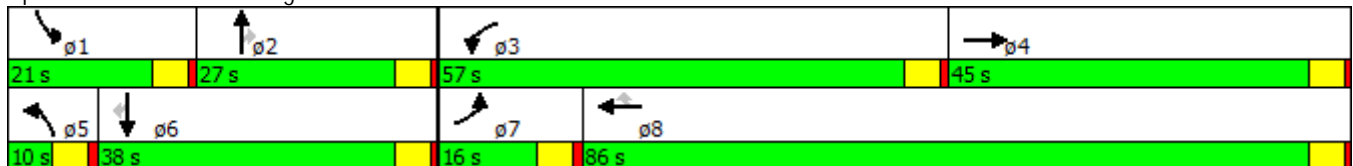


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 16.0 | 45.0 | | 57.0 | 86.0 | 86.0 | 10.0 | 27.0 | 27.0 | 21.0 | 38.0 | 38.0 |
| Total Split (%) | 10.7% | 30.0% | | 38.0% | 57.3% | 57.3% | 6.7% | 18.0% | 18.0% | 14.0% | 25.3% | 25.3% |
| Maximum Green (s) | 11.0 | 40.0 | | 52.0 | 81.0 | 81.0 | 5.0 | 22.0 | 22.0 | 16.0 | 33.0 | 33.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 9.7 | 40.0 | | 52.0 | 84.6 | 84.6 | 5.0 | 22.0 | 22.0 | 16.0 | 33.0 | 33.0 |
| Actuated g/C Ratio | 0.06 | 0.27 | | 0.35 | 0.56 | 0.56 | 0.03 | 0.15 | 0.15 | 0.11 | 0.22 | 0.22 |
| v/c Ratio | 0.56 | 1.21 | | 1.19 | 0.65 | 0.15 | 0.98 | 0.93 | 0.81 | 1.23 | 0.81 | 0.51 |
| Control Delay | 86.7 | 148.5 | | 142.0 | 25.2 | 4.3 | 181.9 | 88.7 | 16.3 | 195.3 | 64.7 | 19.9 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 86.7 | 148.5 | | 142.0 | 25.2 | 4.3 | 181.9 | 88.7 | 16.3 | 195.3 | 64.7 | 19.9 |
| LOS | F | F | | F | C | A | F | F | B | F | E | B |
| Approach Delay | | 146.2 | | | 63.0 | | | 57.0 | | | 82.1 | |
| Approach LOS | | F | | | E | | | E | | | F | |

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 88.6
 Intersection LOS: F
 Intersection Capacity Utilization 107.3%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings

6: S Main St & W Del Amo Blvd/E Del Amo Blvd

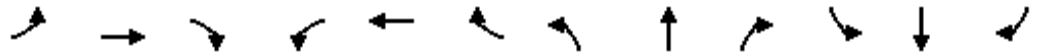
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↕↕↗ | | ↖ | ↕↕↗ | | ↖ | ↕↗ | | ↖ | ↕↗ | |
| Volume (vph) | 243 | 1570 | 339 | 244 | 1188 | 106 | 356 | 489 | 301 | 157 | 812 | 280 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.973 | | | 0.988 | | | 0.943 | | | 0.962 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4948 | 0 | 1770 | 5024 | 0 | 1770 | 3337 | 0 | 1770 | 3405 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4948 | 0 | 1770 | 5024 | 0 | 1770 | 3337 | 0 | 1770 | 3405 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 35 | | | 10 | | | 97 | | | 33 | |
| Link Speed (mph) | | 45 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1251 | | | 1668 | | | 534 | | | 2341 | |
| Travel Time (s) | | 19.0 | | | 25.3 | | | 8.1 | | | 35.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 264 | 1707 | 368 | 265 | 1291 | 115 | 387 | 532 | 327 | 171 | 883 | 304 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 264 | 2075 | 0 | 265 | 1406 | 0 | 387 | 859 | 0 | 171 | 1187 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

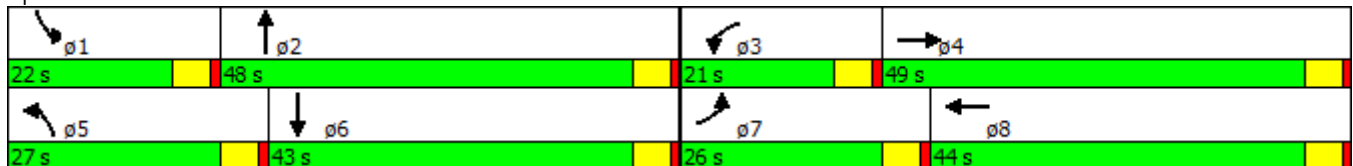


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 26.0 | 49.0 | | 21.0 | 44.0 | | 27.0 | 48.0 | | 22.0 | 43.0 | |
| Total Split (%) | 18.6% | 35.0% | | 15.0% | 31.4% | | 19.3% | 34.3% | | 15.7% | 30.7% | |
| Maximum Green (s) | 21.0 | 44.0 | | 16.0 | 39.0 | | 22.0 | 43.0 | | 17.0 | 38.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 21.0 | 44.0 | | 16.0 | 39.0 | | 22.0 | 43.8 | | 16.2 | 38.0 | |
| Actuated g/C Ratio | 0.15 | 0.31 | | 0.11 | 0.28 | | 0.16 | 0.31 | | 0.12 | 0.27 | |
| v/c Ratio | 1.00 | 1.31 | | 1.31 | 1.00 | | 1.39 | 0.77 | | 0.84 | 1.25 | |
| Control Delay | 113.1 | 184.0 | | 217.8 | 73.8 | | 239.5 | 44.2 | | 92.4 | 163.2 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.8 | | 0.0 | 0.0 | |
| Total Delay | 113.1 | 184.0 | | 217.8 | 73.8 | | 239.5 | 45.0 | | 92.4 | 163.2 | |
| LOS | F | F | | F | E | | F | D | | F | F | |
| Approach Delay | | 176.0 | | | 96.6 | | | 105.4 | | | 154.3 | |
| Approach LOS | | F | | | F | | | F | | | F | |

Intersection Summary

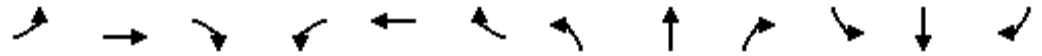
Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.39
 Intersection Signal Delay: 138.2
 Intersection LOS: F
 Intersection Capacity Utilization 119.2%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

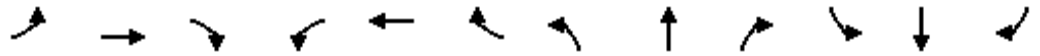
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 710 | 228 | 73 | 1236 | 0 | 316 | 0 | 197 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 155 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | | | | 0.950 | | | 0.950 | 0.950 | | | | |
| Satd. Flow (prot) | 1863 | 3539 | 1583 | 1770 | 3539 | 0 | 1681 | 1681 | 1583 | 1863 | 1770 | 1770 |
| Flt Permitted | | | | 0.248 | | | 0.950 | 0.950 | | | | |
| Satd. Flow (perm) | 1863 | 3539 | 1583 | 462 | 3539 | 0 | 1681 | 1681 | 1583 | 1863 | 1770 | 1770 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 248 | | | | | | 214 | | | |
| Link Speed (mph) | | 45 | | | 45 | | | 25 | | | 50 | |
| Link Distance (ft) | | 1668 | | | 3009 | | | 694 | | | 308 | |
| Travel Time (s) | | 25.3 | | | 45.6 | | | 18.9 | | | 4.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 772 | 248 | 79 | 1343 | 0 | 343 | 0 | 214 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | 50% | | | | | 0% |
| Lane Group Flow (vph) | 0 | 772 | 248 | 79 | 1343 | 0 | 171 | 172 | 214 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Split | NA | Perm | Perm | | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | 2 | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | 2 | 6 | 6 | 6 |

Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 44.0% | 44.0% | 44.0% | 44.0% | 44.0% | | 28.0% | 28.0% | 28.0% | 28.0% | 28.0% | 28.0% |
| Maximum Green (s) | 28.0 | 28.0 | 28.0 | 28.0 | 28.0 | | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | 28.0 | 28.0 | 28.0 | 28.0 | | 16.0 | 16.0 | 16.0 | | | |
| Actuated g/C Ratio | | 0.37 | 0.37 | 0.37 | 0.37 | | 0.21 | 0.21 | 0.21 | | | |
| v/c Ratio | | 0.58 | 0.33 | 0.46 | 1.02 | | 0.48 | 0.48 | 0.42 | | | |
| Control Delay | | 21.0 | 3.8 | 28.5 | 54.3 | | 31.0 | 31.1 | 6.9 | | | |
| Queue Delay | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total Delay | | 21.0 | 3.8 | 28.5 | 54.3 | | 31.0 | 31.1 | 6.9 | | | |
| LOS | | C | A | C | D | | C | C | A | | | |
| Approach Delay | | 16.8 | | | 52.8 | | | 21.8 | | | | |
| Approach LOS | | B | | | D | | | C | | | | |

Intersection Summary

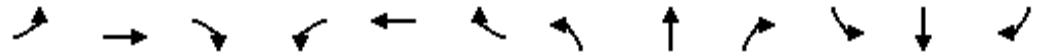
| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 75 |
| Actuated Cycle Length: | 75 |
| Natural Cycle: | 75 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.02 |
| Intersection Signal Delay: | 34.8 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 58.8% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 7: Stamps Dr & E Del Amo Blvd



Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 452 | 1031 | 392 | 294 | 720 | 143 | 220 | 1301 | 227 | 337 | 1025 | 590 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 1 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | 0.945 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4806 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4806 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 184 | | | 124 | | | 245 | | 107 | |
| Link Speed (mph) | | 45 | | | 45 | | | 35 | | | 35 | |
| Link Distance (ft) | | 3009 | | | 3520 | | | 2946 | | | 3936 | |
| Travel Time (s) | | 45.6 | | | 53.3 | | | 57.4 | | | 76.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 491 | 1121 | 426 | 320 | 783 | 155 | 239 | 1414 | 247 | 366 | 1114 | 641 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 491 | 1121 | 426 | 320 | 783 | 155 | 239 | 1414 | 247 | 366 | 1755 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

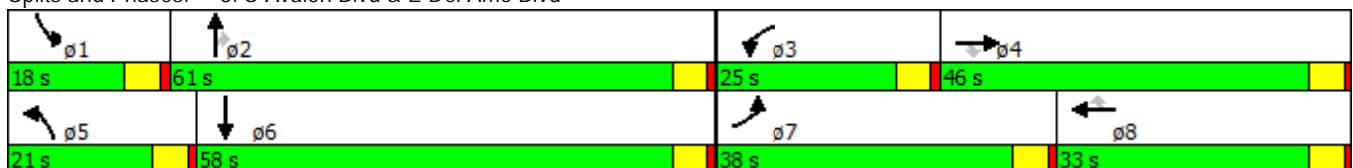


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 46.0 | 46.0 | 25.0 | 33.0 | 33.0 | 21.0 | 61.0 | 61.0 | 18.0 | 58.0 | 58.0 |
| Total Split (%) | 25.3% | 30.7% | 30.7% | 16.7% | 22.0% | 22.0% | 14.0% | 40.7% | 40.7% | 12.0% | 38.7% | 38.7% |
| Maximum Green (s) | 33.0 | 41.0 | 41.0 | 20.0 | 28.0 | 28.0 | 16.0 | 56.0 | 56.0 | 13.0 | 53.0 | 53.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 33.0 | 41.0 | 41.0 | 20.0 | 28.0 | 28.0 | 16.0 | 56.0 | 56.0 | 13.0 | 53.0 | 53.0 |
| Actuated g/C Ratio | 0.22 | 0.27 | 0.27 | 0.13 | 0.19 | 0.19 | 0.11 | 0.37 | 0.37 | 0.09 | 0.35 | 0.35 |
| v/c Ratio | 1.26 | 1.16 | 0.75 | 1.36 | 1.19 | 0.39 | 1.27 | 0.74 | 0.33 | 1.23 | 1.02dr | 1.02dr |
| Control Delay | 183.6 | 130.8 | 37.1 | 232.1 | 149.7 | 16.7 | 208.1 | 43.8 | 4.9 | 184.3 | 64.8 | 64.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 183.6 | 130.8 | 37.1 | 232.1 | 149.7 | 16.7 | 208.1 | 43.8 | 4.9 | 184.3 | 64.8 | 64.8 |
| LOS | F | F | D | F | F | B | F | D | A | F | E | E |
| Approach Delay | | 123.9 | | | 154.3 | | | 59.4 | | | | 85.5 |
| Approach LOS | | F | | | F | | | E | | | | F |

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.36
 Intersection Signal Delay: 101.2
 Intersection LOS: F
 Intersection Capacity Utilization 106.8%
 ICU Level of Service G
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 472 | 217 | 678 | 494 | 766 | 641 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | 235 | | | 250 |
| Storage Lanes | 2 | 0 | 2 | | | 1 |
| Taper Length (ft) | 25 | | 25 | | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 |
| Frt | 0.953 | | | | | 0.850 |
| Flt Protected | 0.967 | | 0.950 | | | |
| Satd. Flow (prot) | 3330 | 0 | 3433 | 3539 | 3539 | 1583 |
| Flt Permitted | 0.967 | | 0.315 | | | |
| Satd. Flow (perm) | 3330 | 0 | 1138 | 3539 | 3539 | 1583 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | 96 | | | | | 697 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 170 | | | 828 | 791 | |
| Travel Time (s) | 2.9 | | | 14.1 | 13.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 513 | 236 | 737 | 537 | 833 | 697 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 749 | 0 | 737 | 537 | 833 | 697 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 24 | | | 24 | 24 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 12 | | | 12 | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Number of Detectors | 1 | | 1 | 2 | 2 | 1 |
| Detector Template | Left | | Left | Thru | Thru | Right |
| Leading Detector (ft) | 20 | | 20 | 100 | 100 | 20 |
| Trailing Detector (ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 20 | 6 | 6 | 20 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | | 94 | 94 | |
| Detector 2 Size(ft) | | | | 6 | 6 | |
| Detector 2 Type | | | | Cl+Ex | Cl+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | | 2 | | | 6 |
| Detector Phase | 4 | | 2 | 2 | 6 | 6 |

Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|-------|-----|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 54.0 | 54.0 | 54.0 | 54.0 |
| Total Split (%) | 28.0% | | 72.0% | 72.0% | 72.0% | 72.0% |
| Maximum Green (s) | 16.0 | | 49.0 | 49.0 | 49.0 | 49.0 |
| Yellow Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 16.0 | | 49.0 | 49.0 | 49.0 | 49.0 |
| Actuated g/C Ratio | 0.21 | | 0.65 | 0.65 | 0.65 | 0.65 |
| v/c Ratio | 0.95 | | 0.99 | 0.23 | 0.36 | 0.55 |
| Control Delay | 50.0 | | 47.1 | 5.6 | 6.4 | 2.2 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 50.0 | | 47.1 | 5.6 | 6.4 | 2.2 |
| LOS | D | | D | A | A | A |
| Approach Delay | 50.0 | | | 29.6 | 4.5 | |
| Approach LOS | D | | | C | A | |

Intersection Summary














Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 23.1
 Intersection LOS: C
 Intersection Capacity Utilization 73.3%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 9: S Figueroa St & I-110 NB Ramps



Lanes, Volumes, Timings
10: S Main St & Lenardo Rd

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|--|---|---|--|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  |  |   | |  |   |
| Volume (vph) | 138 | 178 | 834 | 191 | 182 | 1258 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 145 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Fr _t | | 0.850 | 0.972 | | | |
| Fl _t Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 1583 | 3440 | 0 | 1770 | 3539 |
| Fl _t Permitted | 0.950 | | | | 0.227 | |
| Satd. Flow (perm) | 1770 | 1583 | 3440 | 0 | 423 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | 164 | 76 | | | |
| Link Speed (mph) | 25 | | 45 | | | 45 |
| Link Distance (ft) | 479 | | 971 | | | 534 |
| Travel Time (s) | 13.1 | | 14.7 | | | 8.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 150 | 193 | 907 | 208 | 198 | 1367 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 150 | 193 | 1115 | 0 | 198 | 1367 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | Perm | NA | | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Detector Phase | 8 | 8 | 2 | | 6 | 6 |

Lanes, Volumes, Timings
 10: S Main St & Lenardo Rd

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 49.0 | | 49.0 | 49.0 |
| Total Split (%) | 30.0% | 30.0% | 70.0% | | 70.0% | 70.0% |
| Maximum Green (s) | 16.0 | 16.0 | 44.0 | | 44.0 | 44.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | None | Max | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 11.0 | 11.0 | 46.7 | | 46.7 | 46.7 |
| Actuated g/C Ratio | 0.16 | 0.16 | 0.69 | | 0.69 | 0.69 |
| v/c Ratio | 0.52 | 0.49 | 0.47 | | 0.68 | 0.56 |
| Control Delay | 31.7 | 10.8 | 5.6 | | 23.6 | 6.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 31.7 | 10.8 | 5.6 | | 23.6 | 6.9 |
| LOS | C | B | A | | C | A |
| Approach Delay | 20.0 | | 5.6 | | | 9.0 |
| Approach LOS | B | | A | | | A |

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 67.7
 Natural Cycle: 70
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 9.0
 Intersection Capacity Utilization 59.4%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 10: S Main St & Lenardo Rd



Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

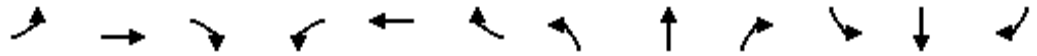
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 621 | 836 | 158 | 48 | 499 | 212 | 85 | 348 | 50 | 153 | 461 | 372 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 180 | | 0 | 115 | | 0 | 255 | | 0 | 185 | | 185 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.91 | 0.91 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.981 | | | | 0.850 | | 0.981 | | | | 0.850 |
| Flt Protected | 0.950 | 0.989 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1610 | 3728 | 0 | 1770 | 3539 | 1583 | 1770 | 3935 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.450 | 0.713 | | 0.120 | | | 0.398 | | | 0.462 | | |
| Satd. Flow (perm) | 763 | 2687 | 0 | 224 | 3539 | 1583 | 741 | 3935 | 0 | 861 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 40 | | | | 170 | | 26 | | | | 315 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 368 | | | 1713 | | | 3767 | | | | 828 |
| Travel Time (s) | | 6.3 | | | 29.2 | | | 64.2 | | | | 14.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 675 | 909 | 172 | 52 | 542 | 230 | 92 | 378 | 54 | 166 | 501 | 404 |
| Shared Lane Traffic (%) | 46% | | | | | | | | | | | |
| Lane Group Flow (vph) | 364 | 1392 | 0 | 52 | 542 | 230 | 92 | 432 | 0 | 166 | 501 | 404 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019

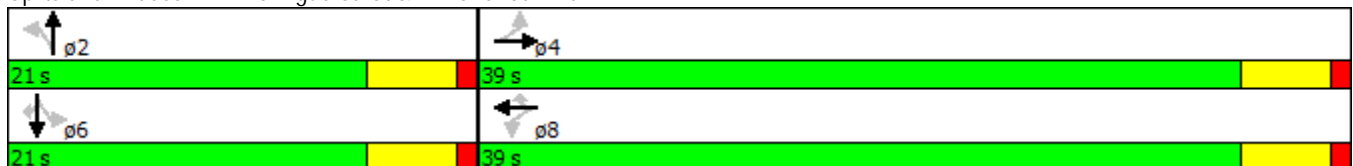


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 39.0 | 39.0 | | 39.0 | 39.0 | 39.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 65.0% | 65.0% | | 65.0% | 65.0% | 65.0% | 35.0% | 35.0% | | 35.0% | 35.0% | 35.0% |
| Maximum Green (s) | 34.0 | 34.0 | | 34.0 | 34.0 | 34.0 | 16.0 | 16.0 | | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | 33.2 | 33.2 | | 33.2 | 33.2 | 33.2 | 16.0 | 16.0 | | 16.0 | 16.0 | 16.0 |
| Actuated g/C Ratio | 0.56 | 0.56 | | 0.56 | 0.56 | 0.56 | 0.27 | 0.27 | | 0.27 | 0.27 | 0.27 |
| v/c Ratio | 0.85 | 0.91 | | 0.42 | 0.27 | 0.24 | 0.46 | 0.40 | | 0.72 | 0.52 | 0.61 |
| Control Delay | 33.7 | 22.9 | | 19.9 | 7.2 | 2.8 | 27.4 | 18.1 | | 40.8 | 20.9 | 9.7 |
| Queue Delay | 0.0 | 2.5 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.7 | 25.4 | | 19.9 | 7.2 | 2.8 | 27.4 | 18.1 | | 40.8 | 20.9 | 9.7 |
| LOS | C | C | | B | A | A | C | B | | D | C | A |
| Approach Delay | | 27.1 | | | 6.7 | | | 19.7 | | | 19.8 | |
| Approach LOS | | C | | | A | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 59.2 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.91 |
| Intersection Signal Delay: | 20.3 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 80.9% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 11: S Figueroa St & W Torrance Blvd



Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕ | ↗ | | ↕ | | ↗ | ↕ | | ↗ | ↕ | ↗ |
| Volume (vph) | 410 | 70 | 533 | 11 | 43 | 25 | 289 | 589 | 9 | 45 | 909 | 432 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 190 | | 0 | 145 | | 45 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 2 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.958 | | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.959 | | | 0.993 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1786 | 1583 | 0 | 2008 | 0 | 3433 | 4003 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | | 0.714 | | | 0.925 | | 0.200 | | | 0.352 | | |
| Satd. Flow (perm) | 0 | 1330 | 1583 | 0 | 1871 | 0 | 723 | 4003 | 0 | 656 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 74 | | 27 | | | 2 | | | | 198 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 45 |
| Link Distance (ft) | | 1713 | | | 375 | | | 2482 | | | | 971 |
| Travel Time (s) | | 29.2 | | | 6.4 | | | 42.3 | | | | 14.7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 446 | 76 | 579 | 12 | 47 | 27 | 314 | 640 | 10 | 49 | 988 | 470 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 522 | 579 | 0 | 86 | 0 | 314 | 650 | 0 | 49 | 988 | 470 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019

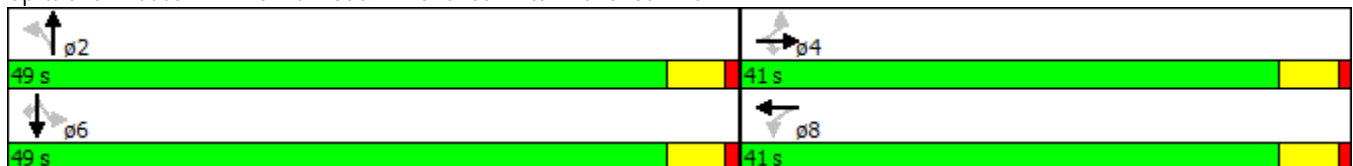


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | | 49.0 | 49.0 | | 49.0 | 49.0 | 49.0 |
| Total Split (%) | 45.6% | 45.6% | 45.6% | 45.6% | 45.6% | | 54.4% | 54.4% | | 54.4% | 54.4% | 54.4% |
| Maximum Green (s) | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | | 44.0 | 44.0 | | 44.0 | 44.0 | 44.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | | 36.0 | 36.0 | | 36.0 | | 44.0 | 44.0 | | 44.0 | 44.0 | 44.0 |
| Actuated g/C Ratio | | 0.40 | 0.40 | | 0.40 | | 0.49 | 0.49 | | 0.49 | 0.49 | 0.49 |
| v/c Ratio | | 0.98 | 0.86 | | 0.11 | | 0.89 | 0.33 | | 0.15 | 0.57 | 0.54 |
| Control Delay | | 63.5 | 35.8 | | 12.7 | | 50.6 | 14.6 | | 14.4 | 18.0 | 11.3 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | | 63.5 | 35.8 | | 12.7 | | 50.6 | 14.6 | | 14.4 | 18.0 | 11.3 |
| LOS | | E | D | | B | | D | B | | B | B | B |
| Approach Delay | | 48.9 | | | 12.7 | | | 26.3 | | | 15.8 | |
| Approach LOS | | D | | | B | | | C | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.98 |
| Intersection Signal Delay: | 28.5 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 78.9% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 12: S Main St & W Torrance Blvd/E Torrance Blvd



Lanes, Volumes, Timings
13: Lenardo Rd/I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 197 | 385 | 37 | 466 | 197 | 182 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | | 0 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 2 | 1 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.97 | 1.00 |
| Fr _t | | | | 0.850 | | 0.850 |
| Fl _t Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 3539 | 1863 | 1583 | 3433 | 1583 |
| Fl _t Permitted | 0.731 | | | | 0.950 | |
| Satd. Flow (perm) | 1362 | 3539 | 1863 | 1583 | 3433 | 1583 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 507 | | 198 |
| Link Speed (mph) | | 35 | 40 | | 40 | |
| Link Distance (ft) | | 701 | 533 | | 434 | |
| Travel Time (s) | | 13.7 | 9.1 | | 7.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 214 | 418 | 40 | 507 | 214 | 198 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 214 | 418 | 40 | 507 | 214 | 198 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 12 | 12 | | 24 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 12 | 12 | | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector (ft) | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | 94 | | | |
| Detector 2 Size(ft) | | 6 | 6 | | | |
| Detector 2 Type | | Cl+Ex | Cl+Ex | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | 0.0 | 0.0 | | | |
| Turn Type | Perm | NA | NA | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |

Lanes, Volumes, Timings
 13: Lenardo Rd/I-405 SB Ramps

1/3/2019

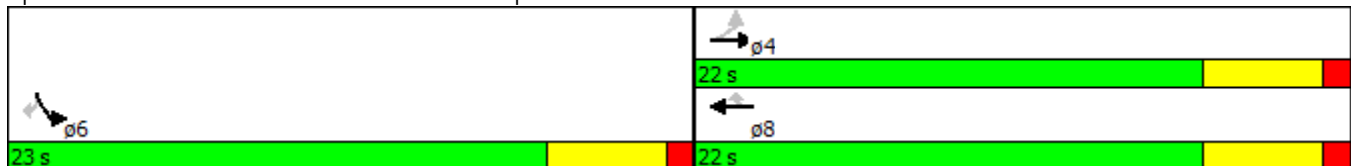


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | 48.9% | 48.9% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 11.9 | 11.9 | 11.9 | 11.9 | 18.1 | 18.1 |
| Actuated g/C Ratio | 0.30 | 0.30 | 0.30 | 0.30 | 0.45 | 0.45 |
| v/c Ratio | 0.53 | 0.40 | 0.07 | 0.61 | 0.14 | 0.24 |
| Control Delay | 16.7 | 12.1 | 9.7 | 5.0 | 7.8 | 2.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 16.7 | 12.1 | 9.7 | 5.0 | 7.8 | 2.7 |
| LOS | B | B | A | A | A | A |
| Approach Delay | | 13.6 | 5.4 | | 5.4 | |
| Approach LOS | | B | A | | A | |

Intersection Summary

Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 40.1
 Natural Cycle: 45
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 8.6
 Intersection Capacity Utilization 48.1%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 13: Lenardo Rd/I-405 SB Ramps



Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

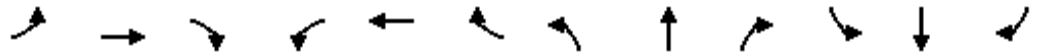
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 696 | 513 | 390 | 0 | 0 | 0 | 96 | 1358 | 215 | 0 | 1282 | 898 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 200 | | 150 | 0 | | 0 | 160 | | 0 | 0 | | 120 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr _t | | | 0.850 | | | | | 0.979 | | | | 0.850 |
| Fl _t Protected | 0.950 | | | | | | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1770 | 3465 | 0 | 0 | 3539 | 1583 |
| Fl _t Permitted | 0.950 | | | | | | 0.123 | | | | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 229 | 3465 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 45 | | | | | 44 | | | | 976 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 533 | | | 422 | | | 1230 | | | | 386 |
| Travel Time (s) | | 9.1 | | | 7.2 | | | 24.0 | | | | 7.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 757 | 558 | 424 | 0 | 0 | 0 | 104 | 1476 | 234 | 0 | 1393 | 976 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 757 | 558 | 424 | 0 | 0 | 0 | 104 | 1710 | 0 | 0 | 1393 | 976 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | | | | 1 | 2 | | | 2 | 1 |
| Detector Template | Left | Thru | Right | | | | Left | Thru | | | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | | | | 20 | 100 | | | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | | | | 20 | 6 | | | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex | Cl+Ex | | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | | | | Perm | NA | | | NA | Perm |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | | 2 | | | | | 6 |
| Detector Phase | 4 | 4 | 4 | | | | 2 | 2 | | | 6 | 6 |

Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-----|-----|-----|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | | | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | 24.0 | 24.0 | 24.0 | | | | 46.0 | 46.0 | | | 46.0 | 46.0 |
| Total Split (%) | 34.3% | 34.3% | 34.3% | | | | 65.7% | 65.7% | | | 65.7% | 65.7% |
| Maximum Green (s) | 19.0 | 19.0 | 19.0 | | | | 41.0 | 41.0 | | | 41.0 | 41.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | | | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | None | None | None | | | | Max | Max | | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | | | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | 19.0 | 19.0 | 19.0 | | | | 41.0 | 41.0 | | | 41.0 | 41.0 |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.27 | | | | 0.59 | 0.59 | | | 0.59 | 0.59 |
| v/c Ratio | 0.81 | 0.58 | 0.92 | | | | 0.78 | 0.84 | | | 0.67 | 0.73 |
| Control Delay | 32.5 | 24.9 | 50.7 | | | | 53.8 | 16.3 | | | 12.0 | 4.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 1.8 | 0.5 |
| Total Delay | 32.5 | 24.9 | 50.7 | | | | 53.8 | 16.3 | | | 13.7 | 5.0 |
| LOS | C | C | D | | | | D | B | | | B | A |
| Approach Delay | | 34.5 | | | | | | 18.4 | | | 10.1 | |
| Approach LOS | | C | | | | | | B | | | B | |

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 19.8
 Intersection LOS: B
 Intersection Capacity Utilization 73.1%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 14: S Avalon Blvd & I-405 SB Ramps



Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | ↶ | ↷ | ↶ | ↶↷ | ↶↷ | | | ↶↷↷ | ↶↷ |
| Volume (vph) | 0 | 0 | 0 | 360 | 0 | 845 | 625 | 1001 | 0 | 0 | 1832 | 616 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 1 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 |
| Frt | | | | | | 0.850 | | | | | | 0.850 |
| Flt Protected | | | | 0.950 | 0.950 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1681 | 1681 | 1583 | 3433 | 3539 | 0 | 0 | 5085 | 1583 |
| Flt Permitted | | | | 0.950 | 0.950 | | 0.211 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1681 | 1681 | 1583 | 762 | 3539 | 0 | 0 | 5085 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 48 | | | | | | 670 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 346 | | | 390 | | | 386 | | | | 2946 |
| Travel Time (s) | | 5.9 | | | 6.6 | | | 7.5 | | | | 57.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 391 | 0 | 918 | 679 | 1088 | 0 | 0 | 1991 | 670 |
| Shared Lane Traffic (%) | | | | 50% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 195 | 196 | 918 | 679 | 1088 | 0 | 0 | 1991 | 670 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | 1 | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | Right | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | 20 | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | 20 | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | Perm | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | 8 | 2 | | | | | 6 |
| Detector Phase | | | | 8 | 8 | 8 | 2 | 2 | | | | 6 |

Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019

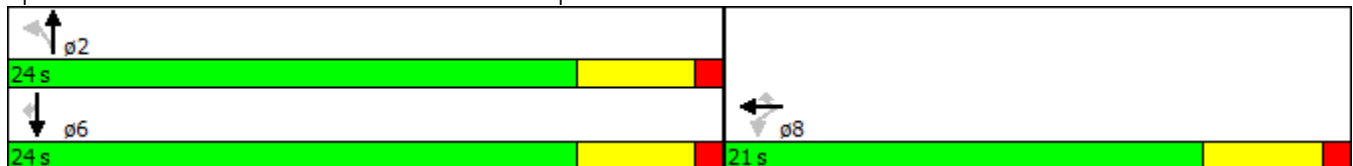


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | | | | 21.0 | 21.0 | 21.0 | 24.0 | 24.0 | | | 24.0 | 24.0 |
| Total Split (%) | | | | 46.7% | 46.7% | 46.7% | 53.3% | 53.3% | | | 53.3% | 53.3% |
| Maximum Green (s) | | | | 16.0 | 16.0 | 16.0 | 19.0 | 19.0 | | | 19.0 | 19.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | | | | None | None | None | Max | Max | | | Max | Max |
| Walk Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | | | | 16.0 | 16.0 | 16.0 | 19.0 | 19.0 | | | 19.0 | 19.0 |
| Actuated g/C Ratio | | | | 0.36 | 0.36 | 0.36 | 0.42 | 0.42 | | | 0.42 | 0.42 |
| v/c Ratio | | | | 0.33 | 0.33 | 1.55 | 2.12 | 0.73 | | | 0.93 | 0.64 |
| Control Delay | | | | 12.5 | 12.5 | 274.3 | 530.1 | 14.4 | | | 22.7 | 4.2 |
| Queue Delay | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | | | | 12.5 | 12.5 | 274.3 | 530.1 | 14.4 | | | 22.7 | 4.2 |
| LOS | | | | B | B | F | F | B | | | C | A |
| Approach Delay | | | | | 196.1 | | | 212.6 | | | 18.0 | |
| Approach LOS | | | | | F | | | F | | | B | |

Intersection Summary













| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 45 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 2.12 |
| Intersection Signal Delay: | 118.6 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 88.3% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 15: S Avalon Blvd & I-405 NB Ramps



Lanes, Volumes, Timings
16: S Main St & E 213th St

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|--|---|---|--|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |   | |  |   |
| Volume (vph) | 228 | 182 | 764 | 263 | 360 | 1049 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 16 | 16 | 16 | 16 | 12 | 12 |
| Storage Length (ft) | 0 | 0 | | 0 | 90 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | 0.940 | | 0.962 | | | |
| Flt Protected | 0.973 | | | | 0.950 | |
| Satd. Flow (prot) | 1931 | 0 | 3859 | 0 | 1770 | 3539 |
| Flt Permitted | 0.973 | | | | 0.219 | |
| Satd. Flow (perm) | 1931 | 0 | 3859 | 0 | 408 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 45 | | 132 | | | |
| Link Speed (mph) | 30 | | 35 | | | 45 |
| Link Distance (ft) | 4544 | | 1360 | | | 2482 |
| Travel Time (s) | 103.3 | | 26.5 | | | 37.6 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 248 | 198 | 830 | 286 | 391 | 1140 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 446 | 0 | 1116 | 0 | 391 | 1140 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 28 | | 24 | | | 24 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | | 2 | | 1 | 2 |
| Detector Template | Left | | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Perm | | NA | | Perm | NA |
| Protected Phases | | | 2 | | | 6 |
| Permitted Phases | 8 | | | | 6 | |

Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-----|-------|-----|-------|-------|
| Detector Phase | 8 | | 2 | | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 59.0 | | 59.0 | 59.0 |
| Total Split (%) | 26.3% | | 73.8% | | 73.8% | 73.8% |
| Maximum Green (s) | 16.0 | | 54.0 | | 54.0 | 54.0 |
| Yellow Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | | Max | | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | | 0 | 0 |
| Act Effect Green (s) | 16.0 | | 54.0 | | 54.0 | 54.0 |
| Actuated g/C Ratio | 0.20 | | 0.68 | | 0.68 | 0.68 |
| v/c Ratio | 1.06 | | 0.42 | | 1.42 | 0.48 |
| Control Delay | 90.3 | | 5.6 | | 229.3 | 7.0 |
| Queue Delay | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Delay | 90.3 | | 5.6 | | 229.3 | 7.0 |
| LOS | F | | A | | F | A |
| Approach Delay | 90.3 | | 5.6 | | | 63.8 |
| Approach LOS | F | | A | | | E |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Natural Cycle: | 80 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.42 |
| Intersection Signal Delay: | 46.6 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 85.7% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 16: S Main St & E 213th St



Lanes, Volumes, Timings
17: S Avalon Blvd & E 213th St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 255 | 295 | 110 | 139 | 222 | 199 | 144 | 1287 | 159 | 100 | 1350 | 183 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 70 | | 0 | 120 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.959 | | | 0.929 | | | 0.983 | | | 0.982 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 2025 | 0 | 1770 | 3726 | 0 | 1770 | 5665 | 0 | 1770 | 5660 | 0 |
| Flt Permitted | 0.489 | | | 0.360 | | | 0.211 | | | 0.211 | | |
| Satd. Flow (perm) | 911 | 2025 | 0 | 671 | 3726 | 0 | 393 | 5665 | 0 | 393 | 5660 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 9 | | | 12 | | | 59 | | | 67 | |
| Link Speed (mph) | | 30 | | | 30 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4544 | | | 967 | | | 1397 | | | 1230 | |
| Travel Time (s) | | 103.3 | | | 22.0 | | | 27.2 | | | 24.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 277 | 321 | 120 | 151 | 241 | 216 | 157 | 1399 | 173 | 109 | 1467 | 199 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 277 | 441 | 0 | 151 | 457 | 0 | 157 | 1572 | 0 | 109 | 1666 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |

Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

1/3/2019

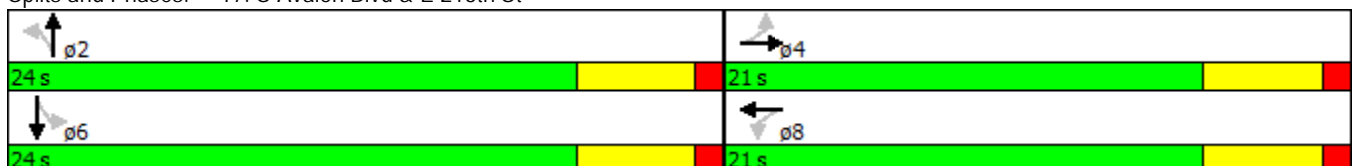


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | | 46.7% | 46.7% | | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 15.2 | 15.2 | | 15.2 | 15.2 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Actuated g/C Ratio | 0.34 | 0.34 | | 0.34 | 0.34 | | 0.43 | 0.43 | | 0.43 | 0.43 | |
| v/c Ratio | 0.88 | 0.63 | | 0.66 | 0.35 | | 0.93 | 0.64 | | 0.65 | 0.67 | |
| Control Delay | 48.3 | 16.5 | | 30.2 | 11.4 | | 77.7 | 11.1 | | 35.1 | 11.6 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 48.3 | 16.5 | | 30.2 | 11.4 | | 77.7 | 11.1 | | 35.1 | 11.6 | |
| LOS | D | B | | C | B | | E | B | | D | B | |
| Approach Delay | | 28.8 | | | 16.1 | | | 17.2 | | | 13.0 | |
| Approach LOS | | C | | | B | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 44.3 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.93 |
| Intersection Signal Delay: | 17.2 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 84.7% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 17: S Avalon Blvd & E 213th St



Lanes, Volumes, Timings
18: S Figueroa St & W Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 127 | 637 | 504 | 58 | 533 | 33 | 231 | 360 | 118 | 88 | 454 | 167 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 213 | | 75 | 152 | | 0 | 230 | | 0 | 240 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 2 | | 0 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 |
| Frt | | | 0.850 | | 0.991 | | | 0.963 | | | | 0.960 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3507 | 0 | 3433 | 3408 | 0 | 3433 | 3398 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3507 | 0 | 3433 | 3408 | 0 | 3433 | 3398 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 298 | | 10 | | | 72 | | | | 86 |
| Link Speed (mph) | | 35 | | | 35 | | | 40 | | | | 40 |
| Link Distance (ft) | | 1243 | | | 2441 | | | 713 | | | | 3767 |
| Travel Time (s) | | 24.2 | | | 47.6 | | | 12.2 | | | | 64.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 138 | 692 | 548 | 63 | 579 | 36 | 251 | 391 | 128 | 96 | 493 | 182 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 138 | 692 | 548 | 63 | 615 | 0 | 251 | 519 | 0 | 96 | 675 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 18: S Figueroa St & W Carson St

1/3/2019

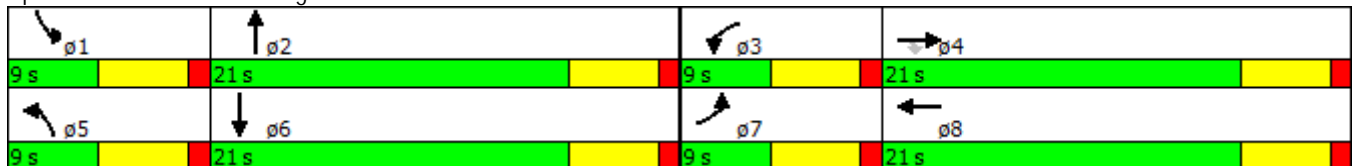


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (%) | 15.0% | 35.0% | 35.0% | 15.0% | 35.0% | | 15.0% | 35.0% | | 15.0% | 35.0% | |
| Maximum Green (s) | 4.0 | 16.0 | 16.0 | 4.0 | 16.0 | | 4.0 | 16.0 | | 4.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 4.0 | 18.3 | 18.3 | 4.0 | 14.6 | | 4.0 | 17.9 | | 4.0 | 16.0 | |
| Actuated g/C Ratio | 0.07 | 0.31 | 0.31 | 0.07 | 0.25 | | 0.07 | 0.31 | | 0.07 | 0.27 | |
| v/c Ratio | 1.14 | 0.63 | 0.78 | 0.52 | 0.70 | | 1.07 | 0.47 | | 0.41 | 0.68 | |
| Control Delay | 158.7 | 21.4 | 19.8 | 45.0 | 24.5 | | 112.3 | 17.0 | | 32.4 | 20.9 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 158.7 | 21.4 | 19.8 | 45.0 | 24.5 | | 112.3 | 17.0 | | 32.4 | 20.9 | |
| LOS | F | C | B | D | C | | F | B | | C | C | |
| Approach Delay | | 34.5 | | | 26.4 | | | 48.1 | | | 22.3 | |
| Approach LOS | | C | | | C | | | D | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 58.6 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.14 |
| Intersection Signal Delay: | 33.3 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 64.9% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 18: S Figueroa St & W Carson St



Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 129 | 493 | 46 | 112 | 465 | 56 | 182 | 626 | 172 | 169 | 860 | 181 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 210 | | 70 | 220 | | 70 | 115 | | 0 | 175 | | 500 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | | 0.850 | | 0.968 | | | 0.974 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 4923 | 0 | 1770 | 4953 | 0 |
| Flt Permitted | 0.407 | | | 0.379 | | | 0.221 | | | 0.314 | | |
| Satd. Flow (perm) | 758 | 3539 | 1583 | 706 | 3539 | 1583 | 412 | 4923 | 0 | 585 | 4953 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 50 | | | 61 | | 95 | | | 109 | |
| Link Speed (mph) | | 35 | | | 35 | | | 35 | | | 35 | |
| Link Distance (ft) | | 2441 | | | 4293 | | | 978 | | | 1360 | |
| Travel Time (s) | | 47.6 | | | 83.6 | | | 19.1 | | | 26.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 140 | 536 | 50 | 122 | 505 | 61 | 198 | 680 | 187 | 184 | 935 | 197 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 140 | 536 | 50 | 122 | 505 | 61 | 198 | 867 | 0 | 184 | 1132 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | | 6 | | |

Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019

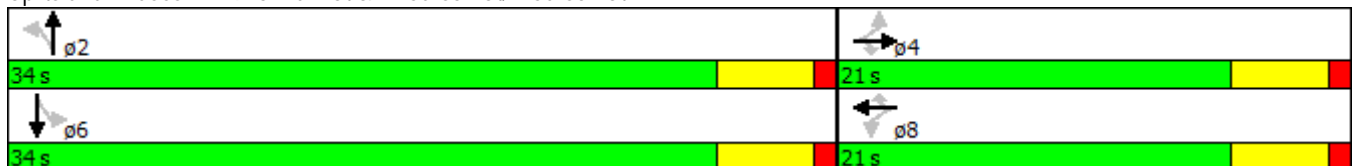


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 34.0 | 34.0 | | 34.0 | 34.0 | |
| Total Split (%) | 38.2% | 38.2% | 38.2% | 38.2% | 38.2% | 38.2% | 61.8% | 61.8% | | 61.8% | 61.8% | |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 | 29.1 | 29.1 | | 29.1 | 29.1 | |
| Actuated g/C Ratio | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.55 | 0.55 | | 0.55 | 0.55 | |
| v/c Ratio | 0.71 | 0.58 | 0.11 | 0.66 | 0.55 | 0.13 | 0.88 | 0.32 | | 0.57 | 0.41 | |
| Control Delay | 39.9 | 19.6 | 5.9 | 37.5 | 19.1 | 5.7 | 54.5 | 6.4 | | 18.4 | 7.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 39.9 | 19.6 | 5.9 | 37.5 | 19.1 | 5.7 | 54.5 | 6.4 | | 18.4 | 7.1 | |
| LOS | D | B | A | D | B | A | D | A | | B | A | |
| Approach Delay | | 22.6 | | | 21.2 | | | 15.4 | | | 8.7 | |
| Approach LOS | | C | | | C | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 53 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.88 |
| Intersection Signal Delay: | 15.5 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 67.4% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 19: S Main St & W Carson St/E Carson St



Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

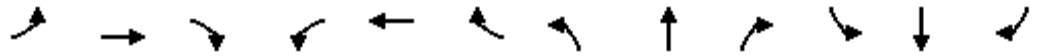
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 167 | 715 | 72 | 489 | 392 | 120 | 76 | 1085 | 464 | 247 | 1131 | 119 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 2 | | 0 | 2 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.986 | | | 0.965 | | | 0.955 | | | 0.986 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3490 | 0 | 3433 | 3415 | 0 | 1770 | 4856 | 0 | 1770 | 5014 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3490 | 0 | 3433 | 3415 | 0 | 1770 | 4856 | 0 | 1770 | 5014 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 7 | | | 29 | | | 82 | | | 15 | |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | 1397 | |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | 27.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 182 | 777 | 78 | 532 | 426 | 130 | 83 | 1179 | 504 | 268 | 1229 | 129 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 182 | 855 | 0 | 532 | 556 | 0 | 83 | 1683 | 0 | 268 | 1358 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |

Lanes, Volumes, Timings
 20: S Avalon Blvd & E Carson St

1/3/2019

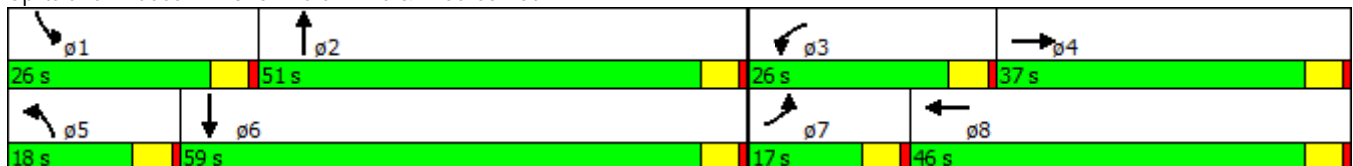


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 17.0 | 37.0 | | 26.0 | 46.0 | | 18.0 | 51.0 | | 26.0 | 59.0 | |
| Total Split (%) | 12.1% | 26.4% | | 18.6% | 32.9% | | 12.9% | 36.4% | | 18.6% | 42.1% | |
| Maximum Green (s) | 12.0 | 32.0 | | 21.0 | 41.0 | | 13.0 | 46.0 | | 21.0 | 54.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 11.3 | 32.0 | | 21.0 | 41.7 | | 11.0 | 46.0 | | 21.0 | 56.0 | |
| Actuated g/C Ratio | 0.08 | 0.23 | | 0.15 | 0.30 | | 0.08 | 0.33 | | 0.15 | 0.40 | |
| v/c Ratio | 0.66 | 1.06 | | 1.04 | 0.54 | | 0.60 | 1.02 | | 1.01 | 0.67 | |
| Control Delay | 74.2 | 100.8 | | 106.0 | 41.2 | | 79.5 | 71.2 | | 116.3 | 36.5 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 74.2 | 100.8 | | 106.0 | 41.2 | | 79.5 | 71.2 | | 116.3 | 36.5 | |
| LOS | E | F | | F | D | | E | E | | F | D | |
| Approach Delay | | 96.1 | | | 72.9 | | | 71.6 | | | 49.6 | |
| Approach LOS | | F | | | E | | | E | | | D | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Natural Cycle: | 140 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.06 |
| Intersection Signal Delay: | 70.0 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 97.7% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St



Lanes, Volumes, Timings
21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | ↘ | ↑↑ | ↗ | ↘ | ↑↑↑ | | ↘ | | ↗ | | | ↗ |
| Volume (vph) | 15 | 1119 | 962 | 132 | 1129 | 0 | 123 | 0 | 69 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 50 | | 180 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | 0.850 | | | | | | 0.850 | | | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (prot) | 1593 | 3185 | 1425 | 1593 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Fl _t Permitted | 0.206 | | | 0.191 | | | 0.950 | | | | | |
| Satd. Flow (perm) | 345 | 3185 | 1425 | 320 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 1046 | | | | | | 73 | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 2121 | | | 469 | | | 428 | | | | 162 |
| Travel Time (s) | | 36.2 | | | 8.0 | | | 7.3 | | | | 2.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 16 | 1216 | 1046 | 143 | 1227 | 0 | 134 | 0 | 75 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 16 | 1216 | 1046 | 143 | 1227 | 0 | 134 | 0 | 75 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | | 1 | | | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | | Right | | | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | | 20 | | | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | | 20 | | | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | | | | | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | | Perm | | | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | | 2 | | | 6 |

Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|-----|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (s) | 44.0 | 44.0 | 44.0 | 44.0 | 44.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (%) | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | | 32.3% | | 32.3% | | | 32.3% |
| Maximum Green (s) | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | | 16.0 | | 16.0 | | | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | | 1.0 | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | 3.0 |
| Recall Mode | None | None | None | None | None | | Min | | Min | | | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | | 11.0 | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Act Effect Green (s) | 34.8 | 34.8 | 34.8 | 34.8 | 34.8 | | 10.1 | | 10.1 | | | |
| Actuated g/C Ratio | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | | 0.18 | | 0.18 | | | |
| v/c Ratio | 0.07 | 0.61 | 0.81 | 0.71 | 0.43 | | 0.46 | | 0.23 | | | |
| Control Delay | 5.7 | 7.9 | 7.4 | 32.9 | 5.9 | | 27.1 | | 8.3 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | |
| Total Delay | 5.7 | 7.9 | 7.4 | 32.9 | 5.9 | | 27.1 | | 8.3 | | | |
| LOS | A | A | A | C | A | | C | | A | | | |
| Approach Delay | | 7.7 | | | 8.7 | | | | | | | |
| Approach LOS | | A | | | A | | | | | | | |

Intersection Summary

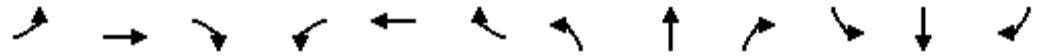
Area Type: CBD
 Cycle Length: 65
 Actuated Cycle Length: 55.3
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 8.7
 Intersection Capacity Utilization 82.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service E

Splits and Phases: 21: I-405 SB Ramps & E Carson St



Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 190 | 990 | 35 | 23 | 729 | 405 | 35 | 20 | 20 | 52 | 8 | 482 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 70 | | 0 | 100 | | 180 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.969 | | | 0.959 | |
| Satd. Flow (prot) | 1770 | 3522 | 0 | 1770 | 3539 | 1583 | 0 | 1805 | 1583 | 0 | 1786 | 1583 |
| Flt Permitted | 0.296 | | | 0.169 | | | | 0.836 | | | 0.771 | |
| Satd. Flow (perm) | 551 | 3522 | 0 | 315 | 3539 | 1583 | 0 | 1557 | 1583 | 0 | 1436 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 9 | | | | 440 | | | 40 | | | 119 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 469 | | | 2039 | | | 158 | | | 364 | |
| Travel Time (s) | | 8.0 | | | 34.8 | | | 2.7 | | | 6.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 207 | 1076 | 38 | 25 | 792 | 440 | 38 | 22 | 22 | 57 | 9 | 524 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 207 | 1114 | 0 | 25 | 792 | 440 | 0 | 60 | 22 | 0 | 66 | 524 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | 6 |

Lanes, Volumes, Timings

22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019

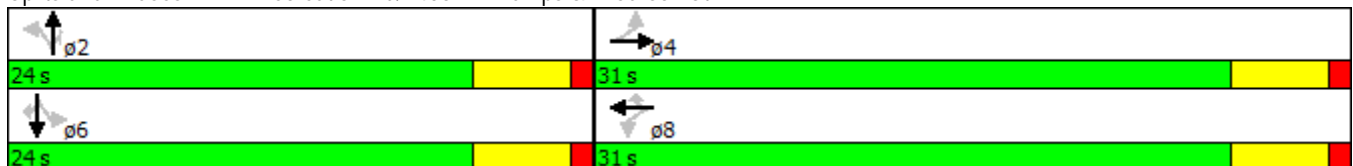


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 31.0 | 31.0 | | 31.0 | 31.0 | 31.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |
| Total Split (%) | 56.4% | 56.4% | | 56.4% | 56.4% | 56.4% | 43.6% | 43.6% | 43.6% | 43.6% | 43.6% | 43.6% |
| Maximum Green (s) | 26.0 | 26.0 | | 26.0 | 26.0 | 26.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 23.6 | 23.6 | | 23.6 | 23.6 | 23.6 | | 19.1 | 19.1 | | 19.1 | 19.1 |
| Actuated g/C Ratio | 0.45 | 0.45 | | 0.45 | 0.45 | 0.45 | | 0.36 | 0.36 | | 0.36 | 0.36 |
| v/c Ratio | 0.84 | 0.71 | | 0.18 | 0.50 | 0.46 | | 0.11 | 0.04 | | 0.13 | 0.81 |
| Control Delay | 46.0 | 14.4 | | 12.2 | 11.5 | 2.9 | | 12.9 | 3.0 | | 13.2 | 25.2 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 46.0 | 14.4 | | 12.2 | 11.5 | 2.9 | | 12.9 | 3.0 | | 13.2 | 25.2 |
| LOS | D | B | | B | B | A | | B | A | | B | C |
| Approach Delay | | 19.3 | | | 8.5 | | | 10.3 | | | 23.9 | |
| Approach LOS | | B | | | A | | | B | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 52.8 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.84 |
| Intersection Signal Delay: | 15.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 65.8% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 22: Recreation Rd/I-405 NB Ramps & E Carson St



Future (Year 2023)

Lanes, Volumes, Timings
 1: S Figueroa St & I-405 SB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | ↑↑ | | ↑ | ↑↑ |
| Volume (vph) | 0 | 0 | 868 | 65 | 86 | 888 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 220 | |
| Storage Lanes | 0 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Fr _t | | | 0.989 | | | |
| Fl _t Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 3500 | 0 | 1770 | 3539 |
| Fl _t Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 3500 | 0 | 1770 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 607 | | 2451 | | | 246 |
| Travel Time (s) | 10.3 | | 41.8 | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 943 | 71 | 93 | 965 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 1014 | 0 | 93 | 965 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Yield | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 51.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 2: S Figueroa St & I-405 NB Ramps

1/3/2019



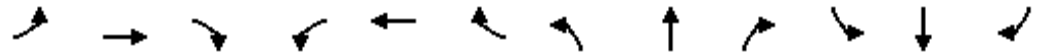
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 203 | 301 | 929 | 0 | 0 | 714 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | | 0.850 | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 724 | | 246 | | | 1243 |
| Travel Time (s) | 12.3 | | 4.2 | | | 21.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 221 | 327 | 1010 | 0 | 0 | 776 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 221 | 327 | 1010 | 0 | 0 | 776 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 51.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
3: S Main St & I-405 SB Ramps

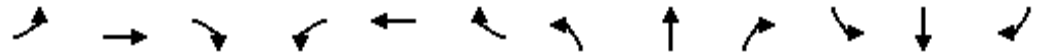
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 27 | 99 | 11 | 0 | 0 | 0 | 0 | 675 | 62 | 91 | 690 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 250 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr _t | | 0.985 | | | | | | 0.987 | | | | |
| Fl _t Protected | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1835 | 0 | 0 | 0 | 0 | 0 | 3493 | 0 | 1770 | 3539 | 0 |
| Fl _t Permitted | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1835 | 0 | 0 | 0 | 0 | 0 | 3493 | 0 | 1770 | 3539 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 10 | | | | | | 18 | | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 607 | | | 169 | | | 2341 | | | 290 | |
| Travel Time (s) | | 10.3 | | | 2.9 | | | 35.5 | | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 29 | 108 | 12 | 0 | 0 | 0 | 0 | 734 | 67 | 99 | 750 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 29 | 120 | 0 | 0 | 0 | 0 | 0 | 801 | 0 | 99 | 750 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | | | | | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | | | | | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | | | | | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 4 | | | | | | | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 3: S Main St & I-405 SB Ramps

1/3/2019

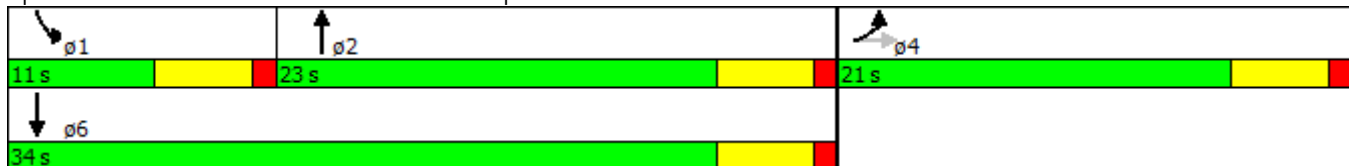


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | | | | | 23.0 | | 11.0 | 34.0 | |
| Total Split (%) | 38.2% | 38.2% | | | | | | 41.8% | | 20.0% | 61.8% | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 18.0 | | 6.0 | 29.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | | | | | Max | | None | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | 0 | |
| Act Effct Green (s) | 8.3 | 8.3 | | | | | | 28.0 | | 5.9 | 34.8 | |
| Actuated g/C Ratio | 0.17 | 0.17 | | | | | | 0.56 | | 0.12 | 0.70 | |
| v/c Ratio | 0.10 | 0.38 | | | | | | 0.41 | | 0.47 | 0.30 | |
| Control Delay | 16.9 | 20.1 | | | | | | 10.5 | | 28.5 | 4.7 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.1 | |
| Total Delay | 16.9 | 20.1 | | | | | | 10.5 | | 28.5 | 4.9 | |
| LOS | B | C | | | | | | B | | C | A | |
| Approach Delay | | 19.5 | | | | | | 10.5 | | | 7.6 | |
| Approach LOS | | B | | | | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 50 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.47 |
| Intersection Signal Delay: | 9.9 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 56.4% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 3: S Main St & I-405 SB Ramps



Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | ↕↕ | | ↕ | ↕↕ | | | ↕↕ | |
| Volume (vph) | 0 | 0 | 0 | 80 | 388 | 197 | 30 | 680 | 0 | 0 | 670 | 86 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.956 | | | | | | 0.983 | |
| Flt Protected | | | | | 0.994 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3363 | 0 | 1770 | 3539 | 0 | 0 | 3479 | 0 |
| Flt Permitted | | | | | 0.994 | | 0.299 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3363 | 0 | 557 | 3539 | 0 | 0 | 3479 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 107 | | | | | | 38 | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 724 | | | 336 | | | 290 | | | 724 | |
| Travel Time (s) | | 12.3 | | | 5.7 | | | 4.4 | | | 11.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 87 | 422 | 214 | 33 | 739 | 0 | 0 | 728 | 93 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 723 | 0 | 33 | 739 | 0 | 0 | 821 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | | 2 | | | | | |
| Detector Phase | | | | 8 | 8 | | 2 | 2 | | | | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | | 21.0 | 21.0 | | | | 21.0 |

Lanes, Volumes, Timings
 4: S Main St & I-405 NB Ramps

1/3/2019

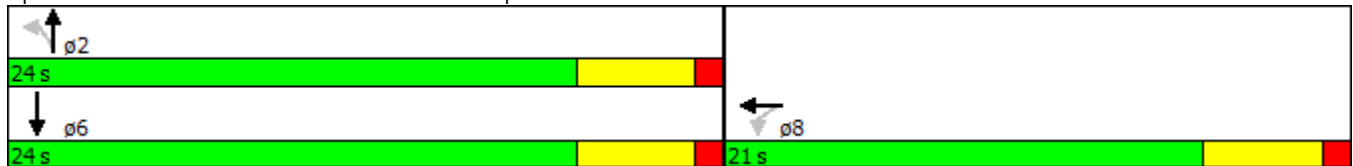


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-------|-------|-----|-----|-------|-----|
| Total Split (s) | | | | 21.0 | 21.0 | | 24.0 | 24.0 | | | 24.0 | |
| Total Split (%) | | | | 46.7% | 46.7% | | 53.3% | 53.3% | | | 53.3% | |
| Maximum Green (s) | | | | 16.0 | 16.0 | | 19.0 | 19.0 | | | 19.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | | 1.0 | 1.0 | | | 1.0 | |
| Lost Time Adjust (s) | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | None | | Max | Max | | | Max | |
| Walk Time (s) | | | | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | | 11.0 | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | | 0 | 0 | | | 0 | |
| Act Effect Green (s) | | | | | 13.4 | | 19.1 | 19.1 | | | 19.1 | |
| Actuated g/C Ratio | | | | | 0.32 | | 0.45 | 0.45 | | | 0.45 | |
| v/c Ratio | | | | | 0.64 | | 0.13 | 0.47 | | | 0.52 | |
| Control Delay | | | | | 13.3 | | 9.6 | 9.9 | | | 10.0 | |
| Queue Delay | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Delay | | | | | 13.3 | | 9.6 | 9.9 | | | 10.0 | |
| LOS | | | | | B | | A | A | | | A | |
| Approach Delay | | | | | 13.3 | | | 9.9 | | | 10.0 | |
| Approach LOS | | | | | B | | | A | | | A | |

Intersection Summary

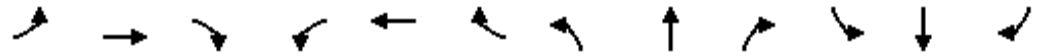
| | |
|-----------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 42.5 |
| Natural Cycle: | 45 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.64 |
| Intersection Signal Delay: | 11.0 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 56.4% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 4: S Main St & I-405 NB Ramps



Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 150 | 404 | 101 | 193 | 957 | 166 | 202 | 744 | 340 | 43 | 389 | 450 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.970 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4933 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4933 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 68 | | | | 232 | | | 370 | | | 300 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | | 40 |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | | 2451 |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | | 41.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 163 | 439 | 110 | 210 | 1040 | 180 | 220 | 809 | 370 | 47 | 423 | 489 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 163 | 549 | 0 | 210 | 1040 | 180 | 220 | 809 | 370 | 47 | 423 | 489 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

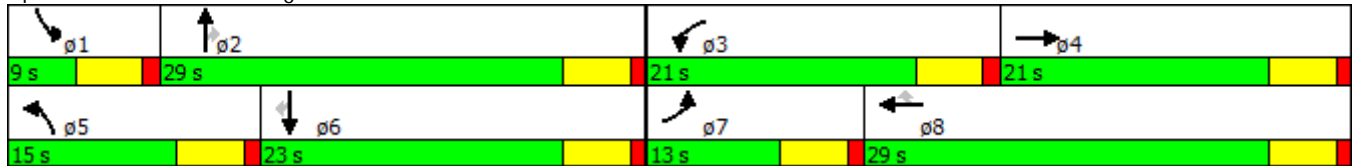


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 13.0 | 21.0 | | 21.0 | 29.0 | 29.0 | 15.0 | 29.0 | 29.0 | 9.0 | 23.0 | 23.0 |
| Total Split (%) | 16.3% | 26.3% | | 26.3% | 36.3% | 36.3% | 18.8% | 36.3% | 36.3% | 11.3% | 28.8% | 28.8% |
| Maximum Green (s) | 8.0 | 16.0 | | 16.0 | 24.0 | 24.0 | 10.0 | 24.0 | 24.0 | 4.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 8.0 | 18.4 | | 13.6 | 24.0 | 24.0 | 10.0 | 27.6 | 27.6 | 4.0 | 18.0 | 18.0 |
| Actuated g/C Ratio | 0.10 | 0.23 | | 0.17 | 0.30 | 0.30 | 0.12 | 0.34 | 0.34 | 0.05 | 0.22 | 0.22 |
| v/c Ratio | 0.92 | 0.46 | | 0.70 | 0.98 | 0.28 | 1.00 | 0.66 | 0.47 | 0.53 | 0.53 | 0.83 |
| Control Delay | 88.8 | 25.2 | | 43.5 | 52.6 | 2.5 | 98.0 | 26.4 | 4.8 | 60.4 | 30.1 | 25.5 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 88.8 | 25.2 | | 43.5 | 52.6 | 2.5 | 98.0 | 26.4 | 4.8 | 60.4 | 30.1 | 25.5 |
| LOS | F | C | | D | D | A | F | C | A | E | C | C |
| Approach Delay | | 39.8 | | | 45.0 | | | 32.0 | | | 29.3 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

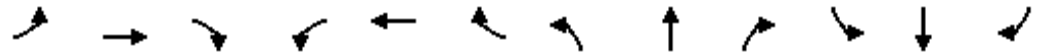
Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 36.8
 Intersection LOS: D
 Intersection Capacity Utilization 78.0%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

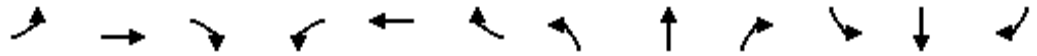


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↕↕↕ | | ↖ | ↕↕↕ | | ↖ | ↕↕ | | ↖ | ↕↕ | |
| Volume (vph) | 146 | 583 | 39 | 235 | 1164 | 63 | 78 | 539 | 248 | 55 | 487 | 130 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.991 | | | 0.992 | | | 0.953 | | | 0.968 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 5040 | 0 | 1770 | 5045 | 0 | 1770 | 3373 | 0 | 1770 | 3426 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 5040 | 0 | 1770 | 5045 | 0 | 1770 | 3373 | 0 | 1770 | 3426 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 14 | | | 12 | | | 105 | | | 46 | |
| Link Speed (mph) | | 45 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1251 | | | 1668 | | | 534 | | | 2341 | |
| Travel Time (s) | | 19.0 | | | 25.3 | | | 8.1 | | | 35.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 159 | 634 | 42 | 255 | 1265 | 68 | 85 | 586 | 270 | 60 | 529 | 141 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 159 | 676 | 0 | 255 | 1333 | 0 | 85 | 856 | 0 | 60 | 670 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings

6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

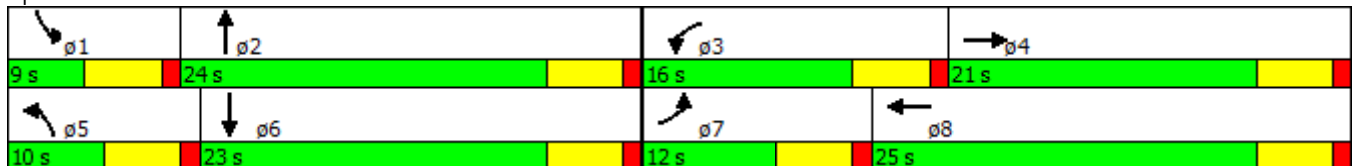


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 12.0 | 21.0 | | 16.0 | 25.0 | | 10.0 | 24.0 | | 9.0 | 23.0 | |
| Total Split (%) | 17.1% | 30.0% | | 22.9% | 35.7% | | 14.3% | 34.3% | | 12.9% | 32.9% | |
| Maximum Green (s) | 7.0 | 16.0 | | 11.0 | 20.0 | | 5.0 | 19.0 | | 4.0 | 18.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 7.0 | 16.0 | | 11.0 | 20.1 | | 5.0 | 19.1 | | 4.0 | 18.3 | |
| Actuated g/C Ratio | 0.10 | 0.23 | | 0.16 | 0.29 | | 0.07 | 0.28 | | 0.06 | 0.27 | |
| v/c Ratio | 0.87 | 0.57 | | 0.89 | 0.89 | | 0.65 | 0.84 | | 0.58 | 0.70 | |
| Control Delay | 75.4 | 25.1 | | 63.8 | 33.0 | | 57.9 | 30.2 | | 56.5 | 26.2 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 75.4 | 25.1 | | 63.8 | 33.0 | | 57.9 | 30.2 | | 56.5 | 26.2 | |
| LOS | E | C | | E | C | | E | C | | E | C | |
| Approach Delay | | 34.7 | | | 37.9 | | | 32.7 | | | 28.7 | |
| Approach LOS | | C | | | D | | | C | | | C | |

Intersection Summary
























| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 68.2 |
| Natural Cycle: | 70 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.89 |
| Intersection Signal Delay: | 34.4 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 74.8% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  | |  |  |  |  |  |  |
| Volume (vph) | 0 | 877 | 0 | 0 | 1352 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 155 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 1863 | 3539 | 1863 | 1863 | 3539 | 0 | 1770 | 1770 | 1863 | 1863 | 1770 | 1770 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 1863 | 3539 | 1863 | 1863 | 3539 | 0 | 1770 | 1770 | 1863 | 1863 | 1770 | 1770 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | 45 | | | 25 | | | | 50 |
| Link Distance (ft) | | 1668 | | | 3009 | | | 694 | | | | 308 |
| Travel Time (s) | | 25.3 | | | 45.6 | | | 18.9 | | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 953 | 0 | 0 | 1470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | 0% | | | | | 0% |
| Lane Group Flow (vph) | 0 | 953 | 0 | 0 | 1470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Split | | Perm | Perm | | Perm |
| Protected Phases | | 4 | | | 8 | | 2 | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | 2 | 6 | 6 | 6 |

Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019

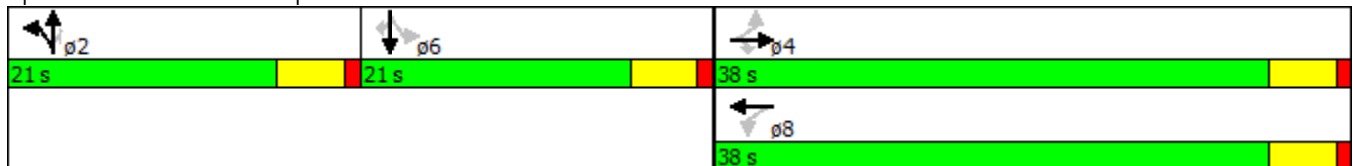


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 47.5% | 47.5% | 47.5% | 47.5% | 47.5% | | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% |
| Maximum Green (s) | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | 33.0 | | | 33.0 | | | | | | | |
| Actuated g/C Ratio | | 0.41 | | | 0.41 | | | | | | | |
| v/c Ratio | | 0.65 | | | 1.01 | | | | | | | |
| Control Delay | | 21.5 | | | 50.4 | | | | | | | |
| Queue Delay | | 0.0 | | | 0.0 | | | | | | | |
| Total Delay | | 21.5 | | | 50.4 | | | | | | | |
| LOS | | C | | | D | | | | | | | |
| Approach Delay | | 21.5 | | | 50.4 | | | | | | | |
| Approach LOS | | C | | | D | | | | | | | |

Intersection Summary

























| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Natural Cycle: | 80 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.01 |
| Intersection Signal Delay: | 39.1 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 41.5% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 7: Stamps Dr & E Del Amo Blvd



Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Volume (vph) | 272 | 562 | 84 | 180 | 831 | 101 | 270 | 938 | 139 | 171 | 619 | 219 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 1 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | 0.961 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4887 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4887 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 206 | | | 206 | | | 151 | | 88 | |
| Link Speed (mph) | | 45 | | | 45 | | | 35 | | | 35 | |
| Link Distance (ft) | | 3009 | | | 3520 | | | 2946 | | | 3936 | |
| Travel Time (s) | | 45.6 | | | 53.3 | | | 57.4 | | | 76.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 296 | 611 | 91 | 196 | 903 | 110 | 293 | 1020 | 151 | 186 | 673 | 238 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 296 | 611 | 91 | 196 | 903 | 110 | 293 | 1020 | 151 | 186 | 911 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

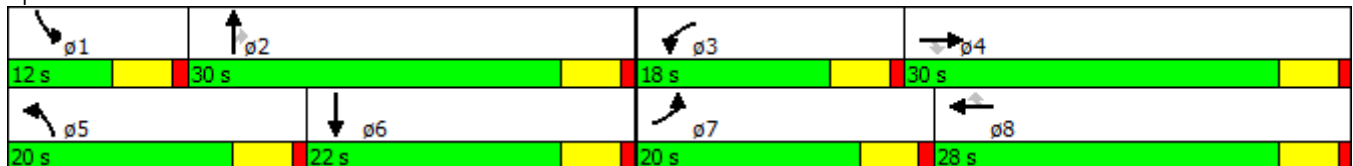


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 20.0 | 30.0 | 30.0 | 18.0 | 28.0 | 28.0 | 20.0 | 30.0 | 30.0 | 12.0 | 22.0 | 22.0 |
| Total Split (%) | 22.2% | 33.3% | 33.3% | 20.0% | 31.1% | 31.1% | 22.2% | 33.3% | 33.3% | 13.3% | 24.4% | 24.4% |
| Maximum Green (s) | 15.0 | 25.0 | 25.0 | 13.0 | 23.0 | 23.0 | 15.0 | 25.0 | 25.0 | 7.0 | 17.0 | 17.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 15.0 | 25.6 | 25.6 | 12.4 | 23.0 | 23.0 | 15.0 | 25.0 | 25.0 | 7.0 | 17.0 | 17.0 |
| Actuated g/C Ratio | 0.17 | 0.28 | 0.28 | 0.14 | 0.26 | 0.26 | 0.17 | 0.28 | 0.28 | 0.08 | 0.19 | 0.19 |
| v/c Ratio | 1.00 | 0.61 | 0.15 | 0.80 | 1.00 | 0.20 | 0.99 | 0.72 | 0.28 | 0.70 | 0.92 | 0.92 |
| Control Delay | 93.1 | 31.1 | 0.5 | 62.5 | 64.5 | 0.8 | 90.6 | 32.9 | 5.9 | 55.3 | 47.5 | 47.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 93.1 | 31.1 | 0.5 | 62.5 | 64.5 | 0.8 | 90.6 | 32.9 | 5.9 | 55.3 | 47.5 | 47.5 |
| LOS | F | C | A | E | E | A | F | C | A | E | D | D |
| Approach Delay | | 46.7 | | | 58.4 | | | 41.6 | | | | 48.8 |
| Approach LOS | | D | | | E | | | D | | | | D |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.00 |
| Intersection Signal Delay: | 48.6 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 86.5% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 589 | 310 | 677 | 713 | 495 | 179 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | 235 | | | 250 |
| Storage Lanes | 2 | 0 | 2 | | | 1 |
| Taper Length (ft) | 25 | | 25 | | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 |
| Frt | 0.948 | | | | | 0.850 |
| Flt Protected | 0.968 | | 0.950 | | | |
| Satd. Flow (prot) | 3316 | 0 | 3433 | 3539 | 3539 | 1583 |
| Flt Permitted | 0.968 | | 0.452 | | | |
| Satd. Flow (perm) | 3316 | 0 | 1633 | 3539 | 3539 | 1583 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | 186 | | | | | 195 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 170 | | | 828 | 791 | |
| Travel Time (s) | 2.9 | | | 14.1 | 13.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 640 | 337 | 736 | 775 | 538 | 195 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 977 | 0 | 736 | 775 | 538 | 195 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 24 | | | 24 | 24 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 12 | | | 12 | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Number of Detectors | 1 | | 1 | 2 | 2 | 1 |
| Detector Template | Left | | Left | Thru | Thru | Right |
| Leading Detector (ft) | 20 | | 20 | 100 | 100 | 20 |
| Trailing Detector (ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 20 | 6 | 6 | 20 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | | 94 | 94 | |
| Detector 2 Size(ft) | | | | 6 | 6 | |
| Detector 2 Type | | | | Cl+Ex | Cl+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | | 2 | | | 6 |
| Detector Phase | 4 | | 2 | 2 | 6 | 6 |

Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019

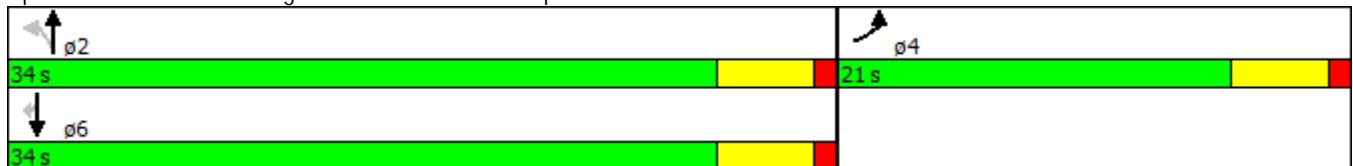


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|-------|-----|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 34.0 | 34.0 | 34.0 | 34.0 |
| Total Split (%) | 38.2% | | 61.8% | 61.8% | 61.8% | 61.8% |
| Maximum Green (s) | 16.0 | | 29.0 | 29.0 | 29.0 | 29.0 |
| Yellow Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 15.6 | | 29.0 | 29.0 | 29.0 | 29.0 |
| Actuated g/C Ratio | 0.29 | | 0.53 | 0.53 | 0.53 | 0.53 |
| v/c Ratio | 0.90 | | 0.85 | 0.41 | 0.29 | 0.21 |
| Control Delay | 29.1 | | 23.6 | 8.6 | 7.7 | 1.9 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 29.1 | | 23.6 | 8.6 | 7.7 | 1.9 |
| LOS | C | | C | A | A | A |
| Approach Delay | 29.1 | | | 15.9 | 6.2 | |
| Approach LOS | C | | | B | A | |

Intersection Summary












Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 54.6
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 17.7
 Intersection Capacity Utilization 72.1%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 9: S Figueroa St & I-110 NB Ramps



Lanes, Volumes, Timings
10: S Main St & Lenardo Rd

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  |  |  | |  |  |
| Volume (vph) | 0 | 0 | 882 | 0 | 0 | 748 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 145 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 1863 | 1863 | 3539 | 0 | 1863 | 3539 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 1863 | 1863 | 3539 | 0 | 1863 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 25 | | 45 | | | 45 |
| Link Distance (ft) | 479 | | 971 | | | 534 |
| Travel Time (s) | 13.1 | | 14.7 | | | 8.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 959 | 0 | 0 | 813 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 959 | 0 | 0 | 813 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | Perm | NA | | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Detector Phase | 8 | 8 | 2 | | 6 | 6 |

Lanes, Volumes, Timings
 10: S Main St & Lenardo Rd

1/3/2019

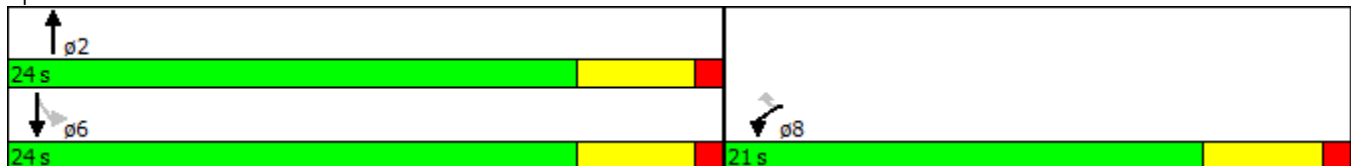


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 24.0 | | 24.0 | 24.0 |
| Total Split (%) | 46.7% | 46.7% | 53.3% | | 53.3% | 53.3% |
| Maximum Green (s) | 16.0 | 16.0 | 19.0 | | 19.0 | 19.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | None | Max | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | | | 39.0 | | | 39.0 |
| Actuated g/C Ratio | | | 1.00 | | | 1.00 |
| v/c Ratio | | | 0.27 | | | 0.23 |
| Control Delay | | | 0.2 | | | 0.2 |
| Queue Delay | | | 0.0 | | | 0.0 |
| Total Delay | | | 0.2 | | | 0.2 |
| LOS | | | A | | | A |
| Approach Delay | | | 0.2 | | | 0.2 |
| Approach LOS | | | A | | | A |

Intersection Summary

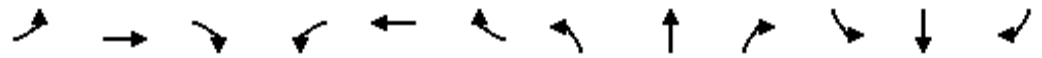
| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 39 |
| Natural Cycle: | 45 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.27 |
| Intersection Signal Delay: | 0.2 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 28.5% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 10: S Main St & Lenardo Rd



Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 618 | 463 | 164 | 61 | 484 | 160 | 184 | 610 | 60 | 57 | 341 | 439 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 180 | | 0 | 115 | | 0 | 255 | | 0 | 185 | | 185 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.91 | 0.91 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.974 | | | | 0.850 | | 0.987 | | | | 0.850 |
| Flt Protected | 0.950 | 0.984 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1610 | 3682 | 0 | 1770 | 3539 | 1583 | 1770 | 3959 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.457 | 0.673 | | 0.201 | | | 0.531 | | | 0.262 | | |
| Satd. Flow (perm) | 775 | 2519 | 0 | 374 | 3539 | 1583 | 989 | 3959 | 0 | 488 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 65 | | | | 51 | | 19 | | | | 299 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 368 | | | 1713 | | | 3767 | | | | 828 |
| Travel Time (s) | | 6.3 | | | 29.2 | | | 64.2 | | | | 14.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 672 | 503 | 178 | 66 | 526 | 174 | 200 | 663 | 65 | 62 | 371 | 477 |
| Shared Lane Traffic (%) | 50% | | | | | | | | | | | |
| Lane Group Flow (vph) | 336 | 1017 | 0 | 66 | 526 | 174 | 200 | 728 | 0 | 62 | 371 | 477 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019

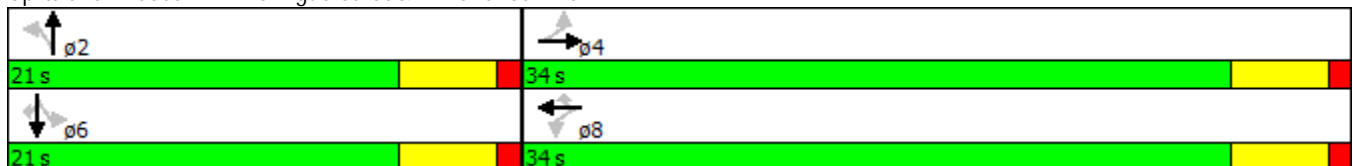


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | 34.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 61.8% | 61.8% | | 61.8% | 61.8% | 61.8% | 38.2% | 38.2% | | 38.2% | 38.2% | 38.2% |
| Maximum Green (s) | 29.0 | 29.0 | | 29.0 | 29.0 | 29.0 | 16.0 | 16.0 | | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | 26.5 | 26.5 | | 26.5 | 26.5 | 26.5 | 16.1 | 16.1 | | 16.1 | 16.1 | 16.1 |
| Actuated g/C Ratio | 0.50 | 0.50 | | 0.50 | 0.50 | 0.50 | 0.31 | 0.31 | | 0.31 | 0.31 | 0.31 |
| v/c Ratio | 0.86 | 0.78 | | 0.35 | 0.30 | 0.21 | 0.66 | 0.59 | | 0.42 | 0.34 | 0.69 |
| Control Delay | 36.9 | 15.0 | | 14.0 | 7.9 | 5.8 | 31.4 | 18.2 | | 26.5 | 16.2 | 13.2 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 36.9 | 15.0 | | 14.0 | 7.9 | 5.8 | 31.4 | 18.2 | | 26.5 | 16.2 | 13.2 |
| LOS | D | B | | B | A | A | C | B | | C | B | B |
| Approach Delay | | 20.4 | | | 8.0 | | | 21.1 | | | 15.3 | |
| Approach LOS | | C | | | A | | | C | | | B | |

Intersection Summary

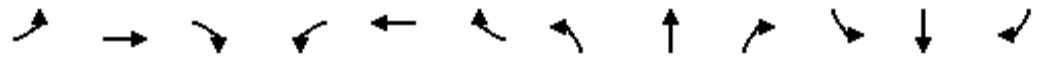
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 52.7 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.86 |
| Intersection Signal Delay: | 17.0 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 76.2% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 11: S Figueroa St & W Torrance Blvd



Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕ | ↗ | | ↕ | | ↗ | ↕ | | ↗ | ↕ | ↗ |
| Volume (vph) | 260 | 24 | 235 | 10 | 77 | 36 | 379 | 614 | 9 | 12 | 479 | 263 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 190 | | 0 | 145 | | 45 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 2 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.961 | | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.956 | | | 0.996 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1781 | 1583 | 0 | 2021 | 0 | 3433 | 4003 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | | 0.651 | | | 0.962 | | 0.459 | | | 0.372 | | |
| Satd. Flow (perm) | 0 | 1213 | 1583 | 0 | 1952 | 0 | 1659 | 4003 | 0 | 693 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 198 | | 39 | | | 4 | | | | 286 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 45 |
| Link Distance (ft) | | 1713 | | | 375 | | | 2482 | | | | 971 |
| Travel Time (s) | | 29.2 | | | 6.4 | | | 42.3 | | | | 14.7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 283 | 26 | 255 | 11 | 84 | 39 | 412 | 667 | 10 | 13 | 521 | 286 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 309 | 255 | 0 | 134 | 0 | 412 | 677 | 0 | 13 | 521 | 286 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019

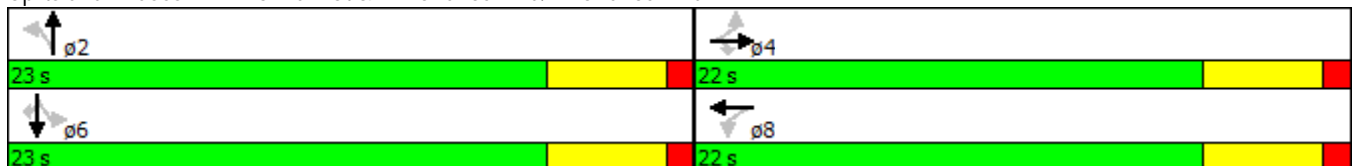


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | 48.9% | 48.9% | 48.9% | | 51.1% | 51.1% | | 51.1% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | | 14.5 | 14.5 | | 14.5 | | 18.6 | 18.6 | | 18.6 | 18.6 | 18.6 |
| Actuated g/C Ratio | | 0.34 | 0.34 | | 0.34 | | 0.43 | 0.43 | | 0.43 | 0.43 | 0.43 |
| v/c Ratio | | 0.76 | 0.38 | | 0.20 | | 0.58 | 0.39 | | 0.04 | 0.34 | 0.34 |
| Control Delay | | 26.8 | 5.1 | | 8.0 | | 14.2 | 9.8 | | 8.8 | 9.7 | 2.9 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | | 26.8 | 5.1 | | 8.0 | | 14.2 | 9.8 | | 8.8 | 9.7 | 2.9 |
| LOS | | C | A | | A | | B | A | | A | A | A |
| Approach Delay | | 17.0 | | | 8.0 | | | 11.5 | | | 7.3 | |
| Approach LOS | | B | | | A | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 43.2 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.76 |
| Intersection Signal Delay: | 11.2 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 58.9% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 12: S Main St & W Torrance Blvd/E Torrance Blvd



Lanes, Volumes, Timings
13: Lenardo Rd/I-405 SB Ramps

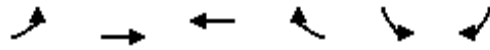
1/3/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 251 | 946 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | | 0 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 2 | 1 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.97 | 1.00 |
| Fr _t | | | | 0.850 | | |
| Fl _t Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 1863 | 3539 | 1863 | 1583 | 3433 | 1863 |
| Fl _t Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 1863 | 3539 | 1863 | 1583 | 3433 | 1863 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 1091 | | |
| Link Speed (mph) | | 35 | 40 | | 40 | |
| Link Distance (ft) | | 701 | 533 | | 434 | |
| Travel Time (s) | | 13.7 | 9.1 | | 7.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 273 | 1028 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 273 | 1028 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 12 | 12 | | 24 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 12 | 12 | | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector (ft) | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | 94 | | | |
| Detector 2 Size(ft) | | 6 | 6 | | | |
| Detector 2 Type | | Cl+Ex | Cl+Ex | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | 0.0 | 0.0 | | | |
| Turn Type | Perm | | | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |

Lanes, Volumes, Timings
 13: Lenardo Rd/I-405 SB Ramps

1/3/2019

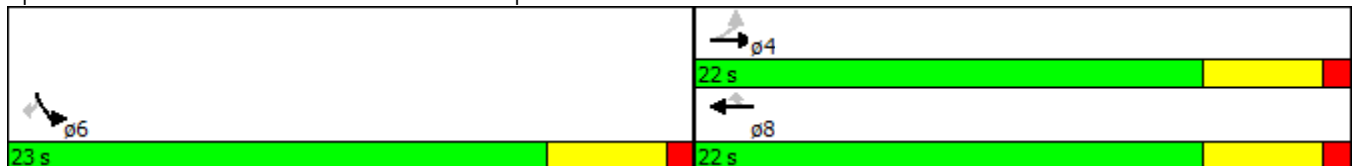


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | 48.9% | 48.9% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | | | 5.6 | 21.2 | |
| Actuated g/C Ratio | | | | 0.15 | 0.57 | |
| v/c Ratio | | | | 0.23 | 0.52 | |
| Control Delay | | | | 0.5 | 6.1 | |
| Queue Delay | | | | 0.0 | 0.0 | |
| Total Delay | | | | 0.5 | 6.1 | |
| LOS | | | | A | A | |
| Approach Delay | | | | | 6.1 | |
| Approach LOS | | | | | A | |

Intersection Summary

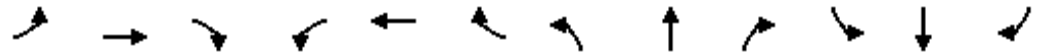
Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 37
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 4.9
 Intersection LOS: A
 Intersection Capacity Utilization 31.2%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 13: Lenardo Rd/I-405 SB Ramps



Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 473 | 3 | 478 | 0 | 0 | 0 | 0 | 1083 | 125 | 0 | 715 | 262 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 200 | | 150 | 0 | | 0 | 160 | | 0 | 0 | | 120 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr _t | | | 0.850 | | | | | 0.984 | | | | 0.850 |
| Fl _t Protected | 0.950 | | | | | | | | | | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1863 | 3483 | 0 | 0 | 3539 | 1583 |
| Fl _t Permitted | 0.950 | | | | | | | | | | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1863 | 3483 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 111 | | | | | 27 | | | | 285 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 533 | | | 422 | | | 1230 | | | | 386 |
| Travel Time (s) | | 9.1 | | | 7.2 | | | 24.0 | | | | 7.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 514 | 3 | 520 | 0 | 0 | 0 | 0 | 1177 | 136 | 0 | 777 | 285 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 514 | 3 | 520 | 0 | 0 | 0 | 0 | 1313 | 0 | 0 | 777 | 285 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | | | | 1 | 2 | | | 2 | 1 |
| Detector Template | Left | Thru | Right | | | | Left | Thru | | | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | | | | 20 | 100 | | | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | | | | 20 | 6 | | | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex | Cl+Ex | | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | | | | Perm | NA | | | NA | Perm |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | | 2 | | | | | 6 |
| Detector Phase | 4 | 4 | 4 | | | | 2 | 2 | | | 6 | 6 |

Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019

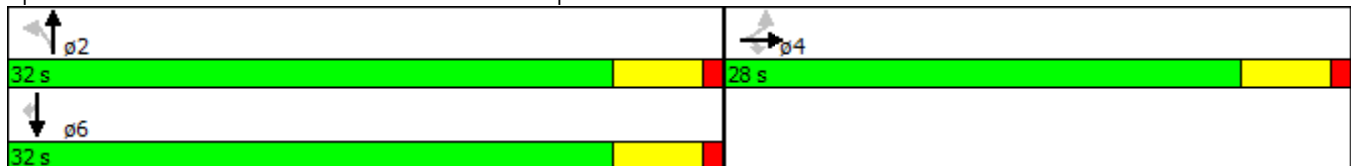


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-----|-----|-----|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | | | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | 28.0 | 28.0 | 28.0 | | | | 32.0 | 32.0 | | | 32.0 | 32.0 |
| Total Split (%) | 46.7% | 46.7% | 46.7% | | | | 53.3% | 53.3% | | | 53.3% | 53.3% |
| Maximum Green (s) | 23.0 | 23.0 | 23.0 | | | | 27.0 | 27.0 | | | 27.0 | 27.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | | | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | None | None | None | | | | Max | Max | | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | | | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Act Effct Green (s) | 20.0 | 20.0 | 20.0 | | | | 27.1 | 27.1 | | | 27.1 | 27.1 |
| Actuated g/C Ratio | 0.35 | 0.35 | 0.35 | | | | 0.47 | 0.47 | | | 0.47 | 0.47 |
| v/c Ratio | 0.43 | 0.00 | 0.83 | | | | 0.79 | 0.79 | | | 0.46 | 0.32 |
| Control Delay | 15.2 | 11.3 | 26.6 | | | | 17.8 | 17.8 | | | 11.9 | 2.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 15.2 | 11.3 | 26.6 | | | | 17.8 | 17.8 | | | 11.9 | 2.6 |
| LOS | B | B | C | | | | B | B | | | B | A |
| Approach Delay | | 20.9 | | | | | 17.8 | 17.8 | | | 9.4 | |
| Approach LOS | | C | | | | | B | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 57.2 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.83 |
| Intersection Signal Delay: | 16.1 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 57.7% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 14: S Avalon Blvd & I-405 SB Ramps



Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

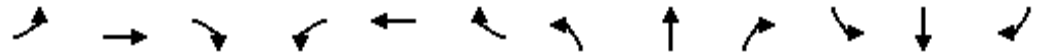
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | ↙ | ↖ | ↗ | ↘ | ↙ | ↖ | | ↗ | ↘ |
| Volume (vph) | 0 | 0 | 0 | 93 | 2 | 557 | 350 | 1193 | 0 | 0 | 809 | 229 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 1 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 |
| Frt | | | | | | 0.850 | | | | | | 0.850 |
| Flt Protected | | | | 0.950 | 0.954 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1681 | 1688 | 1583 | 3433 | 3539 | 0 | 0 | 5085 | 1583 |
| Flt Permitted | | | | 0.950 | 0.954 | | 0.288 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1681 | 1688 | 1583 | 1041 | 3539 | 0 | 0 | 5085 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 40 | | | | | | 249 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 346 | | | 390 | | | 386 | | | | 2946 |
| Travel Time (s) | | 5.9 | | | 6.6 | | | 7.5 | | | | 57.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 101 | 2 | 605 | 380 | 1297 | 0 | 0 | 879 | 249 |
| Shared Lane Traffic (%) | | | | 49% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 52 | 51 | 605 | 380 | 1297 | 0 | 0 | 879 | 249 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | 1 | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | Right | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | 20 | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | 20 | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | Perm | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | 8 | 2 | | | | | 6 |
| Detector Phase | | | | 8 | 8 | 8 | 2 | 2 | | | | 6 |

Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019

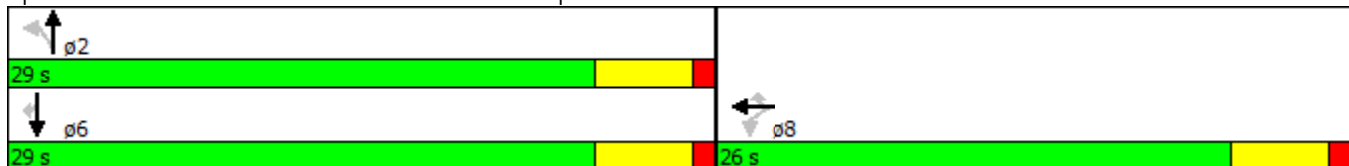


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | | | | 26.0 | 26.0 | 26.0 | 29.0 | 29.0 | | | 29.0 | 29.0 |
| Total Split (%) | | | | 47.3% | 47.3% | 47.3% | 52.7% | 52.7% | | | 52.7% | 52.7% |
| Maximum Green (s) | | | | 21.0 | 21.0 | 21.0 | 24.0 | 24.0 | | | 24.0 | 24.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | | | | None | None | None | Max | Max | | | Max | Max |
| Walk Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | | | | 21.0 | 21.0 | 21.0 | 24.0 | 24.0 | | | 24.0 | 24.0 |
| Actuated g/C Ratio | | | | 0.38 | 0.38 | 0.38 | 0.44 | 0.44 | | | 0.44 | 0.44 |
| v/c Ratio | | | | 0.08 | 0.08 | 0.96 | 0.84 | 0.84 | | | 0.40 | 0.30 |
| Control Delay | | | | 11.4 | 11.3 | 47.1 | 34.0 | 20.6 | | | 11.2 | 2.7 |
| Queue Delay | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | | | | 11.4 | 11.3 | 47.1 | 34.0 | 20.6 | | | 11.2 | 2.7 |
| LOS | | | | B | B | D | C | C | | | B | A |
| Approach Delay | | | | | 41.9 | | | 23.6 | | | 9.4 | |
| Approach LOS | | | | | D | | | C | | | A | |

Intersection Summary











| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 55 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.96 |
| Intersection Signal Delay: | 22.7 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 75.8% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 15: S Avalon Blvd & I-405 NB Ramps



Lanes, Volumes, Timings
16: S Main St & E 213th St

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Volume (vph) | 301 | 312 | 694 | 166 | 124 | 561 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 16 | 16 | 16 | 16 | 12 | 12 |
| Storage Length (ft) | 0 | 0 | | 0 | 90 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | 0.931 | | 0.971 | | | |
| Flt Protected | 0.976 | | | | 0.950 | |
| Satd. Flow (prot) | 1918 | 0 | 3895 | 0 | 1770 | 3539 |
| Flt Permitted | 0.976 | | | | 0.234 | |
| Satd. Flow (perm) | 1918 | 0 | 3895 | 0 | 436 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 107 | | 69 | | | |
| Link Speed (mph) | 30 | | 35 | | | 45 |
| Link Distance (ft) | 4544 | | 1360 | | | 2482 |
| Travel Time (s) | 103.3 | | 26.5 | | | 37.6 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 327 | 339 | 754 | 180 | 135 | 610 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 666 | 0 | 934 | 0 | 135 | 610 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 28 | | 24 | | | 24 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | | 2 | | 1 | 2 |
| Detector Template | Left | | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Perm | | NA | | Perm | NA |
| Protected Phases | | | 2 | | | 6 |
| Permitted Phases | 8 | | | | 6 | |

Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019

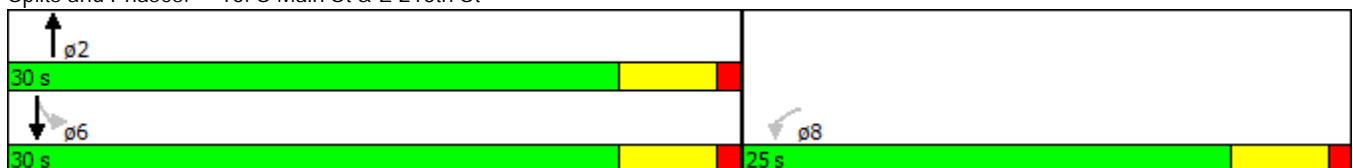


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-----|-------|-----|-------|-------|
| Detector Phase | 8 | | 2 | | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 25.0 | | 30.0 | | 30.0 | 30.0 |
| Total Split (%) | 45.5% | | 54.5% | | 54.5% | 54.5% |
| Maximum Green (s) | 20.0 | | 25.0 | | 25.0 | 25.0 |
| Yellow Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | | Max | | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | | 0 | 0 |
| Act Effect Green (s) | 18.9 | | 25.1 | | 25.1 | 25.1 |
| Actuated g/C Ratio | 0.35 | | 0.46 | | 0.46 | 0.46 |
| v/c Ratio | 0.90 | | 0.51 | | 0.67 | 0.37 |
| Control Delay | 32.1 | | 10.7 | | 33.5 | 10.5 |
| Queue Delay | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Delay | 32.1 | | 10.7 | | 33.5 | 10.5 |
| LOS | C | | B | | C | B |
| Approach Delay | 32.1 | | 10.7 | | | 14.6 |
| Approach LOS | C | | B | | | B |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 54 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.90 |
| Intersection Signal Delay: | 18.0 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 79.7% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 16: S Main St & E 213th St



Lanes, Volumes, Timings
17: S Avalon Blvd & E 213th St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 244 | 208 | 88 | 127 | 243 | 68 | 108 | 846 | 139 | 60 | 923 | 178 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 70 | | 0 | 120 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.955 | | | 0.967 | | | 0.979 | | | 0.976 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 2016 | 0 | 1770 | 3879 | 0 | 1770 | 5642 | 0 | 1770 | 5625 | 0 |
| Flt Permitted | 0.548 | | | 0.512 | | | 0.209 | | | 0.232 | | |
| Satd. Flow (perm) | 1021 | 2016 | 0 | 954 | 3879 | 0 | 389 | 5642 | 0 | 432 | 5625 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 45 | | | 59 | | | 87 | | | 109 | |
| Link Speed (mph) | | 30 | | | 30 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4544 | | | 967 | | | 1397 | | | 1230 | |
| Travel Time (s) | | 103.3 | | | 22.0 | | | 27.2 | | | 24.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 265 | 226 | 96 | 138 | 264 | 74 | 117 | 920 | 151 | 65 | 1003 | 193 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 265 | 322 | 0 | 138 | 338 | 0 | 117 | 1071 | 0 | 65 | 1196 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |

Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

1/3/2019

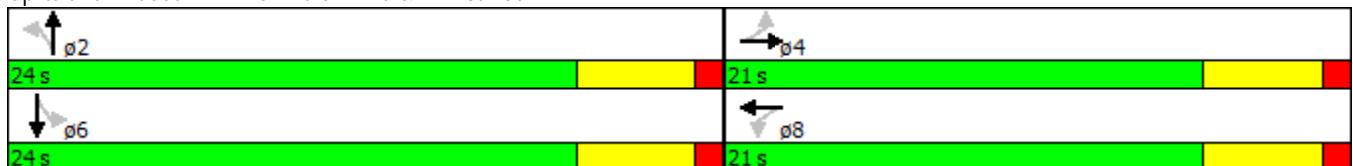


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | | 46.7% | 46.7% | | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 14.1 | 14.1 | | 14.1 | 14.1 | | 19.1 | 19.1 | | 19.1 | 19.1 | |
| Actuated g/C Ratio | 0.33 | 0.33 | | 0.33 | 0.33 | | 0.44 | 0.44 | | 0.44 | 0.44 | |
| v/c Ratio | 0.80 | 0.47 | | 0.45 | 0.26 | | 0.68 | 0.42 | | 0.34 | 0.47 | |
| Control Delay | 34.4 | 12.2 | | 16.5 | 9.1 | | 38.2 | 8.5 | | 15.2 | 8.8 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 34.4 | 12.2 | | 16.5 | 9.1 | | 38.2 | 8.5 | | 15.2 | 8.8 | |
| LOS | C | B | | B | A | | D | A | | B | A | |
| Approach Delay | | 22.3 | | | 11.2 | | | 11.5 | | | 9.1 | |
| Approach LOS | | C | | | B | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 43.2 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.80 |
| Intersection Signal Delay: | 12.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 67.8% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 17: S Avalon Blvd & E 213th St



Lanes, Volumes, Timings
18: S Figueroa St & W Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 149 | 349 | 449 | 38 | 439 | 47 | 357 | 535 | 151 | 45 | 379 | 323 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 213 | | 75 | 152 | | 0 | 230 | | 0 | 240 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 2 | | 0 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 |
| Frt | | | 0.850 | | 0.986 | | | 0.967 | | | 0.931 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3490 | 0 | 3433 | 3422 | 0 | 3433 | 3295 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3490 | 0 | 3433 | 3422 | 0 | 3433 | 3295 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 338 | | 17 | | | 56 | | | 238 | |
| Link Speed (mph) | | 35 | | | 35 | | | 40 | | | 40 | |
| Link Distance (ft) | | 1243 | | | 2441 | | | 713 | | | 3767 | |
| Travel Time (s) | | 24.2 | | | 47.6 | | | 12.2 | | | 64.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 162 | 379 | 488 | 41 | 477 | 51 | 388 | 582 | 164 | 49 | 412 | 351 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 162 | 379 | 488 | 41 | 528 | 0 | 388 | 746 | 0 | 49 | 763 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 18: S Figueroa St & W Carson St

1/3/2019

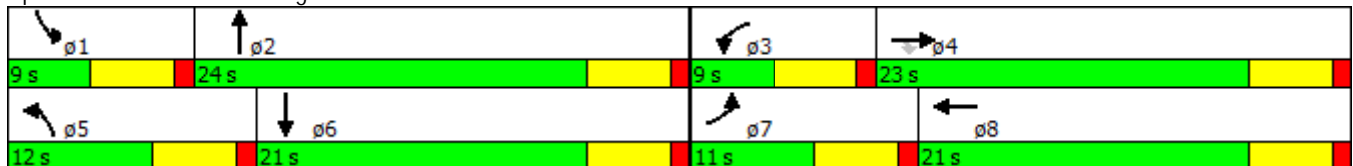


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 11.0 | 23.0 | 23.0 | 9.0 | 21.0 | | 12.0 | 24.0 | | 9.0 | 21.0 | |
| Total Split (%) | 16.9% | 35.4% | 35.4% | 13.8% | 32.3% | | 18.5% | 36.9% | | 13.8% | 32.3% | |
| Maximum Green (s) | 6.0 | 18.0 | 18.0 | 4.0 | 16.0 | | 7.0 | 19.0 | | 4.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 6.0 | 19.7 | 19.7 | 4.0 | 13.9 | | 7.0 | 22.8 | | 4.0 | 16.0 | |
| Actuated g/C Ratio | 0.10 | 0.31 | 0.31 | 0.06 | 0.22 | | 0.11 | 0.36 | | 0.06 | 0.25 | |
| v/c Ratio | 0.96 | 0.34 | 0.67 | 0.37 | 0.67 | | 1.02 | 0.59 | | 0.22 | 0.75 | |
| Control Delay | 95.2 | 18.8 | 12.2 | 38.7 | 26.3 | | 83.3 | 18.9 | | 31.5 | 20.7 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 95.2 | 18.8 | 12.2 | 38.7 | 26.3 | | 83.3 | 18.9 | | 31.5 | 20.7 | |
| LOS | F | B | B | D | C | | F | B | | C | C | |
| Approach Delay | | 27.7 | | | 27.2 | | | 40.9 | | | 21.4 | |
| Approach LOS | | C | | | C | | | D | | | C | |

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 63
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 30.4
 Intersection LOS: C
 Intersection Capacity Utilization 69.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 18: S Figueroa St & W Carson St



Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 87 | 350 | 102 | 52 | 353 | 58 | 136 | 750 | 118 | 57 | 546 | 78 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 210 | | 70 | 220 | | 70 | 115 | | 0 | 175 | | 500 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | | 0.850 | | 0.980 | | | 0.981 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 4984 | 0 | 1770 | 4989 | 0 |
| Flt Permitted | 0.524 | | | 0.526 | | | 0.383 | | | 0.291 | | |
| Satd. Flow (perm) | 976 | 3539 | 1583 | 980 | 3539 | 1583 | 713 | 4984 | 0 | 542 | 4989 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 111 | | | 63 | | 82 | | | 72 | |
| Link Speed (mph) | | 35 | | | 35 | | | 35 | | | 35 | |
| Link Distance (ft) | | 2441 | | | 4293 | | | 978 | | | 1360 | |
| Travel Time (s) | | 47.6 | | | 83.6 | | | 19.1 | | | 26.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 95 | 380 | 111 | 57 | 384 | 63 | 148 | 815 | 128 | 62 | 593 | 85 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 95 | 380 | 111 | 57 | 384 | 63 | 148 | 943 | 0 | 62 | 678 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | | 6 | | |

Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019

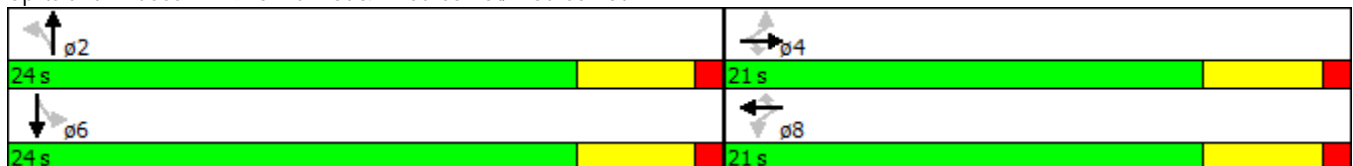


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | 46.7% | 46.7% | 46.7% | 46.7% | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 19.1 | 19.1 | | 19.1 | 19.1 | |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.48 | 0.48 | | 0.48 | 0.48 | |
| v/c Ratio | 0.37 | 0.40 | 0.22 | 0.22 | 0.41 | 0.13 | 0.43 | 0.39 | | 0.24 | 0.28 | |
| Control Delay | 15.7 | 13.0 | 4.1 | 13.0 | 13.0 | 4.4 | 13.3 | 7.1 | | 10.5 | 6.5 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 15.7 | 13.0 | 4.1 | 13.0 | 13.0 | 4.4 | 13.3 | 7.1 | | 10.5 | 6.5 | |
| LOS | B | B | A | B | B | A | B | A | | B | A | |
| Approach Delay | | 11.7 | | | 11.9 | | | 8.0 | | | 6.8 | |
| Approach LOS | | B | | | B | | | A | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 39.8 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.43 |
| Intersection Signal Delay: | 9.1 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 51.7% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 19: S Main St & W Carson St/E Carson St



Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

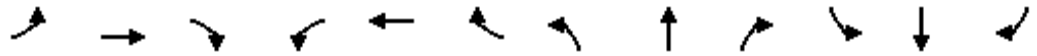
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 118 | 470 | 67 | 395 | 327 | 105 | 67 | 749 | 518 | 138 | 774 | 56 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 2 | | 0 | 2 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.981 | | | 0.964 | | | 0.939 | | | 0.990 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3472 | 0 | 3433 | 3412 | 0 | 1770 | 4775 | 0 | 1770 | 5034 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3472 | 0 | 3433 | 3412 | 0 | 1770 | 4775 | 0 | 1770 | 5034 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 19 | | | 56 | | | 236 | | | 15 | |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | 1397 | |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | 27.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 128 | 511 | 73 | 429 | 355 | 114 | 73 | 814 | 563 | 150 | 841 | 61 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 128 | 584 | 0 | 429 | 469 | 0 | 73 | 1377 | 0 | 150 | 902 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |

Lanes, Volumes, Timings
 20: S Avalon Blvd & E Carson St

1/3/2019

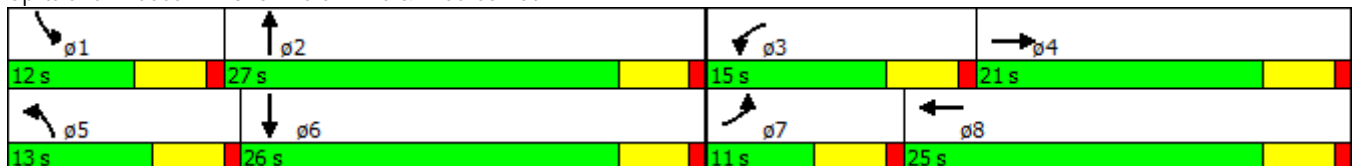


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 11.0 | 21.0 | | 15.0 | 25.0 | | 13.0 | 27.0 | | 12.0 | 26.0 | |
| Total Split (%) | 14.7% | 28.0% | | 20.0% | 33.3% | | 17.3% | 36.0% | | 16.0% | 34.7% | |
| Maximum Green (s) | 6.0 | 16.0 | | 10.0 | 20.0 | | 8.0 | 22.0 | | 7.0 | 21.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 6.0 | 15.2 | | 10.0 | 21.5 | | 7.3 | 22.0 | | 7.0 | 23.9 | |
| Actuated g/C Ratio | 0.08 | 0.20 | | 0.13 | 0.29 | | 0.10 | 0.30 | | 0.09 | 0.32 | |
| v/c Ratio | 0.46 | 0.80 | | 0.93 | 0.46 | | 0.42 | 0.87 | | 0.90 | 0.55 | |
| Control Delay | 38.7 | 36.9 | | 61.8 | 21.4 | | 39.2 | 28.1 | | 85.2 | 23.2 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 38.7 | 36.9 | | 61.8 | 21.4 | | 39.2 | 28.1 | | 85.2 | 23.2 | |
| LOS | D | D | | E | C | | D | C | | F | C | |
| Approach Delay | | 37.2 | | | 40.7 | | | 28.7 | | | 32.0 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

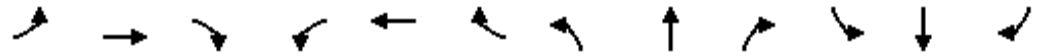
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 75 |
| Actuated Cycle Length: | 74.3 |
| Natural Cycle: | 75 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.93 |
| Intersection Signal Delay: | 33.6 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 76.8% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St



Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

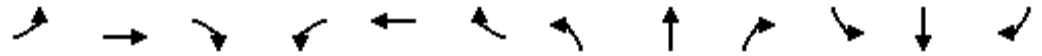
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 7 | 587 | 629 | 111 | 1066 | 0 | 103 | 0 | 227 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 50 | | 180 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | 0.850 | | | | | | 0.850 | | | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (prot) | 1593 | 3185 | 1425 | 1593 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Fl _t Permitted | 0.223 | | | 0.410 | | | 0.950 | | | | | |
| Satd. Flow (perm) | 374 | 3185 | 1425 | 687 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 684 | | | | | | 191 | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 2121 | | | 469 | | | 428 | | | | 162 |
| Travel Time (s) | | 36.2 | | | 8.0 | | | 7.3 | | | | 2.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 8 | 638 | 684 | 121 | 1159 | 0 | 112 | 0 | 247 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 8 | 638 | 684 | 121 | 1159 | 0 | 112 | 0 | 247 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | | 1 | | | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | | Right | | | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | | 20 | | | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | | 20 | | | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | | | | | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | | Perm | | | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | | 2 | | | 6 |

Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019

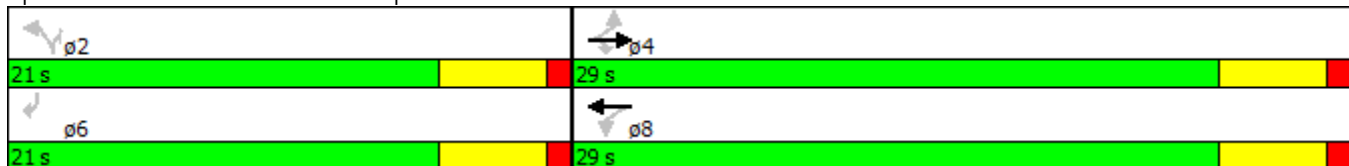


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|-----|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (s) | 29.0 | 29.0 | 29.0 | 29.0 | 29.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (%) | 58.0% | 58.0% | 58.0% | 58.0% | 58.0% | | 42.0% | | 42.0% | | | 42.0% |
| Maximum Green (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | | 16.0 | | 16.0 | | | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | | 1.0 | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | 3.0 |
| Recall Mode | None | None | None | None | None | | Min | | Min | | | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | | 11.0 | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Act Effect Green (s) | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | | 8.5 | | 8.5 | | | |
| Actuated g/C Ratio | 0.49 | 0.49 | 0.49 | 0.49 | 0.49 | | 0.23 | | 0.23 | | | |
| v/c Ratio | 0.04 | 0.41 | 0.66 | 0.36 | 0.52 | | 0.31 | | 0.52 | | | |
| Control Delay | 6.3 | 7.1 | 4.2 | 10.1 | 7.6 | | 15.4 | | 8.9 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | |
| Total Delay | 6.3 | 7.1 | 4.2 | 10.1 | 7.6 | | 15.4 | | 8.9 | | | |
| LOS | A | A | A | B | A | | B | | A | | | |
| Approach Delay | | 5.6 | | | 7.8 | | | | | | | |
| Approach LOS | | A | | | A | | | | | | | |

Intersection Summary

Area Type: CBD
 Cycle Length: 50
 Actuated Cycle Length: 36.9
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 7.2
 Intersection Capacity Utilization 58.4%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 21: I-405 SB Ramps & E Carson St



Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019

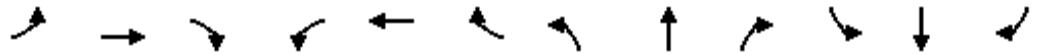


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 86 | 678 | 40 | 14 | 773 | 256 | 7 | 4 | 4 | 22 | 15 | 435 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 70 | | 0 | 100 | | 180 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.992 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.968 | | | 0.971 | |
| Satd. Flow (prot) | 1770 | 3511 | 0 | 1770 | 3539 | 1583 | 0 | 1803 | 1583 | 0 | 1809 | 1583 |
| Flt Permitted | 0.255 | | | 0.282 | | | | 0.897 | | | 0.885 | |
| Satd. Flow (perm) | 475 | 3511 | 0 | 525 | 3539 | 1583 | 0 | 1671 | 1583 | 0 | 1649 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 15 | | | | 278 | | | 48 | | | 55 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 469 | | | 2039 | | | 158 | | | 364 | |
| Travel Time (s) | | 8.0 | | | 34.8 | | | 2.7 | | | 6.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 93 | 737 | 43 | 15 | 840 | 278 | 8 | 4 | 4 | 24 | 16 | 473 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 93 | 780 | 0 | 15 | 840 | 278 | 0 | 12 | 4 | 0 | 40 | 473 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | 6 |

Lanes, Volumes, Timings

22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019

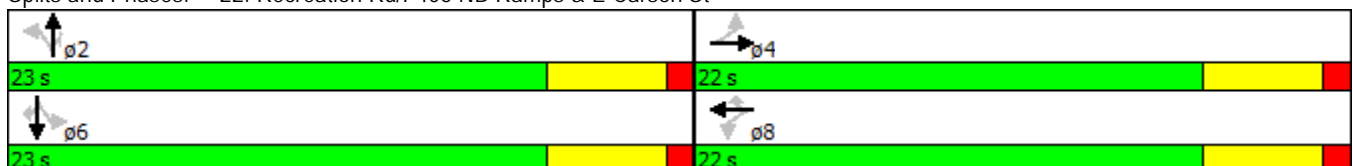


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | | 22.0 | 22.0 | 22.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | | 48.9% | 48.9% | 48.9% | 51.1% | 51.1% | 51.1% | 51.1% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 15.6 | 15.6 | | 15.6 | 15.6 | 15.6 | | 18.0 | 18.0 | | 18.0 | 18.0 |
| Actuated g/C Ratio | 0.36 | 0.36 | | 0.36 | 0.36 | 0.36 | | 0.41 | 0.41 | | 0.41 | 0.41 |
| v/c Ratio | 0.55 | 0.62 | | 0.08 | 0.66 | 0.37 | | 0.02 | 0.01 | | 0.06 | 0.69 |
| Control Delay | 27.0 | 13.7 | | 10.4 | 14.7 | 3.4 | | 8.4 | 0.0 | | 8.6 | 17.0 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 27.0 | 13.7 | | 10.4 | 14.7 | 3.4 | | 8.4 | 0.0 | | 8.6 | 17.0 |
| LOS | C | B | | B | B | A | | A | A | | A | B |
| Approach Delay | | 15.1 | | | 11.9 | | | 6.3 | | | 16.3 | |
| Approach LOS | | B | | | B | | | A | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 43.7 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.69 |
| Intersection Signal Delay: | 13.9 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 64.1% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 22: Recreation Rd/I-405 NB Ramps & E Carson St



Lanes, Volumes, Timings
 1: S Figueroa St & I-405 SB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | ↑↑ | | ↑ | ↑↑ |
| Volume (vph) | 0 | 0 | 761 | 118 | 610 | 1213 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 220 | |
| Storage Lanes | 0 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | | | 0.980 | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 3468 | 0 | 1770 | 3539 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 3468 | 0 | 1770 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 607 | | 2451 | | | 246 |
| Travel Time (s) | 10.3 | | 41.8 | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 827 | 128 | 663 | 1318 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 955 | 0 | 663 | 1318 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Yield | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 65.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service C |

Lanes, Volumes, Timings
 2: S Figueroa St & I-405 NB Ramps

1/3/2019



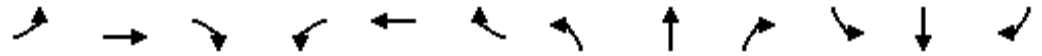
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 79 | 135 | 771 | 0 | 0 | 1728 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | | 0.850 | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 724 | | 246 | | | 1243 |
| Travel Time (s) | 12.3 | | 4.2 | | | 21.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 86 | 147 | 838 | 0 | 0 | 1878 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 86 | 147 | 838 | 0 | 0 | 1878 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 65.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service C |

Lanes, Volumes, Timings
3: S Main St & I-405 SB Ramps

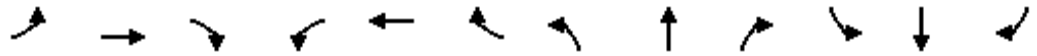
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | | | | | | ↕ | | ↖ | ↗ | |
| Volume (vph) | 18 | 655 | 46 | 0 | 0 | 0 | 0 | 619 | 126 | 234 | 1115 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 250 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr't | | 0.990 | | | | | | 0.975 | | | | |
| Flt Protected | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1844 | 0 | 0 | 0 | 0 | 0 | 3451 | 0 | 1770 | 3539 | 0 |
| Flt Permitted | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1844 | 0 | 0 | 0 | 0 | 0 | 3451 | 0 | 1770 | 3539 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 5 | | | | | | 25 | | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 607 | | | 169 | | | 2341 | | | 290 | |
| Travel Time (s) | | 10.3 | | | 2.9 | | | 35.5 | | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 20 | 712 | 50 | 0 | 0 | 0 | 0 | 673 | 137 | 254 | 1212 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 20 | 762 | 0 | 0 | 0 | 0 | 0 | 810 | 0 | 254 | 1212 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | | | | | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | | | | | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | | | | | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 4 | | | | | | | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
3: S Main St & I-405 SB Ramps

1/3/2019

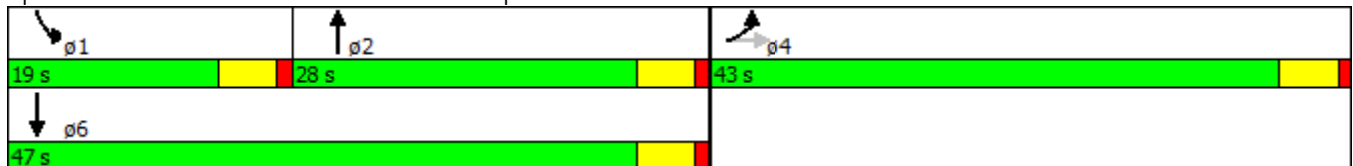


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 43.0 | 43.0 | | | | | | 28.0 | | 19.0 | 47.0 | |
| Total Split (%) | 47.8% | 47.8% | | | | | | 31.1% | | 21.1% | 52.2% | |
| Maximum Green (s) | 38.0 | 38.0 | | | | | | 23.0 | | 14.0 | 42.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | | | | | Max | | None | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | 0 | |
| Act Effct Green (s) | 38.0 | 38.0 | | | | | | 23.0 | | 14.0 | 42.0 | |
| Actuated g/C Ratio | 0.42 | 0.42 | | | | | | 0.26 | | 0.16 | 0.47 | |
| v/c Ratio | 0.03 | 0.98 | | | | | | 0.90 | | 0.92 | 0.73 | |
| Control Delay | 15.4 | 53.9 | | | | | | 46.1 | | 77.4 | 22.8 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 49.3 | |
| Total Delay | 15.4 | 53.9 | | | | | | 46.1 | | 77.4 | 72.1 | |
| LOS | B | D | | | | | | D | | E | E | |
| Approach Delay | | 52.9 | | | | | | 46.1 | | | 73.1 | |
| Approach LOS | | D | | | | | | D | | | E | |

Intersection Summary

| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.98 |
| Intersection Signal Delay: | 60.8 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 83.9% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 3: S Main St & I-405 SB Ramps



Lanes, Volumes, Timings

4: S Main St & I-405 NB Ramps

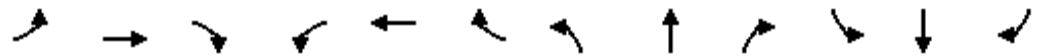
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | ↕↕ | | ↕ | ↕↕ | | | ↕↕ | |
| Volume (vph) | 0 | 0 | 0 | 61 | 124 | 242 | 25 | 626 | 0 | 0 | 1267 | 62 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.915 | | | | | | 0.993 | |
| Flt Protected | | | | | 0.993 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3216 | 0 | 1770 | 3539 | 0 | 0 | 3514 | 0 |
| Flt Permitted | | | | | 0.993 | | 0.137 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3216 | 0 | 255 | 3539 | 0 | 0 | 3514 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 202 | | | | | | 13 | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 724 | | | 336 | | | 290 | | | 724 | |
| Travel Time (s) | | 12.3 | | | 5.7 | | | 4.4 | | | 11.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 66 | 135 | 263 | 27 | 680 | 0 | 0 | 1377 | 67 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 464 | 0 | 27 | 680 | 0 | 0 | 1444 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | | 2 | | | | | |
| Detector Phase | | | | 8 | 8 | | 2 | 2 | | | | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | | 21.0 | 21.0 | | | | 21.0 |

Lanes, Volumes, Timings
 4: S Main St & I-405 NB Ramps

1/3/2019

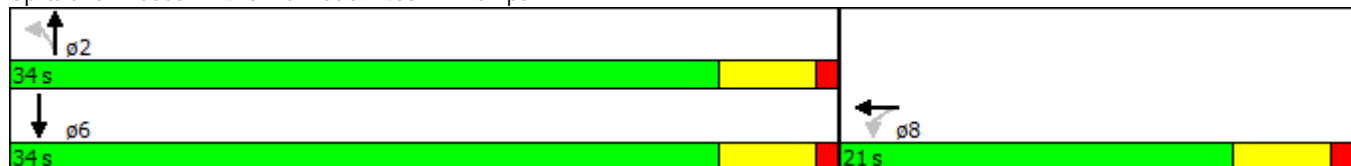


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-------|-------|-----|-----|-------|-----|
| Total Split (s) | | | | 21.0 | 21.0 | | 34.0 | 34.0 | | | 34.0 | |
| Total Split (%) | | | | 38.2% | 38.2% | | 61.8% | 61.8% | | | 61.8% | |
| Maximum Green (s) | | | | 16.0 | 16.0 | | 29.0 | 29.0 | | | 29.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | | 1.0 | 1.0 | | | 1.0 | |
| Lost Time Adjust (s) | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | None | | Max | Max | | | Max | |
| Walk Time (s) | | | | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | | 11.0 | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | | 0 | 0 | | | 0 | |
| Act Effect Green (s) | | | | | 9.8 | | 29.1 | 29.1 | | | 29.1 | |
| Actuated g/C Ratio | | | | | 0.20 | | 0.60 | 0.60 | | | 0.60 | |
| v/c Ratio | | | | | 0.58 | | 0.18 | 0.32 | | | 0.69 | |
| Control Delay | | | | | 12.5 | | 9.3 | 6.0 | | | 9.6 | |
| Queue Delay | | | | | 0.0 | | 0.0 | 0.2 | | | 0.0 | |
| Total Delay | | | | | 12.5 | | 9.3 | 6.3 | | | 9.6 | |
| LOS | | | | | B | | A | A | | | A | |
| Approach Delay | | | | | 12.5 | | | 6.4 | | | 9.6 | |
| Approach LOS | | | | | B | | | A | | | A | |

Intersection Summary

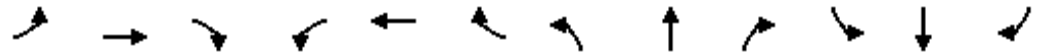
| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 48.9 |
| Natural Cycle: | 55 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.69 |
| Intersection Signal Delay: | 9.2 |
| Intersection Capacity Utilization: | 83.9% |
| Analysis Period (min): | 15 |
| Intersection LOS: | A |
| ICU Level of Service: | E |

Splits and Phases: 4: S Main St & I-405 NB Ramps



Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 60 | 867 | 169 | 207 | 685 | 121 | 55 | 455 | 366 | 202 | 594 | 233 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.975 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4958 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4958 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 54 | | | | 187 | | | 196 | | | 253 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | | 40 |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | | 2451 |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | | 41.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 65 | 942 | 184 | 225 | 745 | 132 | 60 | 495 | 398 | 220 | 646 | 253 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 65 | 1126 | 0 | 225 | 745 | 132 | 60 | 495 | 398 | 220 | 646 | 253 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

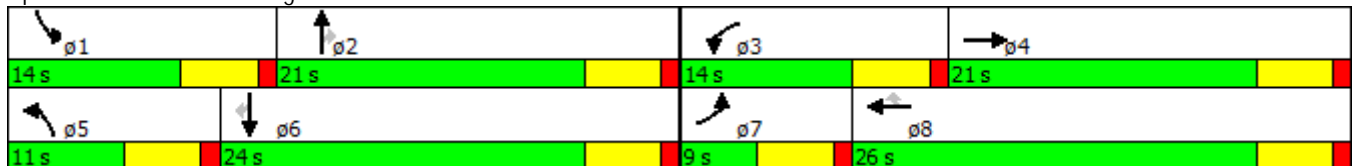


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 9.0 | 21.0 | | 14.0 | 26.0 | 26.0 | 11.0 | 21.0 | 21.0 | 14.0 | 24.0 | 24.0 |
| Total Split (%) | 12.9% | 30.0% | | 20.0% | 37.1% | 37.1% | 15.7% | 30.0% | 30.0% | 20.0% | 34.3% | 34.3% |
| Maximum Green (s) | 4.0 | 16.0 | | 9.0 | 21.0 | 21.0 | 6.0 | 16.0 | 16.0 | 9.0 | 19.0 | 19.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 4.0 | 16.0 | | 9.0 | 22.8 | 22.8 | 5.9 | 16.0 | 16.0 | 9.0 | 23.4 | 23.4 |
| Actuated g/C Ratio | 0.06 | 0.23 | | 0.13 | 0.33 | 0.33 | 0.08 | 0.23 | 0.23 | 0.13 | 0.33 | 0.33 |
| v/c Ratio | 0.64 | 0.96 | | 0.99 | 0.65 | 0.21 | 0.40 | 0.61 | 0.78 | 0.97 | 0.55 | 0.36 |
| Control Delay | 63.2 | 45.2 | | 92.6 | 24.0 | 2.1 | 38.9 | 28.0 | 25.1 | 87.1 | 22.4 | 4.8 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.2 | 45.2 | | 92.6 | 24.0 | 2.1 | 38.9 | 28.0 | 25.1 | 87.1 | 22.4 | 4.8 |
| LOS | E | D | | F | C | A | D | C | C | F | C | A |
| Approach Delay | | 46.2 | | | 35.4 | | | 27.5 | | | 31.2 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 35.5
 Intersection LOS: D
 Intersection Capacity Utilization 72.4%
 ICU Level of Service C
 Analysis Period (min) 15

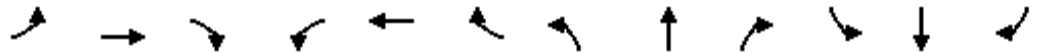
Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings

6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↕↕↗ | | ↖ | ↕↕↗ | | ↖ | ↕↗ | | ↖ | ↕↗ | |
| Volume (vph) | 169 | 1181 | 120 | 254 | 813 | 62 | 43 | 416 | 304 | 139 | 779 | 156 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.986 | | | 0.989 | | | 0.937 | | | 0.975 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 5014 | 0 | 1770 | 5029 | 0 | 1770 | 3316 | 0 | 1770 | 3451 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 5014 | 0 | 1770 | 5029 | 0 | 1770 | 3316 | 0 | 1770 | 3451 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 18 | | | 13 | | | 197 | | | 27 | |
| Link Speed (mph) | | 45 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1251 | | | 1668 | | | 534 | | | 2341 | |
| Travel Time (s) | | 19.0 | | | 25.3 | | | 8.1 | | | 35.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 184 | 1284 | 130 | 276 | 884 | 67 | 47 | 452 | 330 | 151 | 847 | 170 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 184 | 1414 | 0 | 276 | 951 | 0 | 47 | 782 | 0 | 151 | 1017 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

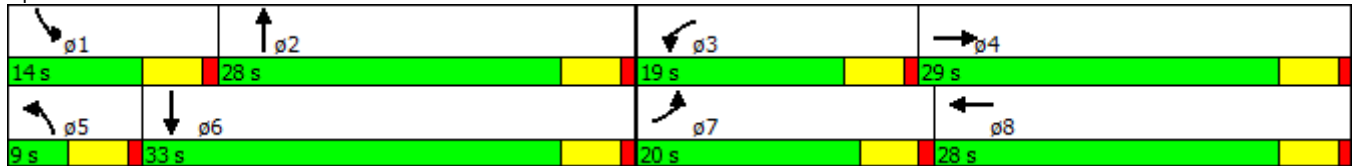


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 20.0 | 29.0 | | 19.0 | 28.0 | | 9.0 | 28.0 | | 14.0 | 33.0 | |
| Total Split (%) | 22.2% | 32.2% | | 21.1% | 31.1% | | 10.0% | 31.1% | | 15.6% | 36.7% | |
| Maximum Green (s) | 15.0 | 24.0 | | 14.0 | 23.0 | | 4.0 | 23.0 | | 9.0 | 28.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 13.2 | 24.0 | | 14.0 | 24.8 | | 4.0 | 23.0 | | 9.0 | 29.8 | |
| Actuated g/C Ratio | 0.15 | 0.27 | | 0.16 | 0.28 | | 0.04 | 0.26 | | 0.10 | 0.33 | |
| v/c Ratio | 0.71 | 1.05 | | 1.00 | 0.68 | | 0.60 | 0.79 | | 0.85 | 0.88 | |
| Control Delay | 51.8 | 70.9 | | 95.6 | 32.0 | | 74.3 | 29.7 | | 79.9 | 38.6 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 51.8 | 70.9 | | 95.6 | 32.0 | | 74.3 | 29.7 | | 79.9 | 38.6 | |
| LOS | D | E | | F | C | | E | C | | E | D | |
| Approach Delay | | 68.7 | | | 46.3 | | | 32.3 | | | 43.9 | |
| Approach LOS | | E | | | D | | | C | | | D | |

Intersection Summary

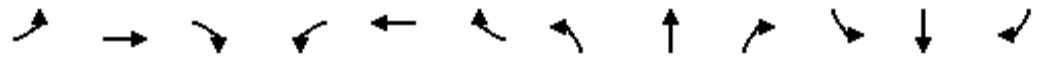
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.05 |
| Intersection Signal Delay: | 50.7 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 86.1% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

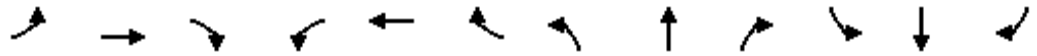
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1478 | 0 | 0 | 1116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 155 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 1863 | 3539 | 1863 | 1863 | 3539 | 0 | 1770 | 1770 | 1863 | 1863 | 1770 | 1770 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 1863 | 3539 | 1863 | 1863 | 3539 | 0 | 1770 | 1770 | 1863 | 1863 | 1770 | 1770 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | 45 | | | 25 | | | | 50 |
| Link Distance (ft) | | 1668 | | | 3009 | | | 694 | | | | 308 |
| Travel Time (s) | | 25.3 | | | 45.6 | | | 18.9 | | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1607 | 0 | 0 | 1213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | 0% | | | | | 0% |
| Lane Group Flow (vph) | 0 | 1607 | 0 | 0 | 1213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Split | | Perm | Perm | | Perm |
| Protected Phases | | 4 | | | 8 | | 2 | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | 2 | 6 | 6 | 6 |

Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019

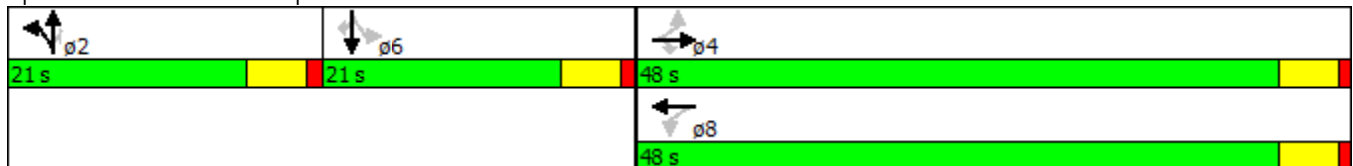


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 48.0 | 48.0 | 48.0 | 48.0 | 48.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 53.3% | 53.3% | 53.3% | 53.3% | 53.3% | | 23.3% | 23.3% | 23.3% | 23.3% | 23.3% | 23.3% |
| Maximum Green (s) | 43.0 | 43.0 | 43.0 | 43.0 | 43.0 | | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | 42.9 | | | 42.9 | | | | | | | |
| Actuated g/C Ratio | | 0.48 | | | 0.48 | | | | | | | |
| v/c Ratio | | 0.95 | | | 0.72 | | | | | | | |
| Control Delay | | 36.6 | | | 21.7 | | | | | | | |
| Queue Delay | | 0.0 | | | 0.0 | | | | | | | |
| Total Delay | | 36.6 | | | 21.7 | | | | | | | |
| LOS | | D | | | C | | | | | | | |
| Approach Delay | | 36.6 | | | 21.7 | | | | | | | |
| Approach LOS | | D | | | C | | | | | | | |

Intersection Summary

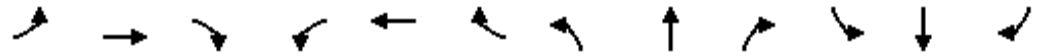
| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 89.9 |
| Natural Cycle: | 90 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 30.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 45.0% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 7: Stamps Dr & E Del Amo Blvd



Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

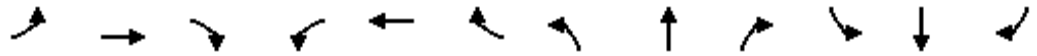
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 210 | 935 | 252 | 261 | 657 | 147 | 191 | 970 | 210 | 347 | 912 | 270 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 1 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | 0.966 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4912 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4912 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 274 | | | 160 | | | 228 | | 70 | |
| Link Speed (mph) | | 45 | | | 45 | | | 35 | | | 35 | |
| Link Distance (ft) | | 3009 | | | 3520 | | | 2946 | | | 3936 | |
| Travel Time (s) | | 45.6 | | | 53.3 | | | 57.4 | | | 76.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 228 | 1016 | 274 | 284 | 714 | 160 | 208 | 1054 | 228 | 377 | 991 | 293 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 228 | 1016 | 274 | 284 | 714 | 160 | 208 | 1054 | 228 | 377 | 1284 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
 8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

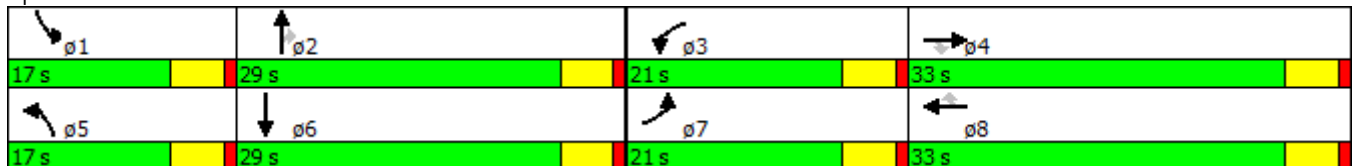


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 33.0 | 33.0 | 21.0 | 33.0 | 33.0 | 17.0 | 29.0 | 29.0 | 17.0 | 29.0 | 29.0 |
| Total Split (%) | 21.0% | 33.0% | 33.0% | 21.0% | 33.0% | 33.0% | 17.0% | 29.0% | 29.0% | 17.0% | 29.0% | 29.0% |
| Maximum Green (s) | 16.0 | 28.0 | 28.0 | 16.0 | 28.0 | 28.0 | 12.0 | 24.0 | 24.0 | 12.0 | 24.0 | 24.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 15.3 | 28.0 | 28.0 | 16.0 | 28.7 | 28.7 | 12.0 | 24.0 | 24.0 | 12.0 | 24.0 | 24.0 |
| Actuated g/C Ratio | 0.15 | 0.28 | 0.28 | 0.16 | 0.29 | 0.29 | 0.12 | 0.24 | 0.24 | 0.12 | 0.24 | 0.24 |
| v/c Ratio | 0.84 | 1.03 | 0.43 | 1.00 | 0.70 | 0.28 | 0.98 | 0.86 | 0.41 | 0.92 | 1.04 | 1.04 |
| Control Delay | 67.9 | 71.9 | 5.8 | 98.0 | 36.5 | 5.9 | 102.9 | 45.1 | 6.7 | 72.3 | 73.2 | 73.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 67.9 | 71.9 | 5.8 | 98.0 | 36.5 | 5.9 | 102.9 | 45.1 | 6.7 | 72.3 | 73.2 | 73.2 |
| LOS | E | E | A | F | D | A | F | D | A | E | E | E |
| Approach Delay | | 59.3 | | | 47.4 | | | 47.3 | | | | 73.0 |
| Approach LOS | | E | | | D | | | D | | | | E |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Natural Cycle: | 100 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.04 |
| Intersection Signal Delay: | 57.8 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 91.2% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 361 | 195 | 648 | 466 | 765 | 224 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | 235 | | | 250 |
| Storage Lanes | 2 | 0 | 2 | | | 1 |
| Taper Length (ft) | 25 | | 25 | | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 |
| Frt | 0.947 | | | | | 0.850 |
| Flt Protected | 0.969 | | 0.950 | | | |
| Satd. Flow (prot) | 3316 | 0 | 3433 | 3539 | 3539 | 1583 |
| Flt Permitted | 0.969 | | 0.319 | | | |
| Satd. Flow (perm) | 3316 | 0 | 1153 | 3539 | 3539 | 1583 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | 120 | | | | | 243 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 170 | | | 828 | 791 | |
| Travel Time (s) | 2.9 | | | 14.1 | 13.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 392 | 212 | 704 | 507 | 832 | 243 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 604 | 0 | 704 | 507 | 832 | 243 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 24 | | | 24 | 24 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 12 | | | 12 | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Number of Detectors | 1 | | 1 | 2 | 2 | 1 |
| Detector Template | Left | | Left | Thru | Thru | Right |
| Leading Detector (ft) | 20 | | 20 | 100 | 100 | 20 |
| Trailing Detector (ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 20 | 6 | 6 | 20 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | | 94 | 94 | |
| Detector 2 Size(ft) | | | | 6 | 6 | |
| Detector 2 Type | | | | Cl+Ex | Cl+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | | 2 | | | 6 |
| Detector Phase | 4 | | 2 | 2 | 6 | 6 |

Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|-------|-----|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 59.0 | 59.0 | 59.0 | 59.0 |
| Total Split (%) | 26.3% | | 73.8% | 73.8% | 73.8% | 73.8% |
| Maximum Green (s) | 16.0 | | 54.0 | 54.0 | 54.0 | 54.0 |
| Yellow Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 15.0 | | 54.0 | 54.0 | 54.0 | 54.0 |
| Actuated g/C Ratio | 0.19 | | 0.68 | 0.68 | 0.68 | 0.68 |
| v/c Ratio | 0.83 | | 0.89 | 0.21 | 0.34 | 0.21 |
| Control Delay | 35.8 | | 27.8 | 5.0 | 5.8 | 1.1 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 35.8 | | 27.8 | 5.0 | 5.8 | 1.1 |
| LOS | D | | C | A | A | A |
| Approach Delay | 35.8 | | | 18.3 | 4.7 | |
| Approach LOS | D | | | B | A | |

Intersection Summary












Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 79.1
 Natural Cycle: 80
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 16.9
 Intersection LOS: B
 Intersection Capacity Utilization 68.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 9: S Figueroa St & I-110 NB Ramps



Lanes, Volumes, Timings
10: S Main St & Lenardo Rd

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  |  |  | |  |  |
| Volume (vph) | 0 | 0 | 768 | 0 | 0 | 1138 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 145 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 1863 | 1863 | 3539 | 0 | 1863 | 3539 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 1863 | 1863 | 3539 | 0 | 1863 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 25 | | 45 | | | 45 |
| Link Distance (ft) | 479 | | 971 | | | 534 |
| Travel Time (s) | 13.1 | | 14.7 | | | 8.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 835 | 0 | 0 | 1237 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 835 | 0 | 0 | 1237 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | Perm | NA | | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Detector Phase | 8 | 8 | 2 | | 6 | 6 |

Lanes, Volumes, Timings
 10: S Main St & Lenardo Rd

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 109.0 | | 109.0 | 109.0 |
| Total Split (%) | 16.2% | 16.2% | 83.8% | | 83.8% | 83.8% |
| Maximum Green (s) | 16.0 | 16.0 | 104.0 | | 104.0 | 104.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | None | Max | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | | | 120.0 | | | 120.0 |
| Actuated g/C Ratio | | | 1.00 | | | 1.00 |
| v/c Ratio | | | 0.24 | | | 0.35 |
| Control Delay | | | 0.2 | | | 0.3 |
| Queue Delay | | | 0.0 | | | 0.0 |
| Total Delay | | | 0.2 | | | 0.3 |
| LOS | | | A | | | A |
| Approach Delay | | | 0.2 | | | 0.3 |
| Approach LOS | | | A | | | A |

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 120
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 0.2
 Intersection Capacity Utilization 35.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 10: S Main St & Lenardo Rd



Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 618 | 705 | 163 | 49 | 383 | 168 | 88 | 340 | 52 | 118 | 455 | 381 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 180 | | 0 | 115 | | 0 | 255 | | 0 | 185 | | 185 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.91 | 0.91 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.978 | | | | 0.850 | | 0.980 | | | | 0.850 |
| Flt Protected | 0.950 | 0.989 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1610 | 3716 | 0 | 1770 | 3539 | 1583 | 1770 | 3931 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.508 | 0.747 | | 0.142 | | | 0.415 | | | 0.477 | | |
| Satd. Flow (perm) | 861 | 2807 | 0 | 265 | 3539 | 1583 | 773 | 3931 | 0 | 889 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 49 | | | | 177 | | 28 | | | | 414 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 368 | | | 1713 | | | 3767 | | | | 828 |
| Travel Time (s) | | 6.3 | | | 29.2 | | | 64.2 | | | | 14.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 672 | 766 | 177 | 53 | 416 | 183 | 96 | 370 | 57 | 128 | 495 | 414 |
| Shared Lane Traffic (%) | 42% | | | | | | | | | | | |
| Lane Group Flow (vph) | 390 | 1225 | 0 | 53 | 416 | 183 | 96 | 427 | 0 | 128 | 495 | 414 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 39.0 | 39.0 | | 39.0 | 39.0 | 39.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 65.0% | 65.0% | | 65.0% | 65.0% | 65.0% | 35.0% | 35.0% | | 35.0% | 35.0% | 35.0% |
| Maximum Green (s) | 34.0 | 34.0 | | 34.0 | 34.0 | 34.0 | 16.0 | 16.0 | | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | 30.8 | 30.8 | | 30.8 | 30.8 | 30.8 | 16.1 | 16.1 | | 16.1 | 16.1 | 16.1 |
| Actuated g/C Ratio | 0.54 | 0.54 | | 0.54 | 0.54 | 0.54 | 0.28 | 0.28 | | 0.28 | 0.28 | 0.28 |
| v/c Ratio | 0.84 | 0.80 | | 0.37 | 0.22 | 0.20 | 0.44 | 0.38 | | 0.51 | 0.49 | 0.56 |
| Control Delay | 30.2 | 14.6 | | 16.1 | 6.9 | 1.9 | 26.0 | 17.3 | | 27.4 | 20.0 | 5.6 |
| Queue Delay | 0.0 | 0.4 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 30.2 | 15.0 | | 16.1 | 6.9 | 1.9 | 26.0 | 17.3 | | 27.4 | 20.0 | 5.6 |
| LOS | C | B | | B | A | A | C | B | | C | C | A |
| Approach Delay | | 18.7 | | | 6.3 | | | 18.9 | | | 15.2 | |
| Approach LOS | | B | | | A | | | B | | | B | |

Intersection Summary

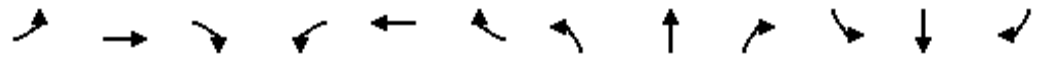
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 57 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.84 |
| Intersection Signal Delay: | 15.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 73.3% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 11: S Figueroa St & W Torrance Blvd



Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

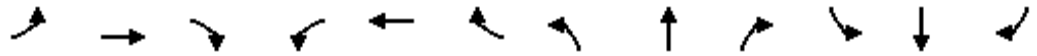
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕ | ↗ | | ↕ | | ↗ | ↕ | | ↗ | ↕ | ↗ |
| Volume (vph) | 294 | 72 | 521 | 11 | 44 | 26 | 284 | 451 | 9 | 46 | 782 | 304 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 190 | | 0 | 145 | | 45 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 2 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.957 | | | 0.997 | | | | 0.850 |
| Flt Protected | | 0.961 | | | 0.993 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1790 | 1583 | 0 | 2006 | 0 | 3433 | 3999 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | | 0.709 | | | 0.935 | | 0.266 | | | 0.467 | | |
| Satd. Flow (perm) | 0 | 1321 | 1583 | 0 | 1889 | 0 | 961 | 3999 | 0 | 870 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 82 | | 28 | | | 5 | | | | 240 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 45 |
| Link Distance (ft) | | 1713 | | | 375 | | | 2482 | | | | 971 |
| Travel Time (s) | | 29.2 | | | 6.4 | | | 42.3 | | | | 14.7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 320 | 78 | 566 | 12 | 48 | 28 | 309 | 490 | 10 | 50 | 850 | 330 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 398 | 566 | 0 | 88 | 0 | 309 | 500 | 0 | 50 | 850 | 330 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019

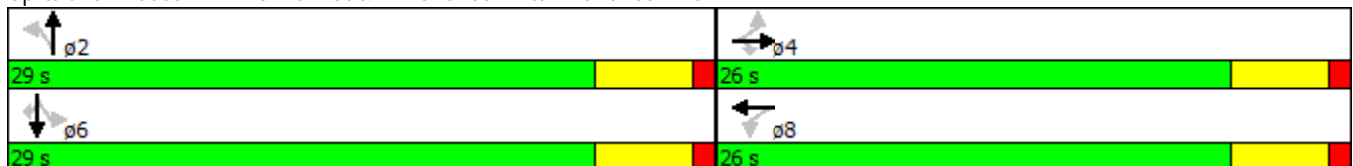


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 | | 29.0 | 29.0 | | 29.0 | 29.0 | 29.0 |
| Total Split (%) | 47.3% | 47.3% | 47.3% | 47.3% | 47.3% | | 52.7% | 52.7% | | 52.7% | 52.7% | 52.7% |
| Maximum Green (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | 24.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | | 19.7 | 19.7 | | 19.7 | | 24.1 | 24.1 | | 24.1 | 24.1 | 24.1 |
| Actuated g/C Ratio | | 0.37 | 0.37 | | 0.37 | | 0.45 | 0.45 | | 0.45 | 0.45 | 0.45 |
| v/c Ratio | | 0.82 | 0.90 | | 0.12 | | 0.72 | 0.28 | | 0.13 | 0.54 | 0.39 |
| Control Delay | | 32.5 | 34.0 | | 8.8 | | 25.5 | 10.1 | | 10.4 | 12.7 | 4.8 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | | 32.5 | 34.0 | | 8.8 | | 25.5 | 10.1 | | 10.4 | 12.7 | 4.8 |
| LOS | | C | C | | A | | C | B | | B | B | A |
| Approach Delay | | 33.4 | | | 8.8 | | | 16.0 | | | 10.5 | |
| Approach LOS | | C | | | A | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 53.8 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.90 |
| Intersection Signal Delay: | 19.1 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 70.9% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 12: S Main St & W Torrance Blvd/E Torrance Blvd



Lanes, Volumes, Timings
13: Lenardo Rd/I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 394 | 580 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | | 0 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 2 | 1 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.97 | 1.00 |
| Flt | | | | 0.850 | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 1863 | 3539 | 1863 | 1583 | 3433 | 1863 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 1863 | 3539 | 1863 | 1583 | 3433 | 1863 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 1091 | | |
| Link Speed (mph) | | 35 | 40 | | 40 | |
| Link Distance (ft) | | 701 | 533 | | 434 | |
| Travel Time (s) | | 13.7 | 9.1 | | 7.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 428 | 630 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 428 | 630 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 12 | 12 | | 24 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 12 | 12 | | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector (ft) | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | 94 | | | |
| Detector 2 Size(ft) | | 6 | 6 | | | |
| Detector 2 Type | | Cl+Ex | Cl+Ex | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | 0.0 | 0.0 | | | |
| Turn Type | Perm | | | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |

Lanes, Volumes, Timings
 13: Lenardo Rd/I-405 SB Ramps

1/3/2019

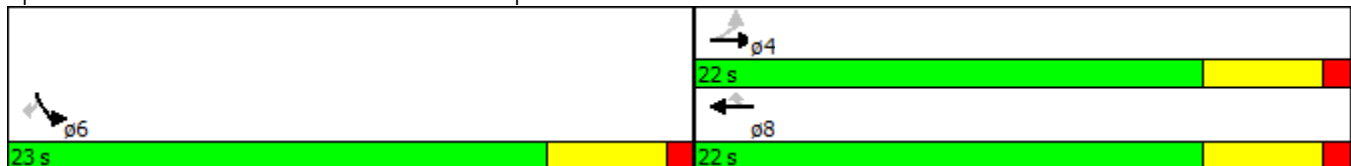


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 23.0 | 23.0 |
| Total Split (%) | 48.9% | 48.9% | 48.9% | 48.9% | 51.1% | 51.1% |
| Maximum Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | | | 5.5 | 18.5 | |
| Actuated g/C Ratio | | | | 0.16 | 0.54 | |
| v/c Ratio | | | | 0.37 | 0.34 | |
| Control Delay | | | | 0.9 | 5.0 | |
| Queue Delay | | | | 0.0 | 0.0 | |
| Total Delay | | | | 0.9 | 5.0 | |
| LOS | | | | A | A | |
| Approach Delay | | | | | 5.0 | |
| Approach LOS | | | | | A | |

Intersection Summary

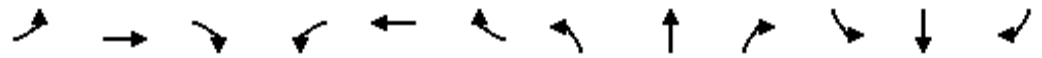
Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 34
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.37
 Intersection Signal Delay: 3.3
 Intersection Capacity Utilization 28.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 13: Lenardo Rd/I-405 SB Ramps



Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | ↖↖ | ↑↑ | ↗ | | | | ↖ | ↑↑ | | | ↑↑ | ↗ |
| Volume (vph) | 177 | 132 | 272 | 0 | 0 | 0 | 0 | 1180 | 195 | 0 | 960 | 400 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 200 | | 150 | 0 | | 0 | 160 | | 0 | 0 | | 120 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Flt | | | 0.850 | | | | | 0.979 | | | | 0.850 |
| Flt Protected | 0.950 | | | | | | | | | | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1863 | 3465 | 0 | 0 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | | | | | | | | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1863 | 3465 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 95 | | | | | 51 | | | | 435 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 533 | | | 422 | | | 1230 | | | | 386 |
| Travel Time (s) | | 9.1 | | | 7.2 | | | 24.0 | | | | 7.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 192 | 143 | 296 | 0 | 0 | 0 | 0 | 1283 | 212 | 0 | 1043 | 435 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 192 | 143 | 296 | 0 | 0 | 0 | 0 | 1495 | 0 | 0 | 1043 | 435 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | | | | 1 | 2 | | | 2 | 1 |
| Detector Template | Left | Thru | Right | | | | Left | Thru | | | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | | | | 20 | 100 | | | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | | | | 20 | 6 | | | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex | Cl+Ex | | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | | | | Perm | NA | | | NA | Perm |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | | 2 | | | | | 6 |
| Detector Phase | 4 | 4 | 4 | | | | 2 | 2 | | | 6 | 6 |

Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-----|-----|-----|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | | | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 21.0 | | | | 39.0 | 39.0 | | | 39.0 | 39.0 |
| Total Split (%) | 35.0% | 35.0% | 35.0% | | | | 65.0% | 65.0% | | | 65.0% | 65.0% |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | | | | 34.0 | 34.0 | | | 34.0 | 34.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | | | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | None | None | None | | | | Max | Max | | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | | | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | 12.2 | 12.2 | 12.2 | | | | | 34.5 | | | 34.5 | 34.5 |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.22 | | | | | 0.61 | | | 0.61 | 0.61 |
| v/c Ratio | 0.26 | 0.19 | 0.71 | | | | | 0.70 | | | 0.49 | 0.38 |
| Control Delay | 18.8 | 18.1 | 23.7 | | | | | 10.4 | | | 7.8 | 1.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | | | | 0.0 | | | 0.2 | 0.0 |
| Total Delay | 18.8 | 18.1 | 23.7 | | | | | 10.4 | | | 8.0 | 1.9 |
| LOS | B | B | C | | | | | B | | | A | A |
| Approach Delay | | 20.9 | | | | | | 10.4 | | | 6.2 | |
| Approach LOS | | C | | | | | | B | | | A | |

Intersection Summary

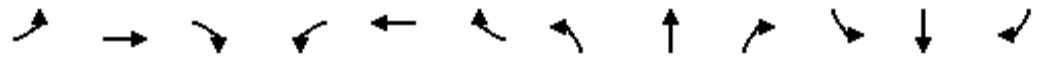
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 56.7 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.71 |
| Intersection Signal Delay: | 10.5 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 52.2% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 14: S Avalon Blvd & I-405 SB Ramps



Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | ↙ | ↖ | ↗ | ↘ | ↙ | ↖ | | ↗ | ↘ |
| Volume (vph) | 0 | 0 | 0 | 94 | 0 | 410 | 385 | 960 | 0 | 0 | 1263 | 521 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 1 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 |
| Frt | | | | | | 0.850 | | | | | | 0.850 |
| Flt Protected | | | | 0.950 | 0.950 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1681 | 1681 | 1583 | 3433 | 3539 | 0 | 0 | 5085 | 1583 |
| Flt Permitted | | | | 0.950 | 0.950 | | 0.168 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1681 | 1681 | 1583 | 607 | 3539 | 0 | 0 | 5085 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 149 | | | | | | 566 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 346 | | | 390 | | | 386 | | | | 2946 |
| Travel Time (s) | | 5.9 | | | 6.6 | | | 7.5 | | | | 57.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 102 | 0 | 446 | 418 | 1043 | 0 | 0 | 1373 | 566 |
| Shared Lane Traffic (%) | | | | 50% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 51 | 51 | 446 | 418 | 1043 | 0 | 0 | 1373 | 566 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | 1 | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | Right | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | 20 | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | 20 | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | Perm | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | 8 | 2 | | | | | 6 |
| Detector Phase | | | | 8 | 8 | 8 | 2 | 2 | | | | 6 |

Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | | | | 23.0 | 23.0 | 23.0 | 67.0 | 67.0 | | | 67.0 | 67.0 |
| Total Split (%) | | | | 25.6% | 25.6% | 25.6% | 74.4% | 74.4% | | | 74.4% | 74.4% |
| Maximum Green (s) | | | | 18.0 | 18.0 | 18.0 | 62.0 | 62.0 | | | 62.0 | 62.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | | | | None | None | None | Max | Max | | | Max | Max |
| Walk Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | | | | 18.0 | 18.0 | 18.0 | 62.0 | 62.0 | | | 62.0 | 62.0 |
| Actuated g/C Ratio | | | | 0.20 | 0.20 | 0.20 | 0.69 | 0.69 | | | 0.69 | 0.69 |
| v/c Ratio | | | | 0.15 | 0.15 | 1.03 | 1.00 | 0.43 | | | 0.39 | 0.45 |
| Control Delay | | | | 31.2 | 31.2 | 75.6 | 61.7 | 6.8 | | | 6.4 | 1.6 |
| Queue Delay | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | | | 0.0 | 0.0 |
| Total Delay | | | | 31.2 | 31.2 | 75.6 | 61.7 | 7.7 | | | 6.4 | 1.6 |
| LOS | | | | C | C | E | E | A | | | A | A |
| Approach Delay | | | | | 67.3 | | | 23.1 | | | 5.0 | |
| Approach LOS | | | | | E | | | C | | | A | |

Intersection Summary













| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.03 |
| Intersection Signal Delay: | 20.4 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 60.3% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 15: S Avalon Blvd & I-405 NB Ramps



Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|--|---|---|--|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |   | |  |   |
| Volume (vph) | 235 | 171 | 516 | 271 | 371 | 909 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 16 | 16 | 16 | 16 | 12 | 12 |
| Storage Length (ft) | 0 | 0 | | 0 | 90 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | 0.943 | | 0.948 | | | |
| Flt Protected | 0.972 | | | | 0.950 | |
| Satd. Flow (prot) | 1935 | 0 | 3803 | 0 | 1770 | 3539 |
| Flt Permitted | 0.972 | | | | 0.306 | |
| Satd. Flow (perm) | 1935 | 0 | 3803 | 0 | 570 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 45 | | 262 | | | |
| Link Speed (mph) | 30 | | 35 | | | 45 |
| Link Distance (ft) | 4544 | | 1360 | | | 2482 |
| Travel Time (s) | 103.3 | | 26.5 | | | 37.6 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 255 | 186 | 561 | 295 | 403 | 988 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 441 | 0 | 856 | 0 | 403 | 988 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 28 | | 24 | | | 24 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | | 2 | | 1 | 2 |
| Detector Template | Left | | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Perm | | NA | | Perm | NA |
| Protected Phases | | | 2 | | | 6 |
| Permitted Phases | 8 | | | | 6 | |

Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-----|-------|-----|-------|-------|
| Detector Phase | 8 | | 2 | | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 54.0 | | 54.0 | 54.0 |
| Total Split (%) | 28.0% | | 72.0% | | 72.0% | 72.0% |
| Maximum Green (s) | 16.0 | | 49.0 | | 49.0 | 49.0 |
| Yellow Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | | Max | | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | | 0 | 0 |
| Act Effect Green (s) | 16.0 | | 49.0 | | 49.0 | 49.0 |
| Actuated g/C Ratio | 0.21 | | 0.65 | | 0.65 | 0.65 |
| v/c Ratio | 0.98 | | 0.33 | | 1.08 | 0.43 |
| Control Delay | 68.2 | | 4.2 | | 89.3 | 6.9 |
| Queue Delay | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Delay | 68.2 | | 4.2 | | 89.3 | 6.9 |
| LOS | E | | A | | F | A |
| Approach Delay | 68.2 | | 4.2 | | | 30.8 |
| Approach LOS | E | | A | | | C |

Intersection Summary

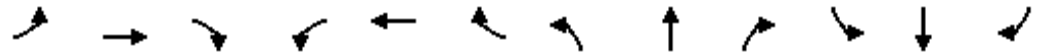
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 75 |
| Actuated Cycle Length: | 75 |
| Natural Cycle: | 75 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.08 |
| Intersection Signal Delay: | 28.5 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 79.5% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 16: S Main St & E 213th St



Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

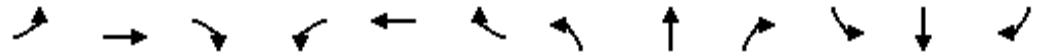
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 263 | 304 | 113 | 126 | 212 | 75 | 148 | 1013 | 130 | 93 | 927 | 189 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 70 | | 0 | 120 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.959 | | | 0.961 | | | 0.983 | | | | 0.975 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 2025 | 0 | 1770 | 3855 | 0 | 1770 | 5665 | 0 | 1770 | 5619 | 0 |
| Flt Permitted | 0.562 | | | 0.338 | | | 0.209 | | | 0.209 | | |
| Satd. Flow (perm) | 1047 | 2025 | 0 | 630 | 3855 | 0 | 389 | 5665 | 0 | 389 | 5619 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 44 | | | 32 | | | 62 | | | | 119 |
| Link Speed (mph) | | 30 | | | 30 | | | 35 | | | | 35 |
| Link Distance (ft) | | 4544 | | | 967 | | | 1397 | | | | 1230 |
| Travel Time (s) | | 103.3 | | | 22.0 | | | 27.2 | | | | 24.0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 286 | 330 | 123 | 137 | 230 | 82 | 161 | 1101 | 141 | 101 | 1008 | 205 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 286 | 453 | 0 | 137 | 312 | 0 | 161 | 1242 | 0 | 101 | 1213 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |

Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

1/3/2019

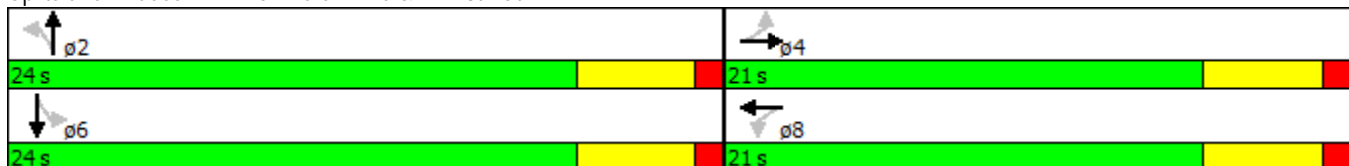


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | | 46.7% | 46.7% | | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 14.7 | 14.7 | | 14.7 | 14.7 | | 19.1 | 19.1 | | 19.1 | 19.1 | |
| Actuated g/C Ratio | 0.34 | 0.34 | | 0.34 | 0.34 | | 0.44 | 0.44 | | 0.44 | 0.44 | |
| v/c Ratio | 0.81 | 0.64 | | 0.65 | 0.24 | | 0.95 | 0.50 | | 0.60 | 0.48 | |
| Control Delay | 35.3 | 15.7 | | 30.7 | 9.7 | | 82.0 | 9.6 | | 31.1 | 9.0 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 35.3 | 15.7 | | 30.7 | 9.7 | | 82.0 | 9.6 | | 31.1 | 9.0 | |
| LOS | D | B | | C | A | | F | A | | C | A | |
| Approach Delay | | 23.3 | | | 16.1 | | | 17.9 | | | 10.7 | |
| Approach LOS | | C | | | B | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 43.8 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 16.3 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 76.8% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 17: S Avalon Blvd & E 213th St



Lanes, Volumes, Timings
 18: S Figueroa St & W Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 135 | 557 | 518 | 62 | 419 | 34 | 237 | 357 | 125 | 91 | 446 | 174 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 213 | | 75 | 152 | | 0 | 230 | | 0 | 240 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 2 | | 0 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 |
| Frt | | | 0.850 | | 0.989 | | | 0.961 | | | 0.958 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3500 | 0 | 3433 | 3401 | 0 | 3433 | 3391 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3500 | 0 | 3433 | 3401 | 0 | 3433 | 3391 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 296 | | 14 | | | 79 | | | 93 | |
| Link Speed (mph) | | 35 | | | 35 | | | 40 | | | 40 | |
| Link Distance (ft) | | 1243 | | | 2441 | | | 713 | | | 3767 | |
| Travel Time (s) | | 24.2 | | | 47.6 | | | 12.2 | | | 64.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 147 | 605 | 563 | 67 | 455 | 37 | 258 | 388 | 136 | 99 | 485 | 189 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 147 | 605 | 563 | 67 | 492 | 0 | 258 | 524 | 0 | 99 | 674 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 18: S Figueroa St & W Carson St

1/3/2019

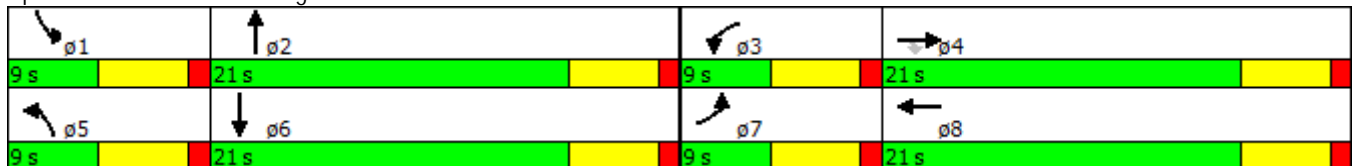


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (%) | 15.0% | 35.0% | 35.0% | 15.0% | 35.0% | | 15.0% | 35.0% | | 15.0% | 35.0% | |
| Maximum Green (s) | 4.0 | 16.0 | 16.0 | 4.0 | 16.0 | | 4.0 | 16.0 | | 4.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 4.0 | 17.4 | 17.4 | 4.0 | 13.6 | | 4.0 | 18.0 | | 4.0 | 16.0 | |
| Actuated g/C Ratio | 0.07 | 0.30 | 0.30 | 0.07 | 0.24 | | 0.07 | 0.31 | | 0.07 | 0.28 | |
| v/c Ratio | 1.20 | 0.57 | 0.82 | 0.54 | 0.59 | | 1.08 | 0.47 | | 0.42 | 0.67 | |
| Control Delay | 175.3 | 20.4 | 22.8 | 46.4 | 22.0 | | 114.9 | 16.5 | | 32.3 | 20.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 175.3 | 20.4 | 22.8 | 46.4 | 22.0 | | 114.9 | 16.5 | | 32.3 | 20.1 | |
| LOS | F | C | C | D | C | | F | B | | C | C | |
| Approach Delay | | 38.7 | | | 24.9 | | | 49.0 | | | 21.7 | |
| Approach LOS | | D | | | C | | | D | | | C | |

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 57.7
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.20
 Intersection Signal Delay: 35.0
 Intersection LOS: C
 Intersection Capacity Utilization 65.9%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 18: S Figueroa St & W Carson St



Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 118 | 497 | 43 | 105 | 334 | 53 | 163 | 546 | 100 | 165 | 793 | 112 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 210 | | 70 | 220 | | 70 | 115 | | 0 | 175 | | 500 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | | 0.850 | | 0.977 | | | 0.981 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 4968 | 0 | 1770 | 4989 | 0 |
| Flt Permitted | 0.535 | | | 0.403 | | | 0.270 | | | 0.373 | | |
| Satd. Flow (perm) | 997 | 3539 | 1583 | 751 | 3539 | 1583 | 503 | 4968 | 0 | 695 | 4989 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 47 | | | 58 | | 102 | | | | 71 |
| Link Speed (mph) | | 35 | | | 35 | | | 35 | | | | 35 |
| Link Distance (ft) | | 2441 | | | 4293 | | | 978 | | | | 1360 |
| Travel Time (s) | | 47.6 | | | 83.6 | | | 19.1 | | | | 26.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 128 | 540 | 47 | 114 | 363 | 58 | 177 | 593 | 109 | 179 | 862 | 122 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 128 | 540 | 47 | 114 | 363 | 58 | 177 | 702 | 0 | 179 | 984 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | | 6 | | |

Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019

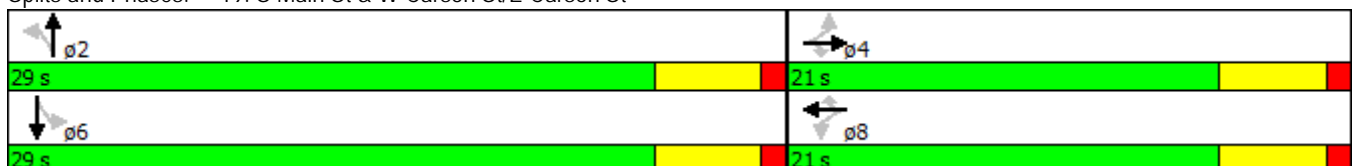


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Total Split (%) | 42.0% | 42.0% | 42.0% | 42.0% | 42.0% | 42.0% | 58.0% | 58.0% | | 58.0% | 58.0% | |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 24.1 | 24.1 | | 24.1 | 24.1 | |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.51 | 0.51 | | 0.51 | 0.51 | |
| v/c Ratio | 0.46 | 0.55 | 0.10 | 0.55 | 0.37 | 0.12 | 0.69 | 0.27 | | 0.51 | 0.38 | |
| Control Delay | 20.0 | 16.7 | 5.3 | 25.2 | 14.6 | 5.0 | 29.8 | 6.3 | | 15.1 | 7.4 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 20.0 | 16.7 | 5.3 | 25.2 | 14.6 | 5.0 | 29.8 | 6.3 | | 15.1 | 7.4 | |
| LOS | B | B | A | C | B | A | C | A | | B | A | |
| Approach Delay | | 16.5 | | | 15.8 | | | 11.0 | | | 8.6 | |
| Approach LOS | | B | | | B | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 50 |
| Actuated Cycle Length: | 47.3 |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.69 |
| Intersection Signal Delay: | 12.2 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 63.1% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 19: S Main St & W Carson St/E Carson St



Lanes, Volumes, Timings
 20: S Avalon Blvd & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 171 | 640 | 73 | 392 | 367 | 104 | 77 | 777 | 478 | 234 | 804 | 101 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 2 | | 0 | 2 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.985 | | | 0.967 | | | 0.943 | | | 0.983 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3486 | 0 | 3433 | 3422 | 0 | 1770 | 4795 | 0 | 1770 | 4999 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3486 | 0 | 3433 | 3422 | 0 | 1770 | 4795 | 0 | 1770 | 4999 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 38 | | | 170 | | | 26 | |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | 1397 | |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | 27.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 186 | 696 | 79 | 426 | 399 | 113 | 84 | 845 | 520 | 254 | 874 | 110 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 186 | 775 | 0 | 426 | 512 | 0 | 84 | 1365 | 0 | 254 | 984 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |

Lanes, Volumes, Timings
 20: S Avalon Blvd & E Carson St

1/3/2019

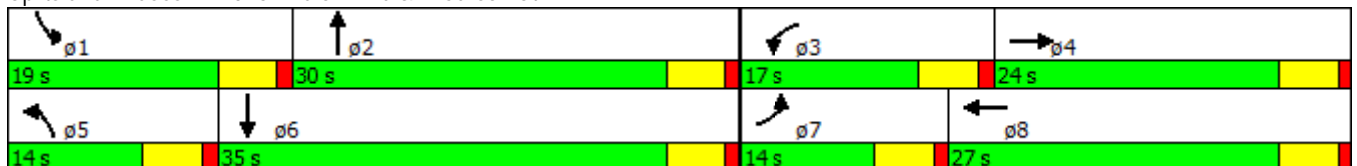


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 14.0 | 24.0 | | 17.0 | 27.0 | | 14.0 | 30.0 | | 19.0 | 35.0 | |
| Total Split (%) | 15.6% | 26.7% | | 18.9% | 30.0% | | 15.6% | 33.3% | | 21.1% | 38.9% | |
| Maximum Green (s) | 9.0 | 19.0 | | 12.0 | 22.0 | | 9.0 | 25.0 | | 14.0 | 30.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 8.7 | 19.0 | | 12.0 | 22.3 | | 8.2 | 25.0 | | 14.0 | 33.0 | |
| Actuated g/C Ratio | 0.10 | 0.21 | | 0.13 | 0.25 | | 0.09 | 0.28 | | 0.16 | 0.37 | |
| v/c Ratio | 0.56 | 1.04 | | 0.93 | 0.58 | | 0.52 | 0.94 | | 0.92 | 0.53 | |
| Control Delay | 45.8 | 79.5 | | 68.2 | 30.7 | | 50.7 | 41.4 | | 77.4 | 23.9 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 45.8 | 79.5 | | 68.2 | 30.7 | | 50.7 | 41.4 | | 77.4 | 23.9 | |
| LOS | D | E | | E | C | | D | D | | E | C | |
| Approach Delay | | 73.0 | | | 47.7 | | | 42.0 | | | 34.9 | |
| Approach LOS | | E | | | D | | | D | | | C | |

Intersection Summary

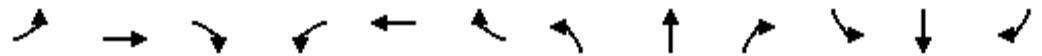
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.04 |
| Intersection Signal Delay: | 47.7 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 86.5% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St



Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 16 | 1052 | 810 | 109 | 983 | 0 | 32 | 0 | 57 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 50 | | 180 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | 0.850 | | | | | | 0.850 | | | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (prot) | 1593 | 3185 | 1425 | 1593 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Fl _t Permitted | 0.256 | | | 0.220 | | | 0.950 | | | | | |
| Satd. Flow (perm) | 429 | 3185 | 1425 | 369 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 880 | | | | | | 62 | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 2121 | | | 469 | | | 428 | | | 162 | |
| Travel Time (s) | | 36.2 | | | 8.0 | | | 7.3 | | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 17 | 1143 | 880 | 118 | 1068 | 0 | 35 | 0 | 62 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 17 | 1143 | 880 | 118 | 1068 | 0 | 35 | 0 | 62 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | | 1 | | | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | | Right | | | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | | 20 | | | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | | 20 | | | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | | | | | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | | Perm | | | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | | 2 | | | 6 |

Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|-----|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (s) | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (%) | 65.0% | 65.0% | 65.0% | 65.0% | 65.0% | | 35.0% | | 35.0% | | | 35.0% |
| Maximum Green (s) | 34.0 | 34.0 | 34.0 | 34.0 | 34.0 | | 16.0 | | 16.0 | | | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | | 1.0 | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | 3.0 |
| Recall Mode | None | None | None | None | None | | Min | | Min | | | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | | 11.0 | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Act Effect Green (s) | 29.2 | 29.2 | 29.2 | 29.2 | 29.2 | | 6.7 | | 6.7 | | | |
| Actuated g/C Ratio | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | | 0.15 | | 0.15 | | | |
| v/c Ratio | 0.06 | 0.57 | 0.72 | 0.51 | 0.37 | | 0.15 | | 0.24 | | | |
| Control Delay | 3.9 | 6.1 | 4.3 | 13.9 | 4.4 | | 20.9 | | 9.2 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | |
| Total Delay | 3.9 | 6.1 | 4.3 | 13.9 | 4.4 | | 20.9 | | 9.2 | | | |
| LOS | A | A | A | B | A | | C | | A | | | |
| Approach Delay | | 5.3 | | | | | 5.3 | | | | | |
| Approach LOS | | A | | | | | A | | | | | |

Intersection Summary

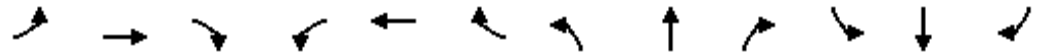
Area Type: CBD
 Cycle Length: 60
 Actuated Cycle Length: 46.2
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 5.5
 Intersection LOS: A
 Intersection Capacity Utilization 70.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 21: I-405 SB Ramps & E Carson St



Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

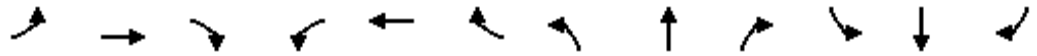
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 122 | 960 | 36 | 23 | 672 | 391 | 36 | 20 | 20 | 39 | 8 | 410 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 70 | | 0 | 100 | | 180 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.969 | | | 0.960 | |
| Satd. Flow (prot) | 1770 | 3522 | 0 | 1770 | 3539 | 1583 | 0 | 1805 | 1583 | 0 | 1788 | 1583 |
| Flt Permitted | 0.315 | | | 0.183 | | | | 0.845 | | | 0.803 | |
| Satd. Flow (perm) | 587 | 3522 | 0 | 341 | 3539 | 1583 | 0 | 1574 | 1583 | 0 | 1496 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 9 | | | | 425 | | | 40 | | | 120 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 469 | | | 2039 | | | 158 | | | 364 | |
| Travel Time (s) | | 8.0 | | | 34.8 | | | 2.7 | | | 6.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 133 | 1043 | 39 | 25 | 730 | 425 | 39 | 22 | 22 | 42 | 9 | 446 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 133 | 1082 | 0 | 25 | 730 | 425 | 0 | 61 | 22 | 0 | 51 | 446 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | 6 |

Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019

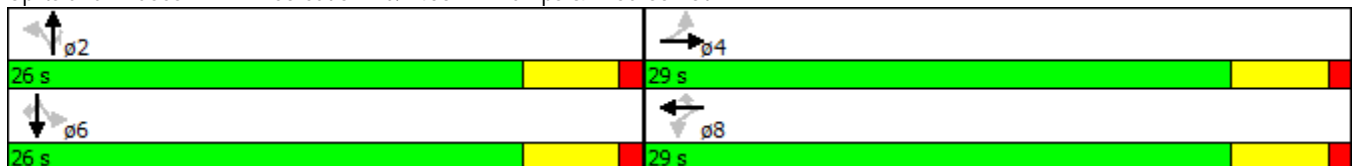


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 29.0 | 29.0 | | 29.0 | 29.0 | 29.0 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 |
| Total Split (%) | 52.7% | 52.7% | | 52.7% | 52.7% | 52.7% | 47.3% | 47.3% | 47.3% | 47.3% | 47.3% | 47.3% |
| Maximum Green (s) | 24.0 | 24.0 | | 24.0 | 24.0 | 24.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 21.9 | 21.9 | | 21.9 | 21.9 | 21.9 | | 21.1 | 21.1 | | 21.1 | 21.1 |
| Actuated g/C Ratio | 0.41 | 0.41 | | 0.41 | 0.41 | 0.41 | | 0.40 | 0.40 | | 0.40 | 0.40 |
| v/c Ratio | 0.55 | 0.74 | | 0.18 | 0.50 | 0.47 | | 0.10 | 0.03 | | 0.09 | 0.64 |
| Control Delay | 21.8 | 16.6 | | 13.3 | 12.7 | 3.2 | | 11.5 | 2.6 | | 11.4 | 14.8 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 21.8 | 16.6 | | 13.3 | 12.7 | 3.2 | | 11.5 | 2.6 | | 11.4 | 14.8 |
| LOS | C | B | | B | B | A | | B | A | | B | B |
| Approach Delay | | 17.2 | | | 9.3 | | | 9.1 | | | 14.4 | |
| Approach LOS | | B | | | A | | | A | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 53 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.74 |
| Intersection Signal Delay: | 13.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 59.8% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 22: Recreation Rd/I-405 NB Ramps & E Carson St



Future (Year 2023) + Development

Lanes, Volumes, Timings
 1: S Figueroa St & I-405 SB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | ↑↑ | | ↑ | ↑↑ |
| Volume (vph) | 0 | 0 | 881 | 65 | 86 | 901 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 220 | |
| Storage Lanes | 0 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Fr _t | | | 0.990 | | | |
| Fl _t Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 3504 | 0 | 1770 | 3539 |
| Fl _t Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 3504 | 0 | 1770 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 607 | | 2451 | | | 246 |
| Travel Time (s) | 10.3 | | 41.8 | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 958 | 71 | 93 | 979 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 1029 | 0 | 93 | 979 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Yield | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 51.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 2: S Figueroa St & I-405 NB Ramps

1/3/2019



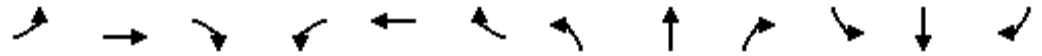
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 203 | 301 | 942 | 0 | 0 | 727 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | | 0.850 | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 724 | | 246 | | | 1243 |
| Travel Time (s) | 12.3 | | 4.2 | | | 21.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 221 | 327 | 1024 | 0 | 0 | 790 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 221 | 327 | 1024 | 0 | 0 | 790 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 51.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 3: S Main St & I-405 SB Ramps

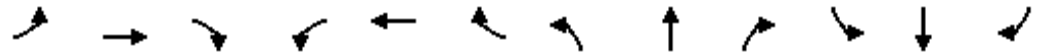
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 27 | 99 | 11 | 0 | 0 | 0 | 0 | 776 | 77 | 92 | 778 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 250 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr't | | 0.985 | | | | | | 0.986 | | | | |
| Flt Protected | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1835 | 0 | 0 | 0 | 0 | 0 | 3490 | 0 | 1770 | 3539 | 0 |
| Flt Permitted | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1835 | 0 | 0 | 0 | 0 | 0 | 3490 | 0 | 1770 | 3539 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 9 | | | | | | 20 | | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 607 | | | 169 | | | 2341 | | | 290 | |
| Travel Time (s) | | 10.3 | | | 2.9 | | | 35.5 | | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 29 | 108 | 12 | 0 | 0 | 0 | 0 | 843 | 84 | 100 | 846 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 29 | 120 | 0 | 0 | 0 | 0 | 0 | 927 | 0 | 100 | 846 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | | | | | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | | | | | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | | | | | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 4 | | | | | | | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 3: S Main St & I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | | | | | 27.0 | | 12.0 | 39.0 | |
| Total Split (%) | 35.0% | 35.0% | | | | | | 45.0% | | 20.0% | 65.0% | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 22.0 | | 7.0 | 34.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | | | | | Max | | None | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | 0 | |
| Act Effct Green (s) | 8.5 | 8.5 | | | | | | 28.4 | | 6.7 | 38.0 | |
| Actuated g/C Ratio | 0.16 | 0.16 | | | | | | 0.53 | | 0.13 | 0.71 | |
| v/c Ratio | 0.10 | 0.40 | | | | | | 0.50 | | 0.45 | 0.34 | |
| Control Delay | 19.1 | 22.3 | | | | | | 12.3 | | 28.9 | 4.7 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.2 | |
| Total Delay | 19.1 | 22.3 | | | | | | 12.3 | | 28.9 | 4.9 | |
| LOS | B | C | | | | | | B | | C | A | |
| Approach Delay | | 21.7 | | | | | | 12.3 | | | 7.5 | |
| Approach LOS | | C | | | | | | B | | | A | |

Intersection Summary

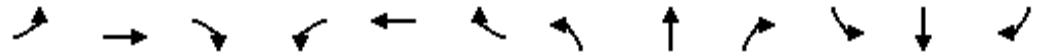
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 53.5 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.50 |
| Intersection Signal Delay: | 10.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 60.6% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 3: S Main St & I-405 SB Ramps



Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | ↕↕ | | ↕ | ↕↕ | | | ↕↕ | |
| Volume (vph) | 0 | 0 | 0 | 90 | 388 | 201 | 30 | 773 | 0 | 0 | 804 | 86 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.956 | | | | | | 0.986 | |
| Flt Protected | | | | | 0.993 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3360 | 0 | 1770 | 3539 | 0 | 0 | 3490 | 0 |
| Flt Permitted | | | | | 0.993 | | 0.229 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3360 | 0 | 427 | 3539 | 0 | 0 | 3490 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 77 | | | | | | 31 | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 724 | | | 336 | | | 290 | | | 724 | |
| Travel Time (s) | | 12.3 | | | 5.7 | | | 4.4 | | | 11.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 98 | 422 | 218 | 33 | 840 | 0 | 0 | 874 | 93 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 738 | 0 | 33 | 840 | 0 | 0 | 967 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | | 2 | | | | | |
| Detector Phase | | | | 8 | 8 | | 2 | 2 | | | | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | | 21.0 | 21.0 | | | | 21.0 |

Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

1/3/2019

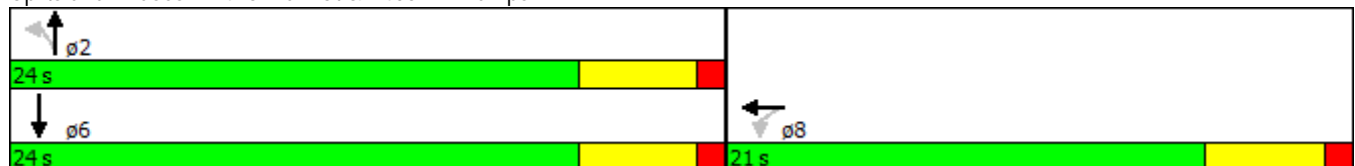


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-------|-------|-----|-----|-------|-----|
| Total Split (s) | | | | 21.0 | 21.0 | | 24.0 | 24.0 | | | 24.0 | |
| Total Split (%) | | | | 46.7% | 46.7% | | 53.3% | 53.3% | | | 53.3% | |
| Maximum Green (s) | | | | 16.0 | 16.0 | | 19.0 | 19.0 | | | 19.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | | 1.0 | 1.0 | | | 1.0 | |
| Lost Time Adjust (s) | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | None | | Max | Max | | | Max | |
| Walk Time (s) | | | | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | | 11.0 | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | | 0 | 0 | | | 0 | |
| Act Effect Green (s) | | | | | 13.7 | | 19.1 | 19.1 | | | 19.1 | |
| Actuated g/C Ratio | | | | | 0.32 | | 0.45 | 0.45 | | | 0.45 | |
| v/c Ratio | | | | | 0.65 | | 0.17 | 0.53 | | | 0.62 | |
| Control Delay | | | | | 14.1 | | 11.0 | 10.7 | | | 11.4 | |
| Queue Delay | | | | | 0.0 | | 0.0 | 0.2 | | | 0.0 | |
| Total Delay | | | | | 14.1 | | 11.0 | 10.9 | | | 11.4 | |
| LOS | | | | | B | | B | B | | | B | |
| Approach Delay | | | | | 14.1 | | | 10.9 | | | 11.4 | |
| Approach LOS | | | | | B | | | B | | | B | |

Intersection Summary

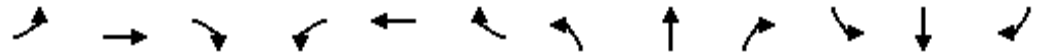
| | |
|-----------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 42.8 |
| Natural Cycle: | 45 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.65 |
| Intersection Signal Delay: | 12.0 |
| Intersection Capacity Utilization | 60.6% |
| Analysis Period (min) | 15 |
| Intersection LOS: | B |
| ICU Level of Service | B |

Splits and Phases: 4: S Main St & I-405 NB Ramps



Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 154 | 414 | 101 | 327 | 1205 | 172 | 202 | 748 | 506 | 58 | 390 | 450 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.971 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4938 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4938 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 60 | | | | 206 | | | 504 | | | 267 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | | 40 |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | | 2451 |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | | 41.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 167 | 450 | 110 | 355 | 1310 | 187 | 220 | 813 | 550 | 63 | 424 | 489 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 167 | 560 | 0 | 355 | 1310 | 187 | 220 | 813 | 550 | 63 | 424 | 489 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

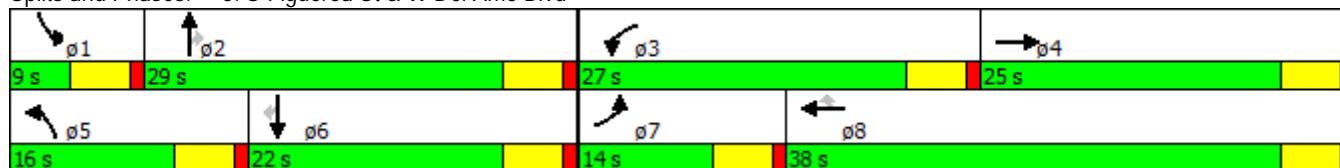


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 14.0 | 25.0 | | 27.0 | 38.0 | 38.0 | 16.0 | 29.0 | 29.0 | 9.0 | 22.0 | 22.0 |
| Total Split (%) | 15.6% | 27.8% | | 30.0% | 42.2% | 42.2% | 17.8% | 32.2% | 32.2% | 10.0% | 24.4% | 24.4% |
| Maximum Green (s) | 9.0 | 20.0 | | 22.0 | 33.0 | 33.0 | 11.0 | 24.0 | 24.0 | 4.0 | 17.0 | 17.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 9.0 | 21.3 | | 20.7 | 33.0 | 33.0 | 11.0 | 25.8 | 25.8 | 4.0 | 17.0 | 17.0 |
| Actuated g/C Ratio | 0.10 | 0.24 | | 0.23 | 0.37 | 0.37 | 0.12 | 0.29 | 0.29 | 0.04 | 0.19 | 0.19 |
| v/c Ratio | 0.94 | 0.46 | | 0.87 | 1.01 | 0.26 | 1.02 | 0.80 | 0.68 | 0.81 | 0.63 | 0.95 |
| Control Delay | 97.3 | 27.9 | | 56.4 | 57.1 | 3.3 | 107.8 | 37.8 | 8.8 | 104.0 | 38.5 | 47.0 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 97.3 | 27.9 | | 56.4 | 57.1 | 3.3 | 107.8 | 37.8 | 8.8 | 104.0 | 38.5 | 47.0 |
| LOS | F | C | | E | E | A | F | D | A | F | D | D |
| Approach Delay | | 43.9 | | | 51.5 | | | 37.5 | | | 47.0 | |
| Approach LOS | | D | | | D | | | D | | | D | |

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 45.2
 Intersection LOS: D
 Intersection Capacity Utilization 84.9%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↕↕↗ | | ↖ | ↕↕↗ | | ↖ | ↕↗ | | ↖ | ↕↗ | |
| Volume (vph) | 203 | 899 | 212 | 237 | 1294 | 74 | 178 | 595 | 254 | 72 | 538 | 190 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.971 | | | 0.992 | | | 0.955 | | | 0.961 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4938 | 0 | 1770 | 5045 | 0 | 1770 | 3380 | 0 | 1770 | 3401 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4938 | 0 | 1770 | 5045 | 0 | 1770 | 3380 | 0 | 1770 | 3401 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 58 | | | 10 | | | 75 | | | 52 | |
| Link Speed (mph) | | 45 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1251 | | | 1668 | | | 534 | | | 2341 | |
| Travel Time (s) | | 19.0 | | | 25.3 | | | 8.1 | | | 35.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 221 | 977 | 230 | 258 | 1407 | 80 | 193 | 647 | 276 | 78 | 585 | 207 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 221 | 1207 | 0 | 258 | 1487 | 0 | 193 | 923 | 0 | 78 | 792 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

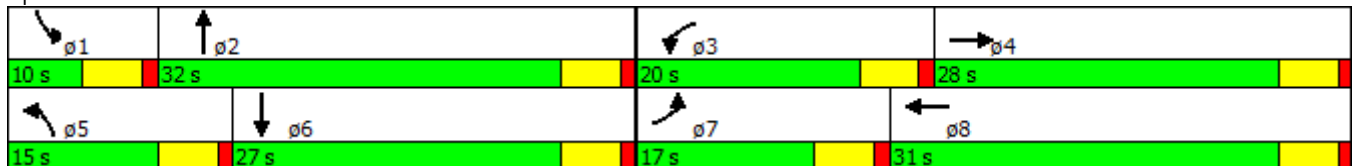


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 17.0 | 28.0 | | 20.0 | 31.0 | | 15.0 | 32.0 | | 10.0 | 27.0 | |
| Total Split (%) | 18.9% | 31.1% | | 22.2% | 34.4% | | 16.7% | 35.6% | | 11.1% | 30.0% | |
| Maximum Green (s) | 12.0 | 23.0 | | 15.0 | 26.0 | | 10.0 | 27.0 | | 5.0 | 22.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 12.0 | 23.3 | | 14.7 | 26.0 | | 10.0 | 29.0 | | 5.0 | 22.0 | |
| Actuated g/C Ratio | 0.13 | 0.26 | | 0.16 | 0.29 | | 0.11 | 0.32 | | 0.06 | 0.24 | |
| v/c Ratio | 0.94 | 0.91 | | 0.89 | 1.02 | | 0.98 | 0.81 | | 0.80 | 0.91 | |
| Control Delay | 85.2 | 42.9 | | 69.8 | 60.1 | | 103.1 | 33.3 | | 92.2 | 47.0 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 85.2 | 42.9 | | 69.8 | 60.1 | | 103.1 | 33.3 | | 92.2 | 47.0 | |
| LOS | F | D | | E | E | | F | C | | F | D | |
| Approach Delay | | 49.4 | | | 61.6 | | | 45.4 | | | 51.1 | |
| Approach LOS | | D | | | E | | | D | | | D | |

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 52.9
 Intersection LOS: D
 Intersection Capacity Utilization 85.4%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1068 | 73 | 23 | 1430 | 0 | 57 | 0 | 36 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 155 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Fr _t | | | 0.850 | | | | | | 0.850 | | | |
| Fl _t Protected | | | | 0.950 | | | 0.950 | 0.950 | | | | |
| Satd. Flow (prot) | 1863 | 3539 | 1583 | 1770 | 3539 | 0 | 1681 | 1681 | 1583 | 1863 | 1770 | 1770 |
| Fl _t Permitted | | | | 0.121 | | | 0.950 | 0.950 | | | | |
| Satd. Flow (perm) | 1863 | 3539 | 1583 | 225 | 3539 | 0 | 1681 | 1681 | 1583 | 1863 | 1770 | 1770 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 95 | | | | | | 95 | | | |
| Link Speed (mph) | | 45 | | | 45 | | | 25 | | | 50 | |
| Link Distance (ft) | | 1668 | | | 3009 | | | 694 | | | 308 | |
| Travel Time (s) | | 25.3 | | | 45.6 | | | 18.9 | | | 4.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1161 | 79 | 25 | 1554 | 0 | 62 | 0 | 39 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | 50% | | | | | 0% |
| Lane Group Flow (vph) | 0 | 1161 | 79 | 25 | 1554 | 0 | 31 | 31 | 39 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Split | NA | Perm | Perm | | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | 2 | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | 2 | 6 | 6 | 6 |

Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019

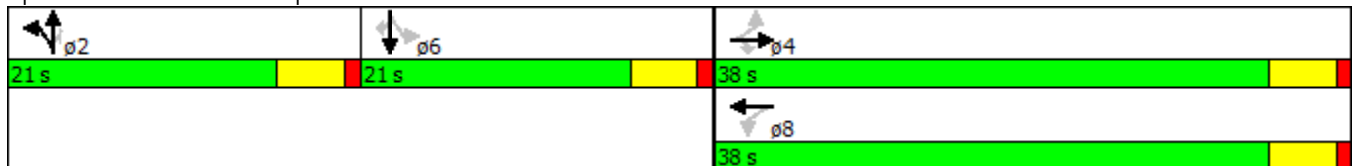


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 47.5% | 47.5% | 47.5% | 47.5% | 47.5% | | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% |
| Maximum Green (s) | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | 33.0 | 33.0 | 33.0 | 33.0 | | 16.0 | 16.0 | 16.0 | | | |
| Actuated g/C Ratio | | 0.41 | 0.41 | 0.41 | 0.41 | | 0.20 | 0.20 | 0.20 | | | |
| v/c Ratio | | 0.80 | 0.11 | 0.27 | 1.07 | | 0.09 | 0.09 | 0.10 | | | |
| Control Delay | | 25.6 | 3.0 | 25.1 | 68.0 | | 27.0 | 27.0 | 0.5 | | | |
| Queue Delay | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total Delay | | 25.6 | 3.0 | 25.1 | 68.0 | | 27.0 | 27.0 | 0.5 | | | |
| LOS | | C | A | C | E | | C | C | A | | | |
| Approach Delay | | 24.1 | | | 67.3 | | 16.8 | | | | | |
| Approach LOS | | C | | | E | | B | | | | | |

Intersection Summary

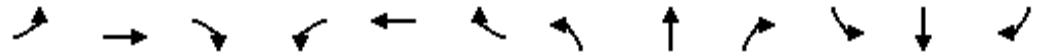
| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Natural Cycle: | 80 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.07 |
| Intersection Signal Delay: | 47.2 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 51.2% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 7: Stamps Dr & E Del Amo Blvd



Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 394 | 659 | 119 | 186 | 871 | 101 | 311 | 1131 | 301 | 171 | 709 | 391 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 1 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | 0.947 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4816 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4816 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 169 | | | 169 | | | 327 | | 121 | |
| Link Speed (mph) | | 45 | | | 45 | | | 35 | | | 35 | |
| Link Distance (ft) | | 3009 | | | 3520 | | | 2946 | | | 3936 | |
| Travel Time (s) | | 45.6 | | | 53.3 | | | 57.4 | | | 76.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 428 | 716 | 129 | 202 | 947 | 110 | 338 | 1229 | 327 | 186 | 771 | 425 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 428 | 716 | 129 | 202 | 947 | 110 | 338 | 1229 | 327 | 186 | 1196 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

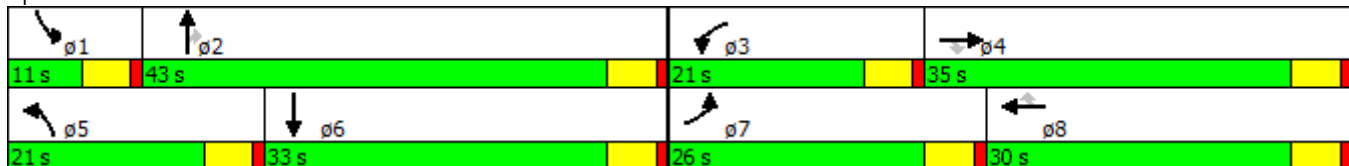


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 26.0 | 35.0 | 35.0 | 21.0 | 30.0 | 30.0 | 21.0 | 43.0 | 43.0 | 11.0 | 33.0 | 33.0 |
| Total Split (%) | 23.6% | 31.8% | 31.8% | 19.1% | 27.3% | 27.3% | 19.1% | 39.1% | 39.1% | 10.0% | 30.0% | 30.0% |
| Maximum Green (s) | 21.0 | 30.0 | 30.0 | 16.0 | 25.0 | 25.0 | 16.0 | 38.0 | 38.0 | 6.0 | 28.0 | 28.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 21.0 | 30.8 | 30.8 | 15.2 | 25.0 | 25.0 | 16.0 | 38.0 | 38.0 | 6.0 | 28.0 | 28.0 |
| Actuated g/C Ratio | 0.19 | 0.28 | 0.28 | 0.14 | 0.23 | 0.23 | 0.15 | 0.35 | 0.35 | 0.05 | 0.25 | 0.25 |
| v/c Ratio | 1.27 | 0.72 | 0.23 | 0.83 | 1.18 | 0.22 | 1.32 | 0.70 | 0.43 | 0.99 | 0.91 | 0.91 |
| Control Delay | 180.6 | 40.9 | 2.9 | 73.0 | 131.2 | 2.1 | 204.9 | 33.7 | 4.7 | 117.4 | 46.8 | 46.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 180.6 | 40.9 | 2.9 | 73.0 | 131.2 | 2.1 | 204.9 | 33.7 | 4.7 | 117.4 | 46.8 | 46.8 |
| LOS | F | D | A | E | F | A | F | C | A | F | D | D |
| Approach Delay | | 84.1 | | | 110.6 | | | 59.2 | | | | 56.3 |
| Approach LOS | | F | | | F | | | E | | | | E |

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.32
 Intersection Signal Delay: 75.1
 Intersection LOS: E
 Intersection Capacity Utilization 102.3%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 691 | 342 | 726 | 781 | 506 | 294 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | 235 | | | 250 |
| Storage Lanes | 2 | 0 | 2 | | | 1 |
| Taper Length (ft) | 25 | | 25 | | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 |
| Frt | 0.950 | | | | | 0.850 |
| Flt Protected | 0.968 | | 0.950 | | | |
| Satd. Flow (prot) | 3323 | 0 | 3433 | 3539 | 3539 | 1583 |
| Flt Permitted | 0.968 | | 0.446 | | | |
| Satd. Flow (perm) | 3323 | 0 | 1612 | 3539 | 3539 | 1583 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | 190 | | | | | 320 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 170 | | | 828 | 791 | |
| Travel Time (s) | 2.9 | | | 14.1 | 13.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 751 | 372 | 789 | 849 | 550 | 320 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1123 | 0 | 789 | 849 | 550 | 320 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 24 | | | 24 | 24 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 12 | | | 12 | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Number of Detectors | 1 | | 1 | 2 | 2 | 1 |
| Detector Template | Left | | Left | Thru | Thru | Right |
| Leading Detector (ft) | 20 | | 20 | 100 | 100 | 20 |
| Trailing Detector (ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 20 | 6 | 6 | 20 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | | 94 | 94 | |
| Detector 2 Size(ft) | | | | 6 | 6 | |
| Detector 2 Type | | | | Cl+Ex | Cl+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | | 2 | | | 6 |
| Detector Phase | 4 | | 2 | 2 | 6 | 6 |

Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019

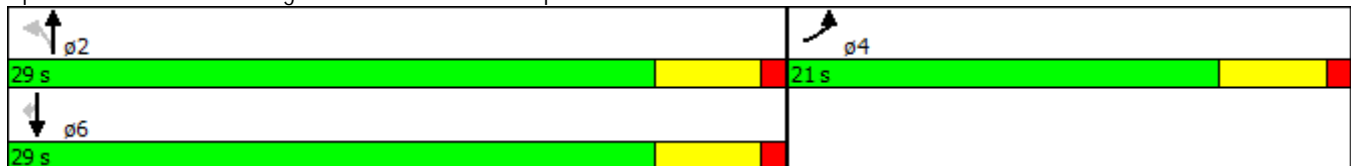


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|-------|-----|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 29.0 | 29.0 | 29.0 | 29.0 |
| Total Split (%) | 42.0% | | 58.0% | 58.0% | 58.0% | 58.0% |
| Maximum Green (s) | 16.0 | | 24.0 | 24.0 | 24.0 | 24.0 |
| Yellow Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 16.0 | | 24.0 | 24.0 | 24.0 | 24.0 |
| Actuated g/C Ratio | 0.32 | | 0.48 | 0.48 | 0.48 | 0.48 |
| v/c Ratio | 0.94 | | 1.02 | 0.50 | 0.32 | 0.35 |
| Control Delay | 31.8 | | 55.4 | 10.2 | 8.7 | 2.4 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.8 | | 55.4 | 10.2 | 8.7 | 2.4 |
| LOS | C | | E | B | A | A |
| Approach Delay | 31.8 | | | 31.9 | 6.3 | |
| Approach LOS | C | | | C | A | |

Intersection Summary












Area Type: Other
 Cycle Length: 50
 Actuated Cycle Length: 50
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 25.8
 Intersection LOS: C
 Intersection Capacity Utilization 77.7%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 9: S Figueroa St & I-110 NB Ramps



Lanes, Volumes, Timings
10: S Main St & Lenardo Rd

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  |  |  | |  |  |
| Volume (vph) | 25 | 32 | 946 | 61 | 59 | 940 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 145 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Fr _t | | 0.850 | 0.991 | | | |
| Fl _t Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 1583 | 3507 | 0 | 1770 | 3539 |
| Fl _t Permitted | 0.950 | | | | 0.254 | |
| Satd. Flow (perm) | 1770 | 1583 | 3507 | 0 | 473 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | 35 | 18 | | | |
| Link Speed (mph) | 25 | | 45 | | | 45 |
| Link Distance (ft) | 479 | | 971 | | | 534 |
| Travel Time (s) | 13.1 | | 14.7 | | | 8.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 27 | 35 | 1028 | 66 | 64 | 1022 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 27 | 35 | 1094 | 0 | 64 | 1022 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | Perm | NA | | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Detector Phase | 8 | 8 | 2 | | 6 | 6 |

Lanes, Volumes, Timings
 10: S Main St & Lenardo Rd

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 29.0 | | 29.0 | 29.0 |
| Total Split (%) | 42.0% | 42.0% | 58.0% | | 58.0% | 58.0% |
| Maximum Green (s) | 16.0 | 16.0 | 24.0 | | 24.0 | 24.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | None | Max | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 6.3 | 6.3 | 39.3 | | 39.3 | 39.3 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.86 | | 0.86 | 0.86 |
| v/c Ratio | 0.11 | 0.14 | 0.36 | | 0.16 | 0.34 |
| Control Delay | 18.5 | 9.1 | 2.8 | | 4.1 | 2.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 18.5 | 9.1 | 2.8 | | 4.1 | 2.7 |
| LOS | B | A | A | | A | A |
| Approach Delay | 13.2 | | 2.8 | | | 2.8 |
| Approach LOS | B | | A | | | A |

Intersection Summary

Area Type: Other
 Cycle Length: 50
 Actuated Cycle Length: 45.8
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.36
 Intersection Signal Delay: 3.1
 Intersection LOS: A
 Intersection Capacity Utilization 47.3%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 10: S Main St & Lenardo Rd



Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 664 | 546 | 164 | 61 | 558 | 209 | 184 | 626 | 60 | 83 | 351 | 441 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 180 | | 0 | 115 | | 0 | 255 | | 0 | 185 | | 185 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.91 | 0.91 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.976 | | | | 0.850 | | 0.987 | | | | 0.850 |
| Flt Protected | 0.950 | 0.984 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1610 | 3690 | 0 | 1770 | 3539 | 1583 | 1770 | 3959 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.411 | 0.645 | | 0.171 | | | 0.516 | | | 0.235 | | |
| Satd. Flow (perm) | 697 | 2419 | 0 | 319 | 3539 | 1583 | 961 | 3959 | 0 | 438 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 53 | | | | 43 | | 17 | | | | 259 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 368 | | | 1713 | | | 3767 | | | | 828 |
| Travel Time (s) | | 6.3 | | | 29.2 | | | 64.2 | | | | 14.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 722 | 593 | 178 | 66 | 607 | 227 | 200 | 680 | 65 | 90 | 382 | 479 |
| Shared Lane Traffic (%) | 50% | | | | | | | | | | | |
| Lane Group Flow (vph) | 361 | 1132 | 0 | 66 | 607 | 227 | 200 | 745 | 0 | 90 | 382 | 479 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019

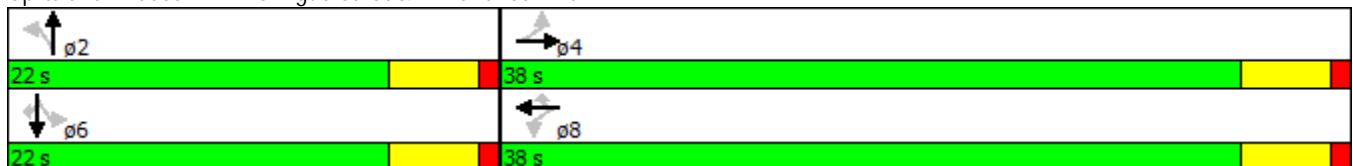


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 38.0 | | 38.0 | 38.0 | 38.0 | 22.0 | 22.0 | | 22.0 | 22.0 | 22.0 |
| Total Split (%) | 63.3% | 63.3% | | 63.3% | 63.3% | 63.3% | 36.7% | 36.7% | | 36.7% | 36.7% | 36.7% |
| Maximum Green (s) | 33.0 | 33.0 | | 33.0 | 33.0 | 33.0 | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | 32.3 | 32.3 | | 32.3 | 32.3 | 32.3 | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 |
| Actuated g/C Ratio | 0.54 | 0.54 | | 0.54 | 0.54 | 0.54 | 0.29 | 0.29 | | 0.29 | 0.29 | 0.29 |
| v/c Ratio | 0.95 | 0.84 | | 0.38 | 0.31 | 0.26 | 0.73 | 0.65 | | 0.72 | 0.38 | 0.75 |
| Control Delay | 53.6 | 18.6 | | 15.7 | 7.9 | 6.6 | 38.2 | 21.4 | | 55.7 | 18.5 | 18.1 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 53.6 | 18.7 | | 15.7 | 7.9 | 6.6 | 38.2 | 21.4 | | 55.7 | 18.5 | 18.1 |
| LOS | D | B | | B | A | A | D | C | | E | B | B |
| Approach Delay | | 27.1 | | | 8.2 | | | 25.0 | | | 21.8 | |
| Approach LOS | | C | | | A | | | C | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 59.3 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 21.5 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 82.3% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 11: S Figueroa St & W Torrance Blvd



Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕ | ↗ | | ↕ | | ↗ | ↕ | | ↗ | ↕ | ↗ |
| Volume (vph) | 337 | 24 | 262 | 10 | 77 | 36 | 401 | 717 | 9 | 12 | 572 | 314 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 190 | | 0 | 145 | | 45 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 2 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.961 | | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.955 | | | 0.996 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1779 | 1583 | 0 | 2021 | 0 | 3433 | 4003 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | | 0.704 | | | 0.959 | | 0.391 | | | 0.299 | | |
| Satd. Flow (perm) | 0 | 1311 | 1583 | 0 | 1946 | 0 | 1413 | 4003 | 0 | 557 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 168 | | 39 | | | 3 | | | | 339 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 45 |
| Link Distance (ft) | | 1713 | | | 375 | | | 2482 | | | | 971 |
| Travel Time (s) | | 29.2 | | | 6.4 | | | 42.3 | | | | 14.7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 366 | 26 | 285 | 11 | 84 | 39 | 436 | 779 | 10 | 13 | 622 | 341 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 392 | 285 | 0 | 134 | 0 | 436 | 789 | 0 | 13 | 622 | 341 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 6 | | | 6 |

Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019

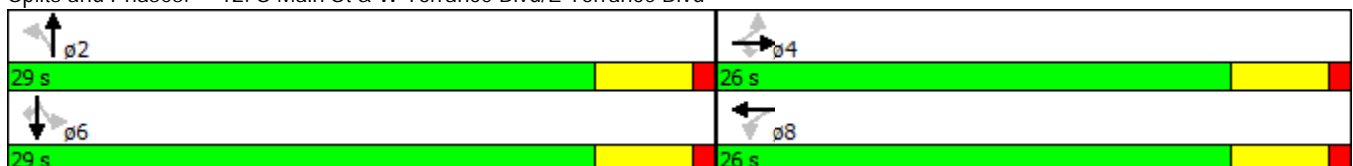


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 | | 29.0 | 29.0 | | 29.0 | 29.0 | 29.0 |
| Total Split (%) | 47.3% | 47.3% | 47.3% | 47.3% | 47.3% | | 52.7% | 52.7% | | 52.7% | 52.7% | 52.7% |
| Maximum Green (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | 24.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | | 18.9 | 18.9 | | 18.9 | | 24.1 | 24.1 | | 24.1 | 24.1 | 24.1 |
| Actuated g/C Ratio | | 0.36 | 0.36 | | 0.36 | | 0.45 | 0.45 | | 0.45 | 0.45 | 0.45 |
| v/c Ratio | | 0.84 | 0.42 | | 0.19 | | 0.68 | 0.43 | | 0.05 | 0.39 | 0.38 |
| Control Delay | | 34.4 | 7.6 | | 9.3 | | 19.4 | 11.2 | | 9.8 | 11.0 | 2.8 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | | 34.4 | 7.6 | | 9.3 | | 19.4 | 11.2 | | 9.8 | 11.0 | 2.8 |
| LOS | | C | A | | A | | B | B | | A | B | A |
| Approach Delay | | 23.1 | | | 9.3 | | | 14.1 | | | 8.1 | |
| Approach LOS | | C | | | A | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 53 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.84 |
| Intersection Signal Delay: | 14.0 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 66.3% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 12: S Main St & W Torrance Blvd/E Torrance Blvd



Lanes, Volumes, Timings
13: Lenardo Rd/I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗↗ | ↖ | ↗ | ↘↘ | ↘ |
| Volume (vph) | 35 | 70 | 12 | 353 | 1165 | 59 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | | 0 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 2 | 1 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.97 | 1.00 |
| Fr _t | | | | 0.850 | | 0.850 |
| Fl _t Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 3539 | 1863 | 1583 | 3433 | 1583 |
| Fl _t Permitted | 0.749 | | | | 0.950 | |
| Satd. Flow (perm) | 1395 | 3539 | 1863 | 1583 | 3433 | 1583 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 384 | | 64 |
| Link Speed (mph) | | 35 | 40 | | 40 | |
| Link Distance (ft) | | 701 | 533 | | 434 | |
| Travel Time (s) | | 13.7 | 9.1 | | 7.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 38 | 76 | 13 | 384 | 1266 | 64 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 38 | 76 | 13 | 384 | 1266 | 64 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 12 | 12 | | 24 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 12 | 12 | | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector (ft) | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | 94 | | | |
| Detector 2 Size(ft) | | 6 | 6 | | | |
| Detector 2 Type | | Cl+Ex | Cl+Ex | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | 0.0 | 0.0 | | | |
| Turn Type | Perm | NA | NA | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |

Lanes, Volumes, Timings
 13: Lenardo Rd/I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 29.0 | 29.0 |
| Total Split (%) | 42.0% | 42.0% | 42.0% | 42.0% | 58.0% | 58.0% |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 24.0 | 24.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 7.9 | 7.9 | 7.9 | 7.9 | 24.9 | 24.9 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.18 | 0.18 | 0.58 | 0.58 |
| v/c Ratio | 0.15 | 0.12 | 0.04 | 0.63 | 0.63 | 0.07 |
| Control Delay | 14.9 | 13.9 | 13.2 | 7.4 | 8.6 | 2.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 14.9 | 13.9 | 13.2 | 7.4 | 8.6 | 2.3 |
| LOS | B | B | B | A | A | A |
| Approach Delay | | 14.3 | 7.6 | | 8.3 | |
| Approach LOS | | B | A | | A | |

Intersection Summary

Area Type: Other
 Cycle Length: 50
 Actuated Cycle Length: 42.9
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 8.5
 Intersection LOS: A
 Intersection Capacity Utilization 50.2%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 13: Lenardo Rd/I-405 SB Ramps



Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | ↔↔ | ↑↑ | ↗ | | | | ↖ | ↑↑↔ | | | ↑↑ | ↗ |
| Volume (vph) | 686 | 73 | 520 | 0 | 0 | 0 | 86 | 1293 | 158 | 0 | 888 | 488 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 200 | | 150 | 0 | | 0 | 160 | | 0 | 0 | | 120 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr _t | | | 0.850 | | | | | 0.984 | | | | 0.850 |
| Fl _t Protected | 0.950 | | | | | | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1770 | 3483 | 0 | 0 | 3539 | 1583 |
| Fl _t Permitted | 0.950 | | | | | | 0.228 | | | | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 425 | 3483 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 90 | | | | | 28 | | | | 530 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 533 | | | 422 | | | 1230 | | | | 386 |
| Travel Time (s) | | 9.1 | | | 7.2 | | | 24.0 | | | | 7.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 746 | 79 | 565 | 0 | 0 | 0 | 93 | 1405 | 172 | 0 | 965 | 530 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 746 | 79 | 565 | 0 | 0 | 0 | 93 | 1577 | 0 | 0 | 965 | 530 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | | | | 1 | 2 | | | 2 | 1 |
| Detector Template | Left | Thru | Right | | | | Left | Thru | | | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | | | | 20 | 100 | | | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | | | | 20 | 6 | | | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex | Cl+Ex | | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | | | | Perm | NA | | | NA | Perm |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | | 2 | | | | | 6 |
| Detector Phase | 4 | 4 | 4 | | | | 2 | 2 | | | 6 | 6 |

Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019

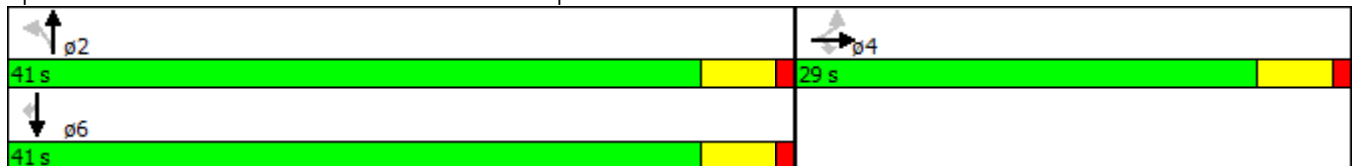


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-----|-----|-----|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | | | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | 29.0 | 29.0 | 29.0 | | | | 41.0 | 41.0 | | | 41.0 | 41.0 |
| Total Split (%) | 41.4% | 41.4% | 41.4% | | | | 58.6% | 58.6% | | | 58.6% | 58.6% |
| Maximum Green (s) | 24.0 | 24.0 | 24.0 | | | | 36.0 | 36.0 | | | 36.0 | 36.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | | | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | None | None | None | | | | Max | Max | | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | | | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Act Effct Green (s) | 23.8 | 23.8 | 23.8 | | | | 36.0 | 36.0 | | | 36.0 | 36.0 |
| Actuated g/C Ratio | 0.34 | 0.34 | 0.34 | | | | 0.52 | 0.52 | | | 0.52 | 0.52 |
| v/c Ratio | 0.64 | 0.07 | 0.94 | | | | 0.42 | 0.87 | | | 0.53 | 0.49 |
| Control Delay | 22.4 | 15.7 | 46.8 | | | | 18.2 | 21.7 | | | 12.6 | 2.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.5 | 0.2 |
| Total Delay | 22.4 | 15.7 | 46.8 | | | | 18.2 | 21.7 | | | 13.1 | 3.0 |
| LOS | C | B | D | | | | B | C | | | B | A |
| Approach Delay | | 31.9 | | | | | | 21.5 | | | 9.5 | |
| Approach LOS | | C | | | | | | C | | | A | |

Intersection Summary

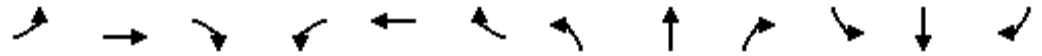
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 69.8 |
| Natural Cycle: | 70 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.94 |
| Intersection Signal Delay: | 20.7 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 68.7% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 14: S Avalon Blvd & I-405 SB Ramps



Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | ↙ | ↖ | ↗ | ↘ | ↕ | | | ↕ | ↘ |
| Volume (vph) | 0 | 0 | 0 | 186 | 2 | 883 | 459 | 1283 | 0 | 0 | 1123 | 282 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 1 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 |
| Frt | | | | | | 0.850 | | | | | | 0.850 |
| Flt Protected | | | | 0.950 | 0.953 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1681 | 1686 | 1583 | 3433 | 3539 | 0 | 0 | 5085 | 1583 |
| Flt Permitted | | | | 0.950 | 0.953 | | 0.170 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1681 | 1686 | 1583 | 614 | 3539 | 0 | 0 | 5085 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 30 | | | | | | 307 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 346 | | | 390 | | | 386 | | | | 2946 |
| Travel Time (s) | | 5.9 | | | 6.6 | | | 7.5 | | | | 57.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 202 | 2 | 960 | 499 | 1395 | 0 | 0 | 1221 | 307 |
| Shared Lane Traffic (%) | | | | 50% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 101 | 103 | 960 | 499 | 1395 | 0 | 0 | 1221 | 307 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | 1 | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | Right | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | 20 | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | 20 | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | Perm | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | 8 | 2 | | | | | 6 |
| Detector Phase | | | | 8 | 8 | 8 | 2 | 2 | | | | 6 |

Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019

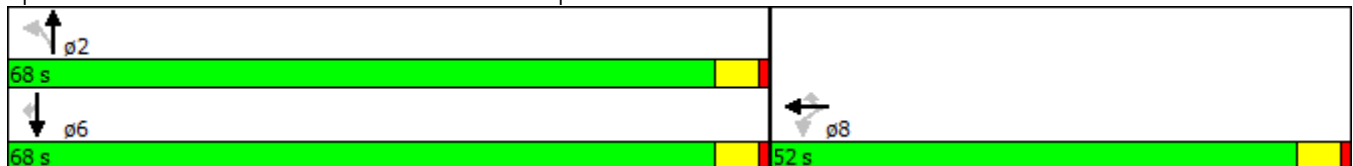


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | | | | 52.0 | 52.0 | 52.0 | 68.0 | 68.0 | | | 68.0 | 68.0 |
| Total Split (%) | | | | 43.3% | 43.3% | 43.3% | 56.7% | 56.7% | | | 56.7% | 56.7% |
| Maximum Green (s) | | | | 47.0 | 47.0 | 47.0 | 63.0 | 63.0 | | | 63.0 | 63.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | | | | None | None | None | Max | Max | | | Max | Max |
| Walk Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | | | | 47.0 | 47.0 | 47.0 | 63.0 | 63.0 | | | 63.0 | 63.0 |
| Actuated g/C Ratio | | | | 0.39 | 0.39 | 0.39 | 0.52 | 0.52 | | | 0.52 | 0.52 |
| v/c Ratio | | | | 0.15 | 0.16 | 1.50 | 1.55 | 0.75 | | | 0.46 | 0.31 |
| Control Delay | | | | 24.5 | 24.5 | 264.0 | 287.8 | 25.6 | | | 18.5 | 2.5 |
| Queue Delay | | | | 0.0 | 0.0 | 0.0 | 0.0 | 48.6 | | | 0.0 | 0.0 |
| Total Delay | | | | 24.5 | 24.5 | 264.0 | 287.8 | 74.2 | | | 18.5 | 2.5 |
| LOS | | | | C | C | F | F | E | | | B | A |
| Approach Delay | | | | | 222.0 | | | 130.5 | | | 15.3 | |
| Approach LOS | | | | | F | | | F | | | B | |

Intersection Summary











Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.55
 Intersection Signal Delay: 115.3
 Intersection Capacity Utilization 98.5%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service F

Splits and Phases: 15: S Avalon Blvd & I-405 NB Ramps



Lanes, Volumes, Timings
16: S Main St & E 213th St

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Volume (vph) | 301 | 334 | 788 | 166 | 124 | 660 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 16 | 16 | 16 | 16 | 12 | 12 |
| Storage Length (ft) | 0 | 0 | | 0 | 90 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | 0.929 | | 0.974 | | | |
| Flt Protected | 0.977 | | | | 0.950 | |
| Satd. Flow (prot) | 1916 | 0 | 3907 | 0 | 1770 | 3539 |
| Flt Permitted | 0.977 | | | | 0.197 | |
| Satd. Flow (perm) | 1916 | 0 | 3907 | 0 | 367 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 102 | | 57 | | | |
| Link Speed (mph) | 30 | | 35 | | | 45 |
| Link Distance (ft) | 4544 | | 1360 | | | 2482 |
| Travel Time (s) | 103.3 | | 26.5 | | | 37.6 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 327 | 363 | 857 | 180 | 135 | 717 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 690 | 0 | 1037 | 0 | 135 | 717 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 28 | | 24 | | | 24 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | | 2 | | 1 | 2 |
| Detector Template | Left | | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Perm | | NA | | Perm | NA |
| Protected Phases | | | 2 | | | 6 |
| Permitted Phases | 8 | | | | 6 | |

Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019

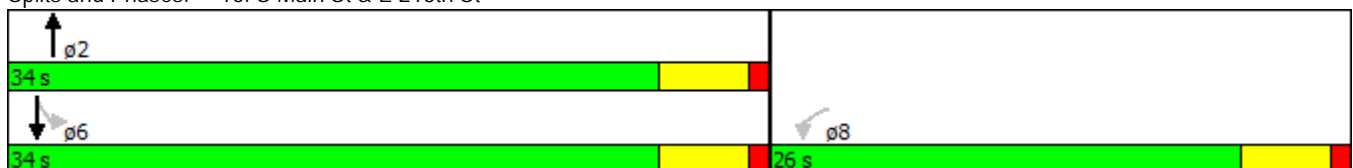


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-----|-------|-----|-------|-------|
| Detector Phase | 8 | | 2 | | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 26.0 | | 34.0 | | 34.0 | 34.0 |
| Total Split (%) | 43.3% | | 56.7% | | 56.7% | 56.7% |
| Maximum Green (s) | 21.0 | | 29.0 | | 29.0 | 29.0 |
| Yellow Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | | Max | | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | | 0 | 0 |
| Act Effect Green (s) | 20.6 | | 29.0 | | 29.0 | 29.0 |
| Actuated g/C Ratio | 0.35 | | 0.49 | | 0.49 | 0.49 |
| v/c Ratio | 0.95 | | 0.54 | | 0.76 | 0.42 |
| Control Delay | 41.7 | | 11.3 | | 44.9 | 10.9 |
| Queue Delay | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Delay | 41.7 | | 11.3 | | 44.9 | 10.9 |
| LOS | D | | B | | D | B |
| Approach Delay | 41.7 | | 11.3 | | | 16.3 |
| Approach LOS | D | | B | | | B |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 59.6 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 21.1 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 83.6% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 16: S Main St & E 213th St



Lanes, Volumes, Timings
17: S Avalon Blvd & E 213th St

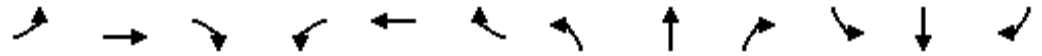
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 244 | 208 | 88 | 149 | 265 | 220 | 108 | 1039 | 149 | 62 | 1130 | 178 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 70 | | 0 | 120 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.955 | | | 0.932 | | | 0.981 | | | 0.980 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 2016 | 0 | 1770 | 3738 | 0 | 1770 | 5654 | 0 | 1770 | 5648 | 0 |
| Flt Permitted | 0.448 | | | 0.517 | | | 0.211 | | | 0.211 | | |
| Satd. Flow (perm) | 835 | 2016 | 0 | 963 | 3738 | 0 | 393 | 5654 | 0 | 393 | 5648 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 21 | | | 29 | | | 72 | | | 81 | |
| Link Speed (mph) | | 30 | | | 30 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4544 | | | 967 | | | 1397 | | | 1230 | |
| Travel Time (s) | | 103.3 | | | 22.0 | | | 27.2 | | | 24.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 265 | 226 | 96 | 162 | 288 | 239 | 117 | 1129 | 162 | 67 | 1228 | 193 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 265 | 322 | 0 | 162 | 527 | 0 | 117 | 1291 | 0 | 67 | 1421 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |

Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

1/3/2019

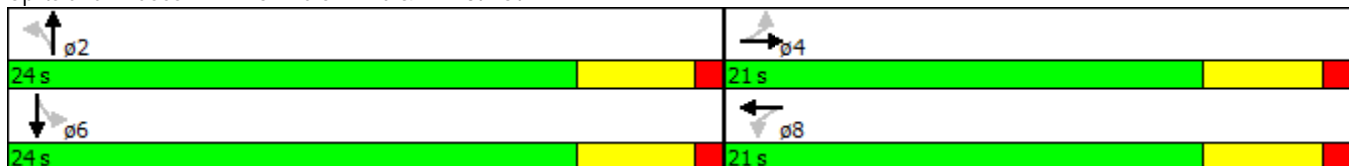


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | | 46.7% | 46.7% | | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 15.5 | 15.5 | | 15.5 | 15.5 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Actuated g/C Ratio | 0.35 | 0.35 | | 0.35 | 0.35 | | 0.43 | 0.43 | | 0.43 | 0.43 | |
| v/c Ratio | 0.91 | 0.45 | | 0.48 | 0.40 | | 0.70 | 0.53 | | 0.40 | 0.58 | |
| Control Delay | 55.3 | 12.8 | | 17.2 | 11.4 | | 40.1 | 9.9 | | 18.0 | 10.4 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 55.3 | 12.8 | | 17.2 | 11.4 | | 40.1 | 9.9 | | 18.0 | 10.4 | |
| LOS | E | B | | B | B | | D | A | | B | B | |
| Approach Delay | | 32.0 | | | 12.7 | | | 12.4 | | | 10.7 | |
| Approach LOS | | C | | | B | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 44.5 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.91 |
| Intersection Signal Delay: | 14.6 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 76.4% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 17: S Avalon Blvd & E 213th St



Lanes, Volumes, Timings
18: S Figueroa St & W Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 149 | 442 | 459 | 38 | 476 | 47 | 361 | 550 | 154 | 45 | 389 | 323 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 213 | | 75 | 152 | | 0 | 230 | | 0 | 240 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 2 | | 0 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 |
| Frt | | | 0.850 | | 0.987 | | | 0.967 | | | 0.932 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3493 | 0 | 3433 | 3422 | 0 | 3433 | 3299 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3493 | 0 | 3433 | 3422 | 0 | 3433 | 3299 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 333 | | 15 | | | 55 | | | 227 | |
| Link Speed (mph) | | 35 | | | 35 | | | 40 | | | 40 | |
| Link Distance (ft) | | 1243 | | | 2441 | | | 713 | | | 3767 | |
| Travel Time (s) | | 24.2 | | | 47.6 | | | 12.2 | | | 64.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 162 | 480 | 499 | 41 | 517 | 51 | 392 | 598 | 167 | 49 | 423 | 351 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 162 | 480 | 499 | 41 | 568 | 0 | 392 | 765 | 0 | 49 | 774 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 18: S Figueroa St & W Carson St

1/3/2019

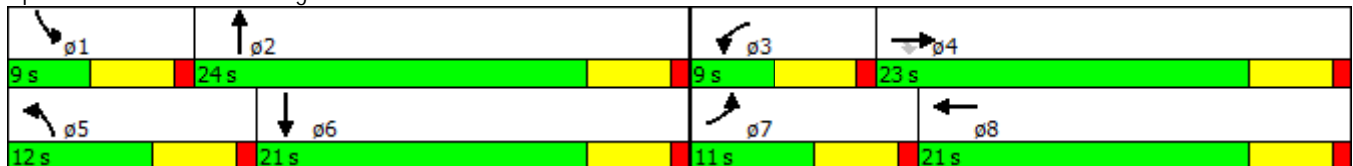


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 11.0 | 23.0 | 23.0 | 9.0 | 21.0 | | 12.0 | 24.0 | | 9.0 | 21.0 | |
| Total Split (%) | 16.9% | 35.4% | 35.4% | 13.8% | 32.3% | | 18.5% | 36.9% | | 13.8% | 32.3% | |
| Maximum Green (s) | 6.0 | 18.0 | 18.0 | 4.0 | 16.0 | | 7.0 | 19.0 | | 4.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 6.0 | 20.1 | 20.1 | 4.0 | 14.4 | | 7.0 | 22.8 | | 4.0 | 16.0 | |
| Actuated g/C Ratio | 0.09 | 0.32 | 0.32 | 0.06 | 0.23 | | 0.11 | 0.36 | | 0.06 | 0.25 | |
| v/c Ratio | 0.97 | 0.43 | 0.68 | 0.37 | 0.71 | | 1.03 | 0.61 | | 0.23 | 0.77 | |
| Control Delay | 97.2 | 19.6 | 13.1 | 39.0 | 27.3 | | 88.1 | 19.4 | | 31.6 | 22.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 97.2 | 19.6 | 13.1 | 39.0 | 27.3 | | 88.1 | 19.4 | | 31.6 | 22.1 | |
| LOS | F | B | B | D | C | | F | B | | C | C | |
| Approach Delay | | 27.8 | | | 28.1 | | | 42.7 | | | 22.7 | |
| Approach LOS | | C | | | C | | | D | | | C | |

Intersection Summary

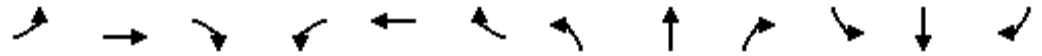
Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 63.4
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 31.3
 Intersection LOS: C
 Intersection Capacity Utilization 71.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 18: S Figueroa St & W Carson St



Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

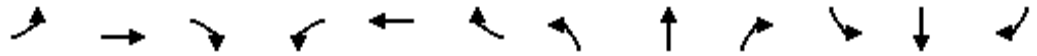
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 105 | 376 | 126 | 123 | 414 | 60 | 140 | 801 | 129 | 66 | 612 | 104 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 210 | | 70 | 220 | | 70 | 115 | | 0 | 175 | | 500 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | | 0.850 | | 0.979 | | | 0.978 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 4979 | 0 | 1770 | 4973 | 0 |
| Flt Permitted | 0.492 | | | 0.512 | | | 0.345 | | | 0.263 | | |
| Satd. Flow (perm) | 916 | 3539 | 1583 | 954 | 3539 | 1583 | 643 | 4979 | 0 | 490 | 4973 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 137 | | | 65 | | 84 | | | 91 | |
| Link Speed (mph) | | 35 | | | 35 | | | 35 | | | 35 | |
| Link Distance (ft) | | 2441 | | | 4293 | | | 978 | | | 1360 | |
| Travel Time (s) | | 47.6 | | | 83.6 | | | 19.1 | | | 26.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 114 | 409 | 137 | 134 | 450 | 65 | 152 | 871 | 140 | 72 | 665 | 113 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 114 | 409 | 137 | 134 | 450 | 65 | 152 | 1011 | 0 | 72 | 778 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | | 6 | | |

Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019

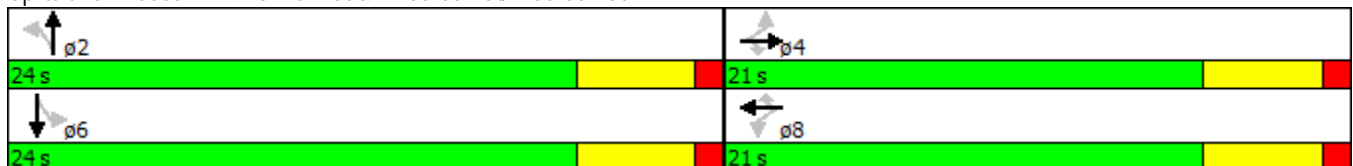


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | 46.7% | 46.7% | 46.7% | 46.7% | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 19.1 | 19.1 | | 19.1 | 19.1 | |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.47 | 0.47 | | 0.47 | 0.47 | |
| v/c Ratio | 0.44 | 0.41 | 0.25 | 0.49 | 0.45 | 0.13 | 0.50 | 0.43 | | 0.31 | 0.33 | |
| Control Delay | 17.3 | 12.8 | 3.9 | 18.6 | 13.1 | 4.2 | 17.6 | 7.8 | | 13.0 | 7.0 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 17.3 | 12.8 | 3.9 | 18.6 | 13.1 | 4.2 | 17.6 | 7.8 | | 13.0 | 7.0 | |
| LOS | B | B | A | B | B | A | B | A | | B | A | |
| Approach Delay | | 11.7 | | | 13.4 | | | 9.1 | | | 7.5 | |
| Approach LOS | | B | | | B | | | A | | | A | |

Intersection Summary

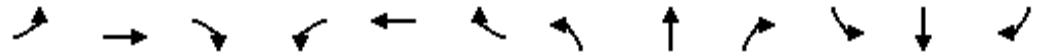
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 40.8 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.50 |
| Intersection Signal Delay: | 10.1 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 55.9% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 19: S Main St & W Carson St/E Carson St



Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 119 | 515 | 68 | 505 | 408 | 111 | 68 | 1056 | 518 | 142 | 966 | 59 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 2 | | 0 | 2 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.982 | | | 0.968 | | | 0.951 | | | 0.991 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3476 | 0 | 3433 | 3426 | 0 | 1770 | 4836 | 0 | 1770 | 5040 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3476 | 0 | 3433 | 3426 | 0 | 1770 | 4836 | 0 | 1770 | 5040 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 14 | | | 38 | | | 150 | | | 11 | |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | 1397 | |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | 27.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 129 | 560 | 74 | 549 | 443 | 121 | 74 | 1148 | 563 | 154 | 1050 | 64 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 129 | 634 | 0 | 549 | 564 | 0 | 74 | 1711 | 0 | 154 | 1114 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |

Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019

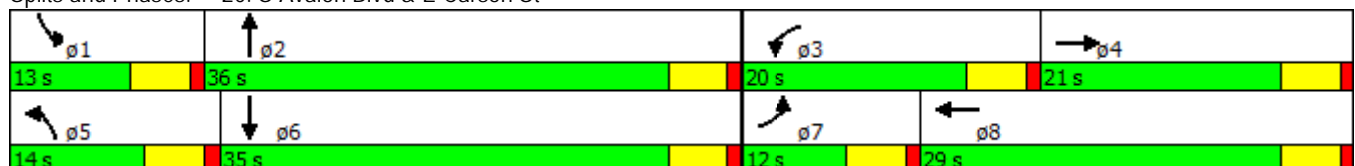


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 12.0 | 21.0 | | 20.0 | 29.0 | | 14.0 | 36.0 | | 13.0 | 35.0 | |
| Total Split (%) | 13.3% | 23.3% | | 22.2% | 32.2% | | 15.6% | 40.0% | | 14.4% | 38.9% | |
| Maximum Green (s) | 7.0 | 16.0 | | 15.0 | 24.0 | | 9.0 | 31.0 | | 8.0 | 30.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 6.9 | 16.0 | | 15.0 | 24.1 | | 8.1 | 31.0 | | 8.0 | 33.1 | |
| Actuated g/C Ratio | 0.08 | 0.18 | | 0.17 | 0.27 | | 0.09 | 0.34 | | 0.09 | 0.37 | |
| v/c Ratio | 0.49 | 1.01 | | 0.96 | 0.60 | | 0.47 | 0.97 | | 0.98 | 0.60 | |
| Control Delay | 46.6 | 75.4 | | 67.6 | 29.8 | | 48.5 | 42.7 | | 111.0 | 25.4 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 46.6 | 75.4 | | 67.6 | 29.8 | | 48.5 | 42.7 | | 111.0 | 25.4 | |
| LOS | D | E | | E | C | | D | D | | F | C | |
| Approach Delay | | 70.6 | | | 48.4 | | | 43.0 | | | 35.8 | |
| Approach LOS | | E | | | D | | | D | | | D | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.01 |
| Intersection Signal Delay: | 46.6 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 87.3% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St



Lanes, Volumes, Timings
21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 7 | 681 | 773 | 124 | 1247 | 0 | 173 | 0 | 260 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 50 | | 180 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (prot) | 1593 | 3185 | 1425 | 1593 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Flt Permitted | 0.167 | | | 0.359 | | | 0.950 | | | | | |
| Satd. Flow (perm) | 280 | 3185 | 1425 | 602 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 840 | | | | | | 197 | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 2121 | | | 469 | | | 428 | | | | 162 |
| Travel Time (s) | | 36.2 | | | 8.0 | | | 7.3 | | | | 2.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 8 | 740 | 840 | 135 | 1355 | 0 | 188 | 0 | 283 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 8 | 740 | 840 | 135 | 1355 | 0 | 188 | 0 | 283 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | | 1 | | | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | | Right | | | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | | 20 | | | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | | 20 | | | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | | | | | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | | Perm | | | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | | 2 | | | 6 |

Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019

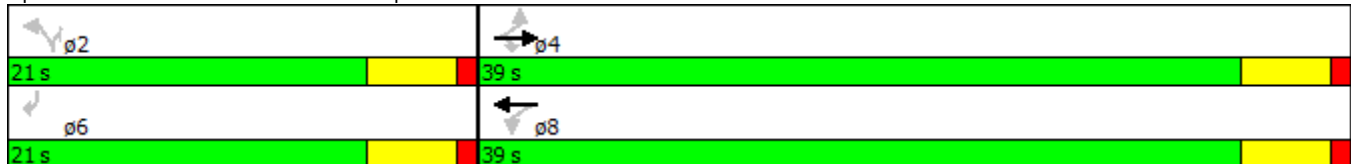


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|-----|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (s) | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (%) | 65.0% | 65.0% | 65.0% | 65.0% | 65.0% | | 35.0% | | 35.0% | | | 35.0% |
| Maximum Green (s) | 34.0 | 34.0 | 34.0 | 34.0 | 34.0 | | 16.0 | | 16.0 | | | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | | 1.0 | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | 3.0 |
| Recall Mode | None | None | None | None | None | | Min | | Min | | | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | | 11.0 | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Act Effect Green (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | | 10.8 | | 10.8 | | | |
| Actuated g/C Ratio | 0.53 | 0.53 | 0.53 | 0.53 | 0.53 | | 0.24 | | 0.24 | | | |
| v/c Ratio | 0.05 | 0.44 | 0.73 | 0.42 | 0.56 | | 0.50 | | 0.58 | | | |
| Control Delay | 6.7 | 7.5 | 5.1 | 11.8 | 8.2 | | 21.8 | | 11.6 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | |
| Total Delay | 6.7 | 7.5 | 5.1 | 11.8 | 8.2 | | 21.8 | | 11.6 | | | |
| LOS | A | A | A | B | A | | C | | B | | | |
| Approach Delay | | 6.2 | | | 8.5 | | | | | | | |
| Approach LOS | | A | | | A | | | | | | | |

Intersection Summary

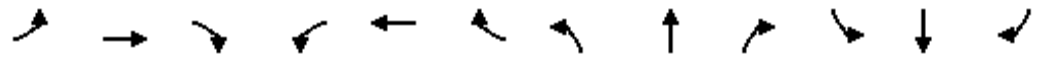
Area Type: CBD
 Cycle Length: 60
 Actuated Cycle Length: 45.4
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 8.4
 Intersection Capacity Utilization 69.1%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 21: I-405 SB Ramps & E Carson St



Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 166 | 750 | 40 | 14 | 829 | 269 | 7 | 4 | 4 | 55 | 15 | 553 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 70 | | 0 | 100 | | 180 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.992 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.968 | | | 0.962 | |
| Satd. Flow (prot) | 1770 | 3511 | 0 | 1770 | 3539 | 1583 | 0 | 1803 | 1583 | 0 | 1792 | 1583 |
| Flt Permitted | 0.230 | | | 0.249 | | | | 0.898 | | | 0.814 | |
| Satd. Flow (perm) | 428 | 3511 | 0 | 464 | 3539 | 1583 | 0 | 1673 | 1583 | 0 | 1516 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 10 | | | | 292 | | | 31 | | | 86 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 469 | | | 2039 | | | 158 | | | 364 | |
| Travel Time (s) | | 8.0 | | | 34.8 | | | 2.7 | | | 6.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 180 | 815 | 43 | 15 | 901 | 292 | 8 | 4 | 4 | 60 | 16 | 601 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 180 | 858 | 0 | 15 | 901 | 292 | 0 | 12 | 4 | 0 | 76 | 601 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | 6 |

Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019

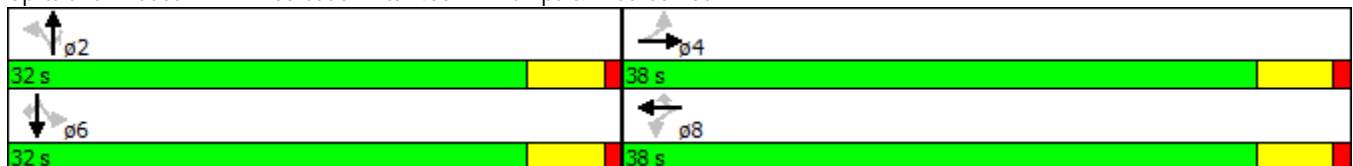


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 38.0 | | 38.0 | 38.0 | 38.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 |
| Total Split (%) | 54.3% | 54.3% | | 54.3% | 54.3% | 54.3% | 45.7% | 45.7% | 45.7% | 45.7% | 45.7% | 45.7% |
| Maximum Green (s) | 33.0 | 33.0 | | 33.0 | 33.0 | 33.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 30.4 | 30.4 | | 30.4 | 30.4 | 30.4 | | 27.2 | 27.2 | | 27.2 | 27.2 |
| Actuated g/C Ratio | 0.45 | 0.45 | | 0.45 | 0.45 | 0.45 | | 0.40 | 0.40 | | 0.40 | 0.40 |
| v/c Ratio | 0.94 | 0.54 | | 0.07 | 0.57 | 0.34 | | 0.02 | 0.01 | | 0.12 | 0.87 |
| Control Delay | 74.2 | 14.7 | | 11.4 | 15.2 | 2.7 | | 13.5 | 0.0 | | 14.7 | 33.7 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 74.2 | 14.7 | | 11.4 | 15.2 | 2.7 | | 13.5 | 0.0 | | 14.7 | 33.7 |
| LOS | E | B | | B | B | A | | B | A | | B | C |
| Approach Delay | | 25.0 | | | 12.1 | | | 10.2 | | | 31.5 | |
| Approach LOS | | C | | | B | | | B | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 67.6 |
| Natural Cycle: | 70 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.94 |
| Intersection Signal Delay: | 21.1 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 73.0% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 22: Recreation Rd/I-405 NB Ramps & E Carson St



Lanes, Volumes, Timings
 1: S Figueroa St & I-405 SB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | ↑↑ | | ↑ | ↑↑ |
| Volume (vph) | 0 | 0 | 785 | 118 | 610 | 1230 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 220 | |
| Storage Lanes | 0 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | | | 0.980 | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 3468 | 0 | 1770 | 3539 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 3468 | 0 | 1770 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 607 | | 2451 | | | 246 |
| Travel Time (s) | 10.3 | | 41.8 | | | 4.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 853 | 128 | 663 | 1337 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 981 | 0 | 663 | 1337 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Yield | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 65.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service C |

Lanes, Volumes, Timings
 2: S Figueroa St & I-405 NB Ramps

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 79 | 135 | 794 | 0 | 0 | 1745 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | | 0.850 | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 1583 | 3539 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 724 | | 246 | | | 1243 |
| Travel Time (s) | 12.3 | | 4.2 | | | 21.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 86 | 147 | 863 | 0 | 0 | 1897 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 86 | 147 | 863 | 0 | 0 | 1897 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 65.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service C |

Lanes, Volumes, Timings 3: S Main St & I-405 SB Ramps

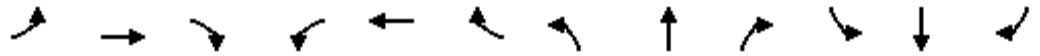
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 18 | 655 | 46 | 0 | 0 | 0 | 0 | 775 | 140 | 236 | 1136 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 250 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Flt | | 0.990 | | | | | | 0.977 | | | | |
| Flt Protected | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1844 | 0 | 0 | 0 | 0 | 0 | 3458 | 0 | 1770 | 3539 | 0 |
| Flt Permitted | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1844 | 0 | 0 | 0 | 0 | 0 | 3458 | 0 | 1770 | 3539 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 5 | | | | | | 23 | | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 607 | | | 169 | | | 2341 | | | 290 | |
| Travel Time (s) | | 10.3 | | | 2.9 | | | 35.5 | | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 20 | 712 | 50 | 0 | 0 | 0 | 0 | 842 | 152 | 257 | 1235 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 20 | 762 | 0 | 0 | 0 | 0 | 0 | 994 | 0 | 257 | 1235 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | | | | | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | | | | | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | | | | | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 4 | | | | | | | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 3: S Main St & I-405 SB Ramps

1/3/2019

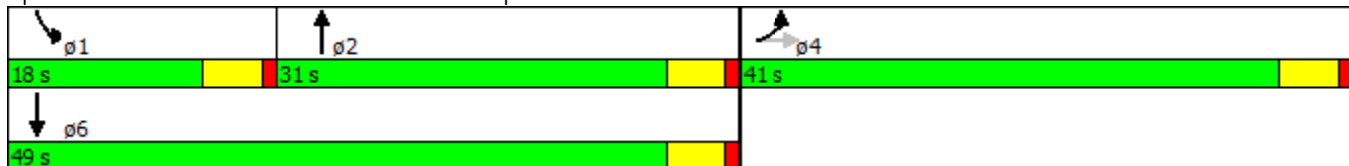


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 41.0 | 41.0 | | | | | | 31.0 | | 18.0 | 49.0 | |
| Total Split (%) | 45.6% | 45.6% | | | | | | 34.4% | | 20.0% | 54.4% | |
| Maximum Green (s) | 36.0 | 36.0 | | | | | | 26.0 | | 13.0 | 44.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | | | | | Max | | None | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | 0 | |
| Act Effct Green (s) | 36.0 | 36.0 | | | | | | 26.0 | | 13.0 | 44.0 | |
| Actuated g/C Ratio | 0.40 | 0.40 | | | | | | 0.29 | | 0.14 | 0.49 | |
| v/c Ratio | 0.03 | 1.03 | | | | | | 0.98 | | 1.01 | 0.71 | |
| Control Delay | 16.7 | 69.3 | | | | | | 55.9 | | 99.2 | 21.0 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 49.3 | |
| Total Delay | 16.7 | 69.3 | | | | | | 55.9 | | 99.2 | 70.3 | |
| LOS | B | E | | | | | | E | | F | E | |
| Approach Delay | | 68.0 | | | | | | 55.9 | | | 75.3 | |
| Approach LOS | | E | | | | | | E | | | E | |

Intersection Summary

| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.03 |
| Intersection Signal Delay: | 67.6 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 88.7% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 3: S Main St & I-405 SB Ramps



Lanes, Volumes, Timings
4: S Main St & I-405 NB Ramps

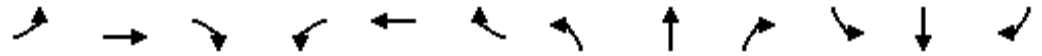
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | ↕↕ | | ↕ | ↕↕ | | | ↕↕ | |
| Volume (vph) | 0 | 0 | 0 | 93 | 124 | 243 | 25 | 769 | 0 | 0 | 1483 | 62 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.921 | | | | | | 0.994 | |
| Flt Protected | | | | | 0.990 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3227 | 0 | 1770 | 3539 | 0 | 0 | 3518 | 0 |
| Flt Permitted | | | | | 0.990 | | 0.117 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3227 | 0 | 218 | 3539 | 0 | 0 | 3518 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 157 | | | | | | 11 | |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | 45 | |
| Link Distance (ft) | | 724 | | | 336 | | | 290 | | | 724 | |
| Travel Time (s) | | 12.3 | | | 5.7 | | | 4.4 | | | 11.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 101 | 135 | 264 | 27 | 836 | 0 | 0 | 1612 | 67 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 500 | 0 | 27 | 836 | 0 | 0 | 1679 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | | 2 | | | | | |
| Detector Phase | | | | 8 | 8 | | 2 | 2 | | | | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | | 21.0 | 21.0 | | | | 21.0 |

Lanes, Volumes, Timings
 4: S Main St & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-------|-------|-----|-----|-------|-----|
| Total Split (s) | | | | 21.0 | 21.0 | | 39.0 | 39.0 | | | 39.0 | |
| Total Split (%) | | | | 35.0% | 35.0% | | 65.0% | 65.0% | | | 65.0% | |
| Maximum Green (s) | | | | 16.0 | 16.0 | | 34.0 | 34.0 | | | 34.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | | 1.0 | 1.0 | | | 1.0 | |
| Lost Time Adjust (s) | | | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | None | | Max | Max | | | Max | |
| Walk Time (s) | | | | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | | 11.0 | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | | 0 | 0 | | | 0 | |
| Act Effect Green (s) | | | | | 11.5 | | 34.1 | 34.1 | | | 34.1 | |
| Actuated g/C Ratio | | | | | 0.21 | | 0.61 | 0.61 | | | 0.61 | |
| v/c Ratio | | | | | 0.63 | | 0.20 | 0.39 | | | 0.78 | |
| Control Delay | | | | | 17.2 | | 10.6 | 6.6 | | | 12.2 | |
| Queue Delay | | | | | 0.0 | | 0.0 | 0.5 | | | 0.0 | |
| Total Delay | | | | | 17.2 | | 10.6 | 7.1 | | | 12.2 | |
| LOS | | | | | B | | B | A | | | B | |
| Approach Delay | | | | | 17.2 | | | 7.2 | | | 12.2 | |
| Approach LOS | | | | | B | | | A | | | B | |

Intersection Summary

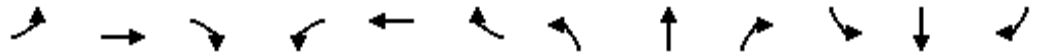
| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 55.7 |
| Natural Cycle: | 60 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.78 |
| Intersection Signal Delay: | 11.6 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 88.7% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 4: S Main St & I-405 NB Ramps



Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 61 | 1361 | 169 | 675 | 1213 | 137 | 55 | 458 | 521 | 220 | 597 | 233 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.983 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4999 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4999 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 14 | | | | 124 | | | 520 | | | 182 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | | 40 |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | | 2451 |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | | 41.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 66 | 1479 | 184 | 734 | 1318 | 149 | 60 | 498 | 566 | 239 | 649 | 253 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 66 | 1663 | 0 | 734 | 1318 | 149 | 60 | 498 | 566 | 239 | 649 | 253 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

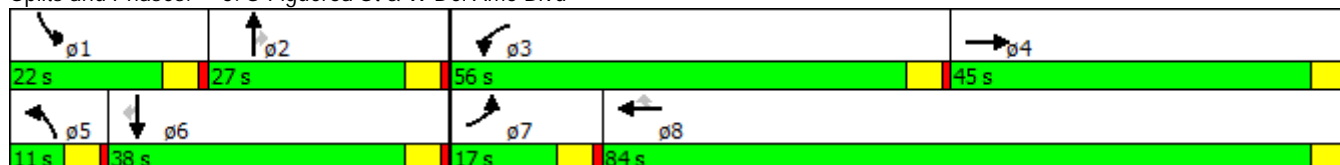


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 17.0 | 45.0 | | 56.0 | 84.0 | 84.0 | 11.0 | 27.0 | 27.0 | 22.0 | 38.0 | 38.0 |
| Total Split (%) | 11.3% | 30.0% | | 37.3% | 56.0% | 56.0% | 7.3% | 18.0% | 18.0% | 14.7% | 25.3% | 25.3% |
| Maximum Green (s) | 12.0 | 40.0 | | 51.0 | 79.0 | 79.0 | 6.0 | 22.0 | 22.0 | 17.0 | 33.0 | 33.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 10.2 | 40.0 | | 51.0 | 83.2 | 83.2 | 6.0 | 22.0 | 22.0 | 17.0 | 33.0 | 33.0 |
| Actuated g/C Ratio | 0.07 | 0.27 | | 0.34 | 0.55 | 0.55 | 0.04 | 0.15 | 0.15 | 0.11 | 0.22 | 0.22 |
| v/c Ratio | 0.55 | 1.24 | | 1.22 | 0.67 | 0.16 | 0.86 | 0.96 | 0.84 | 1.20 | 0.83 | 0.52 |
| Control Delay | 84.6 | 158.6 | | 156.0 | 26.7 | 4.7 | 142.2 | 93.5 | 19.5 | 180.3 | 66.4 | 19.1 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 84.6 | 158.6 | | 156.0 | 26.7 | 4.7 | 142.2 | 93.5 | 19.5 | 180.3 | 66.4 | 19.1 |
| LOS | F | F | | F | C | A | F | F | B | F | E | B |
| Approach Delay | | 155.8 | | | 68.3 | | | 58.8 | | | 79.8 | |
| Approach LOS | | F | | | E | | | E | | | E | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.24 |
| Intersection Signal Delay: | 93.1 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 109.0% |
| ICU Level of Service: | G |
| Analysis Period (min): | 15 |

Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings

6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↶ | ↶↶↶ | | ↶ | ↶↶↶ | | ↶ | ↶↶ | | ↶ | ↶↶ | |
| Volume (vph) | 248 | 1654 | 343 | 256 | 1212 | 108 | 357 | 501 | 310 | 168 | 838 | 285 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.974 | | | 0.988 | | | 0.943 | | | 0.962 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4953 | 0 | 1770 | 5024 | 0 | 1770 | 3337 | 0 | 1770 | 3405 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4953 | 0 | 1770 | 5024 | 0 | 1770 | 3337 | 0 | 1770 | 3405 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 31 | | | 10 | | | 93 | | | 31 | |
| Link Speed (mph) | | 45 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1251 | | | 1668 | | | 534 | | | 2341 | |
| Travel Time (s) | | 19.0 | | | 25.3 | | | 8.1 | | | 35.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 270 | 1798 | 373 | 278 | 1317 | 117 | 388 | 545 | 337 | 183 | 911 | 310 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 270 | 2171 | 0 | 278 | 1434 | 0 | 388 | 882 | 0 | 183 | 1221 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

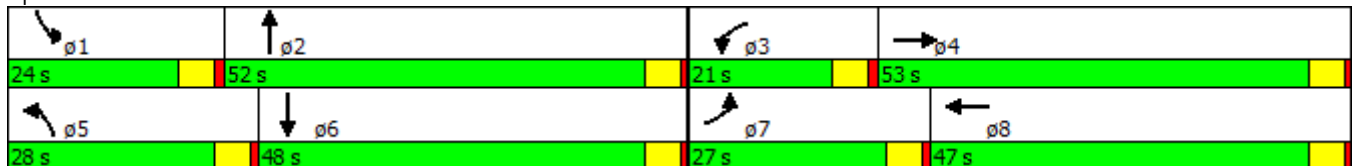


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 27.0 | 53.0 | | 21.0 | 47.0 | | 28.0 | 52.0 | | 24.0 | 48.0 | |
| Total Split (%) | 18.0% | 35.3% | | 14.0% | 31.3% | | 18.7% | 34.7% | | 16.0% | 32.0% | |
| Maximum Green (s) | 22.0 | 48.0 | | 16.0 | 42.0 | | 23.0 | 47.0 | | 19.0 | 43.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 22.0 | 48.0 | | 16.0 | 42.0 | | 23.0 | 47.9 | | 18.1 | 43.0 | |
| Actuated g/C Ratio | 0.15 | 0.32 | | 0.11 | 0.28 | | 0.15 | 0.32 | | 0.12 | 0.29 | |
| v/c Ratio | 1.04 | 1.35 | | 1.48 | 1.01 | | 1.43 | 0.78 | | 0.86 | 1.22 | |
| Control Delay | 127.7 | 201.4 | | 285.4 | 80.1 | | 257.8 | 47.2 | | 97.8 | 153.2 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 2.1 | | 0.0 | 0.0 | |
| Total Delay | 127.7 | 201.4 | | 285.4 | 80.1 | | 257.8 | 49.3 | | 97.8 | 153.2 | |
| LOS | F | F | | F | F | | F | D | | F | F | |
| Approach Delay | | 193.3 | | | 113.5 | | | 113.0 | | | 146.0 | |
| Approach LOS | | F | | | F | | | F | | | F | |

Intersection Summary

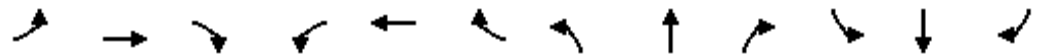
Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 148.6
 Intersection LOS: F
 Intersection Capacity Utilization 122.5%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1754 | 228 | 73 | 1269 | 0 | 316 | 0 | 197 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 155 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Fr _t | | | 0.850 | | | | | | 0.850 | | | |
| Fl _t Protected | | | | 0.950 | | | 0.950 | 0.950 | | | | |
| Satd. Flow (prot) | 1863 | 3539 | 1583 | 1770 | 3539 | 0 | 1681 | 1681 | 1583 | 1863 | 1770 | 1770 |
| Fl _t Permitted | | | | 0.075 | | | 0.950 | 0.950 | | | | |
| Satd. Flow (perm) | 1863 | 3539 | 1583 | 140 | 3539 | 0 | 1681 | 1681 | 1583 | 1863 | 1770 | 1770 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 208 | | | | | | 214 | | | |
| Link Speed (mph) | | 45 | | | 45 | | | 25 | | | 50 | |
| Link Distance (ft) | | 1668 | | | 3009 | | | 694 | | | 308 | |
| Travel Time (s) | | 25.3 | | | 45.6 | | | 18.9 | | | 4.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1907 | 248 | 79 | 1379 | 0 | 343 | 0 | 214 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | 50% | | | | | 0% |
| Lane Group Flow (vph) | 0 | 1907 | 248 | 79 | 1379 | 0 | 171 | 172 | 214 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Split | NA | Perm | Perm | | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | 2 | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | 2 | 6 | 6 | 6 |

Lanes, Volumes, Timings
7: Stamps Dr & E Del Amo Blvd

1/3/2019

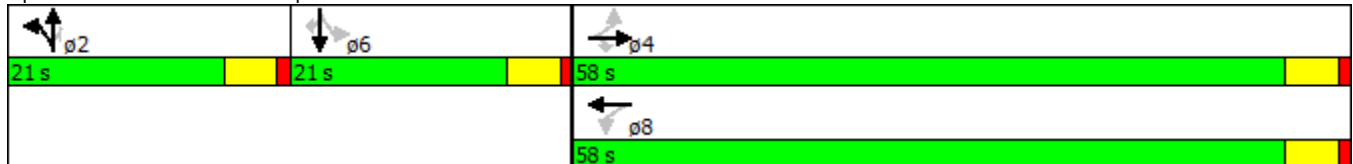


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 58.0 | 58.0 | 58.0 | 58.0 | 58.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 58.0% | 58.0% | 58.0% | 58.0% | 58.0% | | 21.0% | 21.0% | 21.0% | 21.0% | 21.0% | 21.0% |
| Maximum Green (s) | 53.0 | 53.0 | 53.0 | 53.0 | 53.0 | | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | | 53.0 | 53.0 | 53.0 | 53.0 | | 16.0 | 16.0 | 16.0 | | | |
| Actuated g/C Ratio | | 0.53 | 0.53 | 0.53 | 0.53 | | 0.16 | 0.16 | 0.16 | | | |
| v/c Ratio | | 1.02 | 0.26 | 1.07 | 0.74 | | 0.64 | 0.64 | 0.49 | | | |
| Control Delay | | 49.5 | 3.5 | 154.9 | 21.1 | | 51.2 | 51.4 | 9.6 | | | |
| Queue Delay | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total Delay | | 49.5 | 3.5 | 154.9 | 21.1 | | 51.2 | 51.4 | 9.6 | | | |
| LOS | | D | A | F | C | | D | D | A | | | |
| Approach Delay | | 44.2 | | | 28.3 | | 35.3 | | | | | |
| Approach LOS | | D | | | C | | D | | | | | |

Intersection Summary

































| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Natural Cycle: | 100 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.07 |
| Intersection Signal Delay: | 37.5 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 73.8% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 7: Stamps Dr & E Del Amo Blvd



Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|--|---|---|--|---|--|---|---|--|---|--|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |   |  |  |   |  |  |    |  |   |    |   |
| Volume (vph) | 459 | 1060 | 410 | 301 | 739 | 147 | 232 | 1330 | 233 | 347 | 1049 | 601 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 1 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | 0.945 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4806 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 5085 | 1583 | 3433 | 4806 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 182 | | | 124 | | | 245 | | 106 | |
| Link Speed (mph) | | 45 | | | 45 | | | 35 | | | 35 | |
| Link Distance (ft) | | 3009 | | | 3520 | | | 2946 | | | 3936 | |
| Travel Time (s) | | 45.6 | | | 53.3 | | | 57.4 | | | 76.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 499 | 1152 | 446 | 327 | 803 | 160 | 252 | 1446 | 253 | 377 | 1140 | 653 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 499 | 1152 | 446 | 327 | 803 | 160 | 252 | 1446 | 253 | 377 | 1793 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

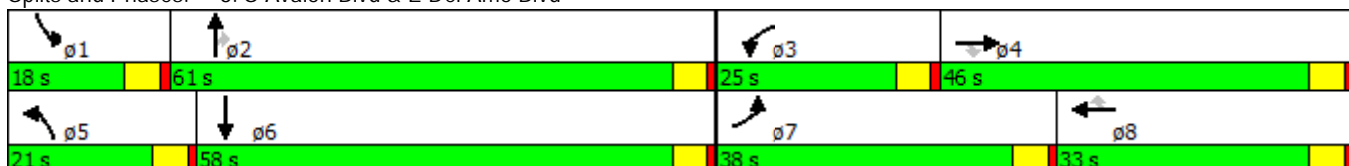


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 38.0 | 46.0 | 46.0 | 25.0 | 33.0 | 33.0 | 21.0 | 61.0 | 61.0 | 18.0 | 58.0 | 58.0 |
| Total Split (%) | 25.3% | 30.7% | 30.7% | 16.7% | 22.0% | 22.0% | 14.0% | 40.7% | 40.7% | 12.0% | 38.7% | 38.7% |
| Maximum Green (s) | 33.0 | 41.0 | 41.0 | 20.0 | 28.0 | 28.0 | 16.0 | 56.0 | 56.0 | 13.0 | 53.0 | 53.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 33.0 | 41.0 | 41.0 | 20.0 | 28.0 | 28.0 | 16.0 | 56.0 | 56.0 | 13.0 | 53.0 | 53.0 |
| Actuated g/C Ratio | 0.22 | 0.27 | 0.27 | 0.13 | 0.19 | 0.19 | 0.11 | 0.37 | 0.37 | 0.09 | 0.35 | 0.35 |
| v/c Ratio | 1.28 | 1.19 | 0.79 | 1.39 | 1.22 | 0.40 | 1.34 | 0.76 | 0.34 | 1.27 | 1.04dr | 1.04dr |
| Control Delay | 191.3 | 142.8 | 40.6 | 243.3 | 160.8 | 17.7 | 232.8 | 44.4 | 5.3 | 197.3 | 70.0 | 70.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 191.3 | 142.8 | 40.6 | 243.3 | 160.8 | 17.7 | 232.8 | 44.4 | 5.3 | 197.3 | 70.0 | 70.0 |
| LOS | F | F | D | F | F | B | F | D | A | F | E | E |
| Approach Delay | | 132.6 | | | 164.0 | | | 63.7 | | | | 92.1 |
| Approach LOS | | F | | | F | | | E | | | | F |

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.39
 Intersection Signal Delay: 108.4
 Intersection LOS: F
 Intersection Capacity Utilization 109.2%
 ICU Level of Service H
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 483 | 223 | 699 | 507 | 789 | 648 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | 235 | | | 250 |
| Storage Lanes | 2 | 0 | 2 | | | 1 |
| Taper Length (ft) | 25 | | 25 | | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 |
| Flt | 0.953 | | | | | 0.850 |
| Flt Protected | 0.967 | | 0.950 | | | |
| Satd. Flow (prot) | 3330 | 0 | 3433 | 3539 | 3539 | 1583 |
| Flt Permitted | 0.967 | | 0.305 | | | |
| Satd. Flow (perm) | 3330 | 0 | 1102 | 3539 | 3539 | 1583 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | 97 | | | | | 704 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 170 | | | 828 | 791 | |
| Travel Time (s) | 2.9 | | | 14.1 | 13.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 525 | 242 | 760 | 551 | 858 | 704 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 767 | 0 | 760 | 551 | 858 | 704 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 24 | | | 24 | 24 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 12 | | | 12 | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Number of Detectors | 1 | | 1 | 2 | 2 | 1 |
| Detector Template | Left | | Left | Thru | Thru | Right |
| Leading Detector (ft) | 20 | | 20 | 100 | 100 | 20 |
| Trailing Detector (ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 20 | 6 | 6 | 20 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | | 94 | 94 | |
| Detector 2 Size(ft) | | | | 6 | 6 | |
| Detector 2 Type | | | | Cl+Ex | Cl+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | | 2 | | | 6 |
| Detector Phase | 4 | | 2 | 2 | 6 | 6 |

Lanes, Volumes, Timings
 9: S Figueroa St & I-110 NB Ramps

1/3/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|-------|-----|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 54.0 | 54.0 | 54.0 | 54.0 |
| Total Split (%) | 28.0% | | 72.0% | 72.0% | 72.0% | 72.0% |
| Maximum Green (s) | 16.0 | | 49.0 | 49.0 | 49.0 | 49.0 |
| Yellow Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 16.0 | | 49.0 | 49.0 | 49.0 | 49.0 |
| Actuated g/C Ratio | 0.21 | | 0.65 | 0.65 | 0.65 | 0.65 |
| v/c Ratio | 0.98 | | 1.06 | 0.24 | 0.37 | 0.55 |
| Control Delay | 54.4 | | 66.5 | 5.6 | 6.5 | 2.3 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 54.4 | | 66.5 | 5.6 | 6.5 | 2.3 |
| LOS | D | | E | A | A | A |
| Approach Delay | 54.4 | | | 40.9 | 4.6 | |
| Approach LOS | D | | | D | A | |

Intersection Summary












| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 75 |
| Actuated Cycle Length: | 75 |
| Natural Cycle: | 75 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.06 |
| Intersection Signal Delay: | 28.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 75.0% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 9: S Figueroa St & I-110 NB Ramps



Lanes, Volumes, Timings
10: S Main St & Lenardo Rd

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  |  |  | |  |  |
| Volume (vph) | 138 | 178 | 857 | 191 | 182 | 1292 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | 0 | 145 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Fr _t | | 0.850 | 0.973 | | | |
| Fl _t Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 1583 | 3444 | 0 | 1770 | 3539 |
| Fl _t Permitted | 0.950 | | | | 0.220 | |
| Satd. Flow (perm) | 1770 | 1583 | 3444 | 0 | 410 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | 155 | 73 | | | |
| Link Speed (mph) | 25 | | 45 | | | 45 |
| Link Distance (ft) | 479 | | 971 | | | 534 |
| Travel Time (s) | 13.1 | | 14.7 | | | 8.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 150 | 193 | 932 | 208 | 198 | 1404 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 150 | 193 | 1140 | 0 | 198 | 1404 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | Perm | NA | | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Detector Phase | 8 | 8 | 2 | | 6 | 6 |

Lanes, Volumes, Timings
 10: S Main St & Lenardo Rd

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 49.0 | | 49.0 | 49.0 |
| Total Split (%) | 30.0% | 30.0% | 70.0% | | 70.0% | 70.0% |
| Maximum Green (s) | 16.0 | 16.0 | 44.0 | | 44.0 | 44.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | None | Max | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 11.0 | 11.0 | 46.7 | | 46.7 | 46.7 |
| Actuated g/C Ratio | 0.16 | 0.16 | 0.69 | | 0.69 | 0.69 |
| v/c Ratio | 0.52 | 0.50 | 0.48 | | 0.70 | 0.58 |
| Control Delay | 31.7 | 11.8 | 5.7 | | 25.6 | 7.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 31.7 | 11.8 | 5.7 | | 25.6 | 7.1 |
| LOS | C | B | A | | C | A |
| Approach Delay | 20.5 | | 5.7 | | | 9.4 |
| Approach LOS | C | | A | | | A |

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 67.7
 Natural Cycle: 70
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 9.2
 Intersection LOS: A
 Intersection Capacity Utilization 60.0%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 10: S Main St & Lenardo Rd



Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

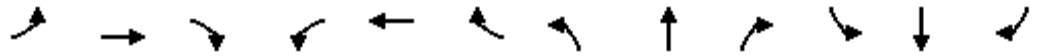
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 639 | 857 | 163 | 49 | 513 | 219 | 88 | 358 | 52 | 156 | 477 | 383 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 180 | | 0 | 115 | | 0 | 255 | | 0 | 185 | | 185 |
| Storage Lanes | 1 | | 0 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.91 | 0.91 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | 0.982 | | | | 0.850 | | 0.981 | | | | 0.850 |
| Flt Protected | 0.950 | 0.989 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1610 | 3732 | 0 | 1770 | 3539 | 1583 | 1770 | 3935 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.440 | 0.701 | | 0.107 | | | 0.367 | | | 0.433 | | |
| Satd. Flow (perm) | 746 | 2645 | 0 | 199 | 3539 | 1583 | 684 | 3935 | 0 | 807 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 39 | | | | 154 | | 24 | | | | 316 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 368 | | | 1713 | | | 3767 | | | | 828 |
| Travel Time (s) | | 6.3 | | | 29.2 | | | 64.2 | | | | 14.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 695 | 932 | 177 | 53 | 558 | 238 | 96 | 389 | 57 | 170 | 518 | 416 |
| Shared Lane Traffic (%) | 47% | | | | | | | | | | | |
| Lane Group Flow (vph) | 368 | 1436 | 0 | 53 | 558 | 238 | 96 | 446 | 0 | 170 | 518 | 416 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 11: S Figueroa St & W Torrance Blvd

1/3/2019

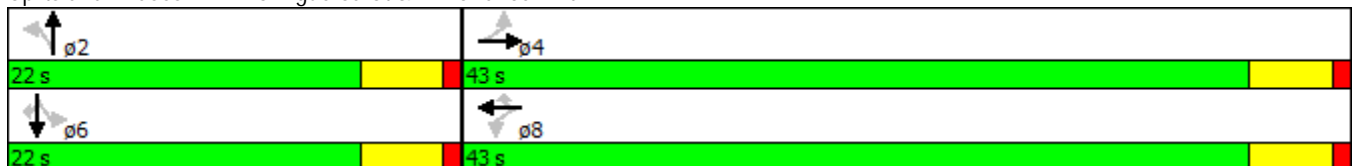


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 43.0 | 43.0 | | 43.0 | 43.0 | 43.0 | 22.0 | 22.0 | | 22.0 | 22.0 | 22.0 |
| Total Split (%) | 66.2% | 66.2% | | 66.2% | 66.2% | 66.2% | 33.8% | 33.8% | | 33.8% | 33.8% | 33.8% |
| Maximum Green (s) | 38.0 | 38.0 | | 38.0 | 38.0 | 38.0 | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | 37.3 | 37.3 | | 37.3 | 37.3 | 37.3 | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 |
| Actuated g/C Ratio | 0.58 | 0.58 | | 0.58 | 0.58 | 0.58 | 0.26 | 0.26 | | 0.26 | 0.26 | 0.26 |
| v/c Ratio | 0.85 | 0.93 | | 0.46 | 0.27 | 0.24 | 0.53 | 0.42 | | 0.80 | 0.55 | 0.64 |
| Control Delay | 33.5 | 24.5 | | 24.3 | 7.1 | 3.2 | 33.8 | 20.1 | | 52.6 | 23.2 | 10.9 |
| Queue Delay | 0.0 | 8.4 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.5 | 33.0 | | 24.3 | 7.1 | 3.2 | 33.8 | 20.1 | | 52.6 | 23.2 | 10.9 |
| LOS | C | C | | C | A | A | C | C | | D | C | B |
| Approach Delay | | 33.1 | | | 7.1 | | | 22.5 | | | 23.1 | |
| Approach LOS | | C | | | A | | | C | | | C | |

Intersection Summary

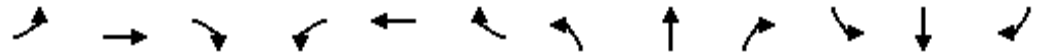
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 65 |
| Actuated Cycle Length: | 64.3 |
| Natural Cycle: | 65 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.93 |
| Intersection Signal Delay: | 24.1 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 82.7% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 11: S Figueroa St & W Torrance Blvd



Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

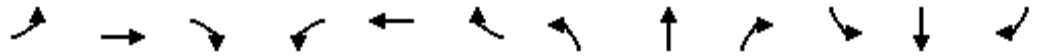
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕ | ↗ | | ↕ | | ↗ | ↕ | | ↗ | ↕ | ↗ |
| Volume (vph) | 418 | 72 | 554 | 11 | 44 | 26 | 297 | 602 | 9 | 46 | 932 | 443 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 190 | | 0 | 145 | | 45 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 2 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.957 | | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.959 | | | 0.993 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1786 | 1583 | 0 | 2006 | 0 | 3433 | 4003 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | | 0.722 | | | 0.925 | | 0.195 | | | 0.347 | | |
| Satd. Flow (perm) | 0 | 1345 | 1583 | 0 | 1869 | 0 | 705 | 4003 | 0 | 646 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 73 | | 28 | | | 2 | | | | 203 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 45 |
| Link Distance (ft) | | 1713 | | | 375 | | | 2482 | | | | 971 |
| Travel Time (s) | | 29.2 | | | 6.4 | | | 42.3 | | | | 14.7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 454 | 78 | 602 | 12 | 48 | 28 | 323 | 654 | 10 | 50 | 1013 | 482 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 532 | 602 | 0 | 88 | 0 | 323 | 664 | 0 | 50 | 1013 | 482 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | 6 |

Lanes, Volumes, Timings
 12: S Main St & W Torrance Blvd/E Torrance Blvd

1/3/2019

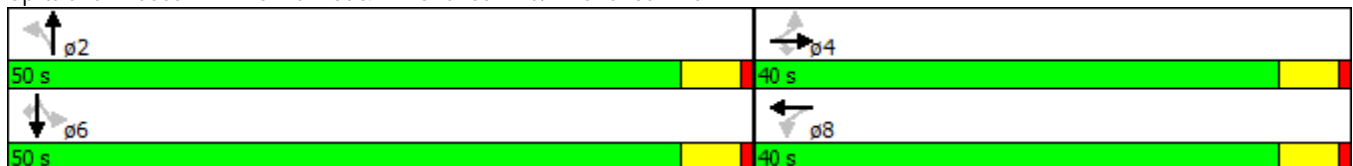


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | | 50.0 | 50.0 | | 50.0 | 50.0 | 50.0 |
| Total Split (%) | 44.4% | 44.4% | 44.4% | 44.4% | 44.4% | | 55.6% | 55.6% | | 55.6% | 55.6% | 55.6% |
| Maximum Green (s) | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | | 45.0 | 45.0 | | 45.0 | 45.0 | 45.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effect Green (s) | | 35.0 | 35.0 | | 35.0 | | 45.0 | 45.0 | | 45.0 | 45.0 | 45.0 |
| Actuated g/C Ratio | | 0.39 | 0.39 | | 0.39 | | 0.50 | 0.50 | | 0.50 | 0.50 | 0.50 |
| v/c Ratio | | 1.02 | 0.91 | | 0.12 | | 0.92 | 0.33 | | 0.15 | 0.57 | 0.54 |
| Control Delay | | 73.3 | 43.5 | | 13.1 | | 55.0 | 14.0 | | 13.8 | 17.4 | 11.0 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | | 73.3 | 43.5 | | 13.1 | | 55.0 | 14.0 | | 13.8 | 17.4 | 11.0 |
| LOS | | E | D | | B | | E | B | | B | B | B |
| Approach Delay | | 57.5 | | | 13.1 | | 27.4 | | | | 15.3 | |
| Approach LOS | | E | | | B | | C | | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.02 |
| Intersection Signal Delay: | 31.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 80.3% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 12: S Main St & W Torrance Blvd/E Torrance Blvd



Lanes, Volumes, Timings
13: Lenardo Rd/I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 197 | 385 | 37 | 478 | 1009 | 182 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | | 0 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 2 | 1 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.97 | 1.00 |
| Fr _t | | | | 0.850 | | 0.850 |
| Fl _t Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 3539 | 1863 | 1583 | 3433 | 1583 |
| Fl _t Permitted | 0.731 | | | | 0.950 | |
| Satd. Flow (perm) | 1362 | 3539 | 1863 | 1583 | 3433 | 1583 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 520 | | 198 |
| Link Speed (mph) | | 35 | 40 | | 40 | |
| Link Distance (ft) | | 701 | 533 | | 434 | |
| Travel Time (s) | | 13.7 | 9.1 | | 7.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 214 | 418 | 40 | 520 | 1097 | 198 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 214 | 418 | 40 | 520 | 1097 | 198 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 12 | 12 | | 24 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 12 | 12 | | 12 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector (ft) | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | 94 | | | |
| Detector 2 Size(ft) | | 6 | 6 | | | |
| Detector 2 Type | | Cl+Ex | Cl+Ex | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | 0.0 | 0.0 | | | |
| Turn Type | Perm | NA | NA | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |

Lanes, Volumes, Timings
 13: Lenardo Rd/I-405 SB Ramps

1/3/2019

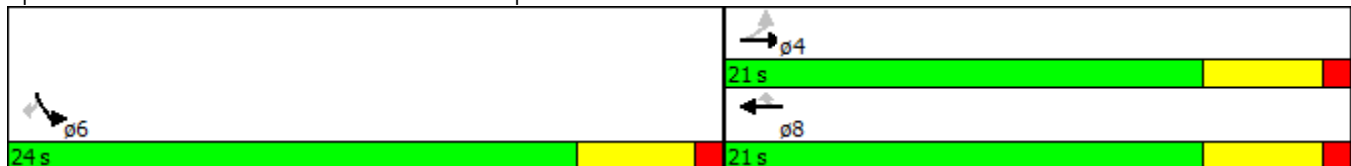


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 24.0 | 24.0 |
| Total Split (%) | 46.7% | 46.7% | 46.7% | 46.7% | 53.3% | 53.3% |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 19.0 | 19.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 11.9 | 11.9 | 11.9 | 11.9 | 19.1 | 19.1 |
| Actuated g/C Ratio | 0.29 | 0.29 | 0.29 | 0.29 | 0.46 | 0.46 |
| v/c Ratio | 0.54 | 0.41 | 0.07 | 0.63 | 0.69 | 0.23 |
| Control Delay | 17.7 | 12.7 | 10.3 | 5.3 | 12.4 | 2.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 17.7 | 12.7 | 10.3 | 5.3 | 12.4 | 2.6 |
| LOS | B | B | B | A | B | A |
| Approach Delay | | 14.4 | 5.7 | | 10.9 | |
| Approach LOS | | B | A | | B | |

Intersection Summary

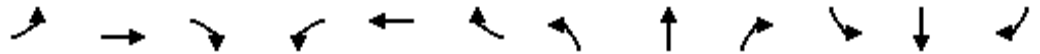
Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 41.1
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 10.6
 Intersection Capacity Utilization 54.7%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 13: Lenardo Rd/I-405 SB Ramps



Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

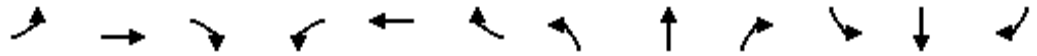
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | ↖↖ | ↗↗ | ↘ | | | | ↖ | ↗↘ | | | ↗↗ | ↘ |
| Volume (vph) | 702 | 517 | 398 | 0 | 0 | 0 | 96 | 1393 | 221 | 0 | 1310 | 916 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 200 | | 150 | 0 | | 0 | 160 | | 0 | 0 | | 120 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Fr _t | | | 0.850 | | | | | 0.979 | | | | 0.850 |
| Fl _t Protected | 0.950 | | | | | | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 1770 | 3465 | 0 | 0 | 3539 | 1583 |
| Fl _t Permitted | 0.950 | | | | | | 0.116 | | | | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 0 | 0 | 0 | 216 | 3465 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 41 | | | | | 44 | | | | 996 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 533 | | | 422 | | | 1230 | | | | 386 |
| Travel Time (s) | | 9.1 | | | 7.2 | | | 24.0 | | | | 7.5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 763 | 562 | 433 | 0 | 0 | 0 | 104 | 1514 | 240 | 0 | 1424 | 996 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 763 | 562 | 433 | 0 | 0 | 0 | 104 | 1754 | 0 | 0 | 1424 | 996 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | | | | 1 | 2 | | | 2 | 1 |
| Detector Template | Left | Thru | Right | | | | Left | Thru | | | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | | | | 20 | 100 | | | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | | | | 20 | 6 | | | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex | Cl+Ex | | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | | | | Perm | NA | | | NA | Perm |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | | 2 | | | | | 6 |
| Detector Phase | 4 | 4 | 4 | | | | 2 | 2 | | | 6 | 6 |

Lanes, Volumes, Timings
 14: S Avalon Blvd & I-405 SB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-----|-----|-----|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | | | | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | 24.0 | 24.0 | 24.0 | | | | 46.0 | 46.0 | | | 46.0 | 46.0 |
| Total Split (%) | 34.3% | 34.3% | 34.3% | | | | 65.7% | 65.7% | | | 65.7% | 65.7% |
| Maximum Green (s) | 19.0 | 19.0 | 19.0 | | | | 41.0 | 41.0 | | | 41.0 | 41.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | | | | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | None | None | None | | | | Max | Max | | | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | | | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | | | 0 | 0 | | | 0 | 0 |
| Act Effct Green (s) | 19.0 | 19.0 | 19.0 | | | | 41.0 | 41.0 | | | 41.0 | 41.0 |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.27 | | | | 0.59 | 0.59 | | | 0.59 | 0.59 |
| v/c Ratio | 0.82 | 0.59 | 0.94 | | | | 0.83 | 0.86 | | | 0.69 | 0.74 |
| Control Delay | 32.9 | 25.0 | 55.7 | | | | 64.1 | 17.4 | | | 12.2 | 4.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | | | 2.1 | 0.6 |
| Total Delay | 32.9 | 25.0 | 55.7 | | | | 64.1 | 17.4 | | | 14.3 | 5.2 |
| LOS | C | C | E | | | | E | B | | | B | A |
| Approach Delay | | 36.0 | | | | | | 20.0 | | | 10.6 | |
| Approach LOS | | D | | | | | | C | | | B | |

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 20.9
 Intersection LOS: C
 Intersection Capacity Utilization 74.1%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 14: S Avalon Blvd & I-405 SB Ramps



Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | ↙ | ↖ | ↗ | ↘ | ↑ | | | ↑↑↑ | ↗ |
| Volume (vph) | 0 | 0 | 0 | 363 | 0 | 870 | 636 | 1020 | 0 | 0 | 1869 | 631 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 1 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 |
| Frt | | | | | | 0.850 | | | | | | 0.850 |
| Flt Protected | | | | 0.950 | 0.950 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1681 | 1681 | 1583 | 3433 | 3539 | 0 | 0 | 5085 | 1583 |
| Flt Permitted | | | | 0.950 | 0.950 | | 0.211 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1681 | 1681 | 1583 | 762 | 3539 | 0 | 0 | 5085 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 48 | | | | | | 686 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 346 | | | 390 | | | 386 | | | | 2946 |
| Travel Time (s) | | 5.9 | | | 6.6 | | | 7.5 | | | | 57.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 395 | 0 | 946 | 691 | 1109 | 0 | 0 | 2032 | 686 |
| Shared Lane Traffic (%) | | | | 50% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 197 | 198 | 946 | 691 | 1109 | 0 | 0 | 2032 | 686 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | 1 | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | Right | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | 20 | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | 20 | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Perm | NA | Perm | Perm | NA | | | | NA |
| Protected Phases | | | | | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | | 8 | | 8 | 2 | | | | | 6 |
| Detector Phase | | | | 8 | 8 | 8 | 2 | 2 | | | | 6 |

Lanes, Volumes, Timings
 15: S Avalon Blvd & I-405 NB Ramps

1/3/2019

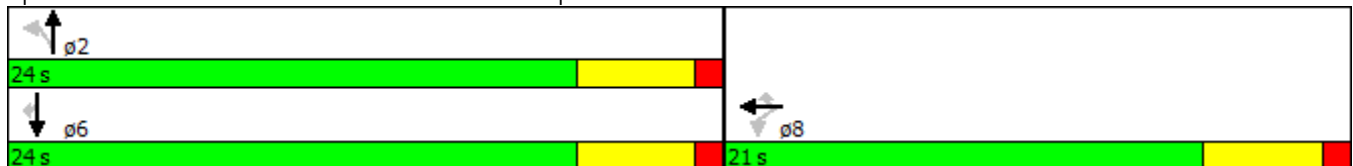


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Minimum Split (s) | | | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | | 21.0 | 21.0 |
| Total Split (s) | | | | 21.0 | 21.0 | 21.0 | 24.0 | 24.0 | | | 24.0 | 24.0 |
| Total Split (%) | | | | 46.7% | 46.7% | 46.7% | 53.3% | 53.3% | | | 53.3% | 53.3% |
| Maximum Green (s) | | | | 16.0 | 16.0 | 16.0 | 19.0 | 19.0 | | | 19.0 | 19.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Recall Mode | | | | None | None | None | Max | Max | | | Max | Max |
| Walk Time (s) | | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Act Effect Green (s) | | | | 16.0 | 16.0 | 16.0 | 19.0 | 19.0 | | | 19.0 | 19.0 |
| Actuated g/C Ratio | | | | 0.36 | 0.36 | 0.36 | 0.42 | 0.42 | | | 0.42 | 0.42 |
| v/c Ratio | | | | 0.33 | 0.33 | 1.60 | 2.15 | 0.74 | | | 0.95 | 0.64 |
| Control Delay | | | | 12.5 | 12.6 | 295.0 | 546.7 | 14.7 | | | 25.0 | 4.3 |
| Queue Delay | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | | | | 12.5 | 12.6 | 295.0 | 546.7 | 14.7 | | | 25.0 | 4.3 |
| LOS | | | | B | B | F | F | B | | | C | A |
| Approach Delay | | | | | 211.8 | | | 218.9 | | | 19.8 | |
| Approach LOS | | | | | F | | | F | | | B | |

Intersection Summary











| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 45 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 2.15 |
| Intersection Signal Delay: | 124.9 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 90.4% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 15: S Avalon Blvd & I-405 NB Ramps



Lanes, Volumes, Timings
16: S Main St & E 213th St

1/3/2019

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Volume (vph) | 235 | 188 | 677 | 271 | 371 | 1081 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 16 | 16 | 16 | 16 | 12 | 12 |
| Storage Length (ft) | 0 | 0 | | 0 | 90 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt | 0.940 | | 0.957 | | | |
| Flt Protected | 0.973 | | | | 0.950 | |
| Satd. Flow (prot) | 1931 | 0 | 3839 | 0 | 1770 | 3539 |
| Flt Permitted | 0.973 | | | | 0.246 | |
| Satd. Flow (perm) | 1931 | 0 | 3839 | 0 | 458 | 3539 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 45 | | 165 | | | |
| Link Speed (mph) | 30 | | 35 | | | 45 |
| Link Distance (ft) | 4544 | | 1360 | | | 2482 |
| Travel Time (s) | 103.3 | | 26.5 | | | 37.6 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 255 | 204 | 736 | 295 | 403 | 1175 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 459 | 0 | 1031 | 0 | 403 | 1175 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 28 | | 24 | | | 24 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 12 | | 12 | | | 12 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | | 2 | | 1 | 2 |
| Detector Template | Left | | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | | 6 | | 20 | 6 |
| Detector 1 Type | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Perm | | NA | | Perm | NA |
| Protected Phases | | | 2 | | | 6 |
| Permitted Phases | 8 | | | | 6 | |

Lanes, Volumes, Timings
 16: S Main St & E 213th St

1/3/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|-----|-------|-----|-------|-------|
| Detector Phase | 8 | | 2 | | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | | 21.0 | | 21.0 | 21.0 |
| Total Split (s) | 21.0 | | 59.0 | | 59.0 | 59.0 |
| Total Split (%) | 26.3% | | 73.8% | | 73.8% | 73.8% |
| Maximum Green (s) | 16.0 | | 54.0 | | 54.0 | 54.0 |
| Yellow Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 |
| Recall Mode | None | | Max | | Max | Max |
| Walk Time (s) | 5.0 | | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | 0 | | 0 | 0 |
| Act Effect Green (s) | 16.0 | | 54.0 | | 54.0 | 54.0 |
| Actuated g/C Ratio | 0.20 | | 0.68 | | 0.68 | 0.68 |
| v/c Ratio | 1.09 | | 0.39 | | 1.30 | 0.49 |
| Control Delay | 99.8 | | 5.2 | | 177.9 | 7.2 |
| Queue Delay | 0.0 | | 0.0 | | 0.0 | 0.0 |
| Total Delay | 99.8 | | 5.2 | | 177.9 | 7.2 |
| LOS | F | | A | | F | A |
| Approach Delay | 99.8 | | 5.2 | | | 50.8 |
| Approach LOS | F | | A | | | D |

Intersection Summary

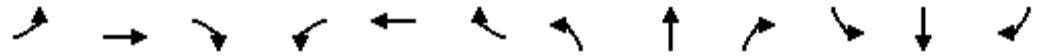
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Natural Cycle: | 80 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.30 |
| Intersection Signal Delay: | 42.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 85.0% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 16: S Main St & E 213th St



Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 263 | 304 | 113 | 143 | 229 | 202 | 148 | 1317 | 165 | 103 | 1377 | 189 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 | 12 | 16 | 16 |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 70 | | 0 | 120 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.959 | | | 0.930 | | | 0.983 | | | | 0.982 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 2025 | 0 | 1770 | 3730 | 0 | 1770 | 5665 | 0 | 1770 | 5660 | 0 |
| Flt Permitted | 0.483 | | | 0.348 | | | 0.211 | | | 0.211 | | |
| Satd. Flow (perm) | 900 | 2025 | 0 | 648 | 3730 | 0 | 393 | 5665 | 0 | 393 | 5660 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 8 | | | 10 | | | 60 | | | | 68 |
| Link Speed (mph) | | 30 | | | 30 | | | 35 | | | | 35 |
| Link Distance (ft) | | 4544 | | | 967 | | | 1397 | | | | 1230 |
| Travel Time (s) | | 103.3 | | | 22.0 | | | 27.2 | | | | 24.0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 286 | 330 | 123 | 155 | 249 | 220 | 161 | 1432 | 179 | 112 | 1497 | 205 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 286 | 453 | 0 | 155 | 469 | 0 | 161 | 1611 | 0 | 112 | 1702 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 | 1.00 | 0.85 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |

Lanes, Volumes, Timings
 17: S Avalon Blvd & E 213th St

1/3/2019

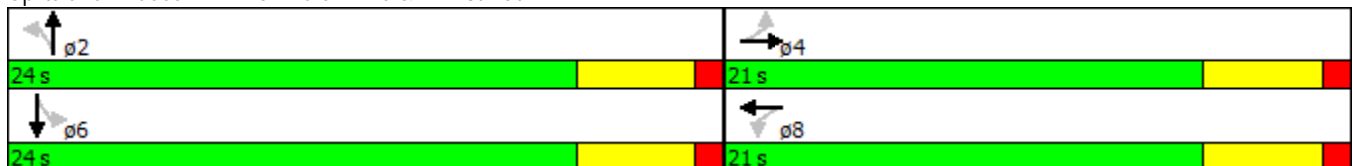


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 46.7% | 46.7% | | 46.7% | 46.7% | | 53.3% | 53.3% | | 53.3% | 53.3% | |
| Maximum Green (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 15.6 | 15.6 | | 15.6 | 15.6 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Actuated g/C Ratio | 0.35 | 0.35 | | 0.35 | 0.35 | | 0.43 | 0.43 | | 0.43 | 0.43 | |
| v/c Ratio | 0.91 | 0.64 | | 0.69 | 0.36 | | 0.96 | 0.66 | | 0.67 | 0.69 | |
| Control Delay | 52.7 | 16.7 | | 33.2 | 11.5 | | 85.1 | 11.4 | | 37.1 | 11.9 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 52.7 | 16.7 | | 33.2 | 11.5 | | 85.1 | 11.4 | | 37.1 | 11.9 | |
| LOS | D | B | | C | B | | F | B | | D | B | |
| Approach Delay | | 30.7 | | | 16.8 | | | 18.1 | | | 13.5 | |
| Approach LOS | | C | | | B | | | B | | | B | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 44.6 |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.96 |
| Intersection Signal Delay: | 18.1 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 86.5% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 17: S Avalon Blvd & E 213th St



Lanes, Volumes, Timings
18: S Figueroa St & W Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 135 | 653 | 522 | 62 | 557 | 34 | 239 | 357 | 125 | 91 | 468 | 174 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 213 | | 75 | 152 | | 0 | 230 | | 0 | 240 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 2 | | 0 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 |
| Frt | | | 0.850 | | 0.991 | | | 0.961 | | | 0.959 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3507 | 0 | 3433 | 3401 | 0 | 3433 | 3394 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3507 | 0 | 3433 | 3401 | 0 | 3433 | 3394 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 289 | | 10 | | | 79 | | | 87 | |
| Link Speed (mph) | | 35 | | | 35 | | | 40 | | | 40 | |
| Link Distance (ft) | | 1243 | | | 2441 | | | 713 | | | 3767 | |
| Travel Time (s) | | 24.2 | | | 47.6 | | | 12.2 | | | 64.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 147 | 710 | 567 | 67 | 605 | 37 | 260 | 388 | 136 | 99 | 509 | 189 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 147 | 710 | 567 | 67 | 642 | 0 | 260 | 524 | 0 | 99 | 698 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |

Lanes, Volumes, Timings
 18: S Figueroa St & W Carson St

1/3/2019

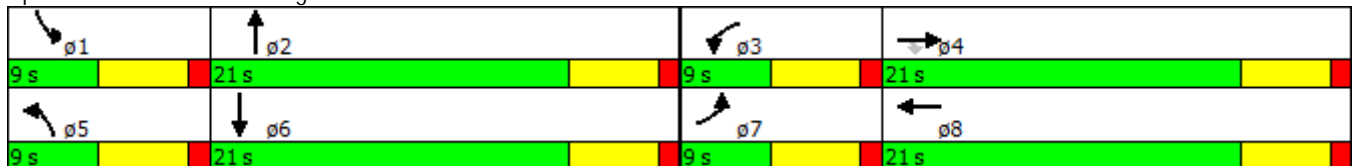


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (%) | 15.0% | 35.0% | 35.0% | 15.0% | 35.0% | | 15.0% | 35.0% | | 15.0% | 35.0% | |
| Maximum Green (s) | 4.0 | 16.0 | 16.0 | 4.0 | 16.0 | | 4.0 | 16.0 | | 4.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 4.0 | 18.4 | 18.4 | 4.0 | 14.7 | | 4.0 | 17.9 | | 4.0 | 16.0 | |
| Actuated g/C Ratio | 0.07 | 0.31 | 0.31 | 0.07 | 0.25 | | 0.07 | 0.30 | | 0.07 | 0.27 | |
| v/c Ratio | 1.23 | 0.64 | 0.82 | 0.56 | 0.73 | | 1.12 | 0.48 | | 0.42 | 0.71 | |
| Control Delay | 185.0 | 21.8 | 22.7 | 47.6 | 25.2 | | 125.1 | 16.9 | | 32.8 | 21.6 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 185.0 | 21.8 | 22.7 | 47.6 | 25.2 | | 125.1 | 16.9 | | 32.8 | 21.6 | |
| LOS | F | C | C | D | C | | F | B | | C | C | |
| Approach Delay | | 39.0 | | | 27.3 | | | 52.8 | | | 23.0 | |
| Approach LOS | | D | | | C | | | D | | | C | |

Intersection Summary

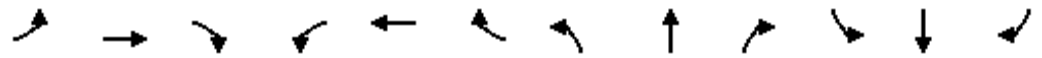
Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 58.8
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 36.3
 Intersection LOS: D
 Intersection Capacity Utilization 66.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 18: S Figueroa St & W Carson St



Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 133 | 508 | 47 | 116 | 475 | 59 | 189 | 642 | 175 | 175 | 883 | 185 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 210 | | 70 | 220 | | 70 | 115 | | 0 | 175 | | 500 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | | | 0.850 | | 0.968 | | | 0.974 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | 1770 | 4923 | 0 | 1770 | 4953 | 0 |
| Flt Permitted | 0.398 | | | 0.366 | | | 0.212 | | | 0.305 | | |
| Satd. Flow (perm) | 741 | 3539 | 1583 | 682 | 3539 | 1583 | 395 | 4923 | 0 | 568 | 4953 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 51 | | | 64 | | 88 | | | 104 | |
| Link Speed (mph) | | 35 | | | 35 | | | 35 | | | 35 | |
| Link Distance (ft) | | 2441 | | | 4293 | | | 978 | | | 1360 | |
| Travel Time (s) | | 47.6 | | | 83.6 | | | 19.1 | | | 26.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 145 | 552 | 51 | 126 | 516 | 64 | 205 | 698 | 190 | 190 | 960 | 201 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 145 | 552 | 51 | 126 | 516 | 64 | 205 | 888 | 0 | 190 | 1161 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | | 6 | | |

Lanes, Volumes, Timings
 19: S Main St & W Carson St/E Carson St

1/3/2019

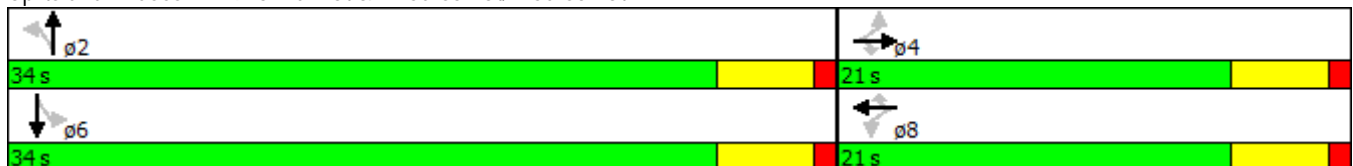


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | 21.0 | |
| Total Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 34.0 | 34.0 | | 34.0 | 34.0 | |
| Total Split (%) | 38.2% | 38.2% | 38.2% | 38.2% | 38.2% | 38.2% | 61.8% | 61.8% | | 61.8% | 61.8% | |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 14.1 | 14.1 | 14.1 | 14.1 | 14.1 | 14.1 | 29.1 | 29.1 | | 29.1 | 29.1 | |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.55 | 0.55 | | 0.55 | 0.55 | |
| v/c Ratio | 0.74 | 0.59 | 0.11 | 0.70 | 0.55 | 0.14 | 0.95 | 0.33 | | 0.61 | 0.42 | |
| Control Delay | 43.7 | 19.8 | 5.9 | 41.5 | 19.2 | 5.6 | 71.0 | 6.6 | | 20.9 | 7.3 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 43.7 | 19.8 | 5.9 | 41.5 | 19.2 | 5.6 | 71.0 | 6.6 | | 20.9 | 7.3 | |
| LOS | D | B | A | D | B | A | E | A | | C | A | |
| Approach Delay | | 23.5 | | | 21.9 | | | 18.7 | | | 9.2 | |
| Approach LOS | | C | | | C | | | B | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 53.2 |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 16.9 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 68.8% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 19: S Main St & W Carson St/E Carson St



Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 172 | 734 | 74 | 501 | 403 | 123 | 78 | 1108 | 478 | 254 | 1155 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 2 | | 0 | 2 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 0.95 | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | 0.986 | | | 0.965 | | | 0.955 | | | 0.986 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3490 | 0 | 3433 | 3415 | 0 | 1770 | 4856 | 0 | 1770 | 5014 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3490 | 0 | 3433 | 3415 | 0 | 1770 | 4856 | 0 | 1770 | 5014 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 7 | | | 31 | | | 90 | | | 16 | |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | 1397 | |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | 27.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 187 | 798 | 80 | 545 | 438 | 134 | 85 | 1204 | 520 | 276 | 1255 | 134 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 187 | 878 | 0 | 545 | 572 | 0 | 85 | 1724 | 0 | 276 | 1389 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |

Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019

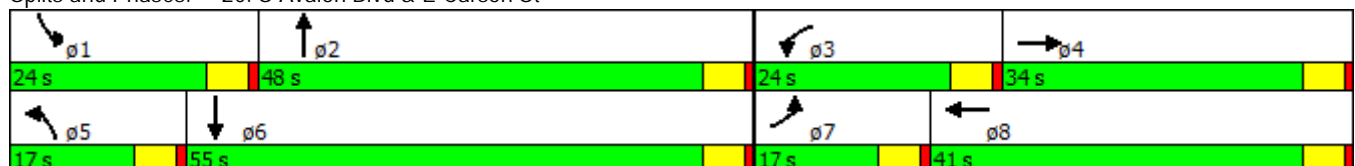


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | |
| Total Split (s) | 17.0 | 34.0 | | 24.0 | 41.0 | | 17.0 | 48.0 | | 24.0 | 55.0 | |
| Total Split (%) | 13.1% | 26.2% | | 18.5% | 31.5% | | 13.1% | 36.9% | | 18.5% | 42.3% | |
| Maximum Green (s) | 12.0 | 29.0 | | 19.0 | 36.0 | | 12.0 | 43.0 | | 19.0 | 50.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 11.2 | 29.0 | | 19.0 | 36.8 | | 10.5 | 43.0 | | 19.0 | 51.5 | |
| Actuated g/C Ratio | 0.09 | 0.22 | | 0.15 | 0.28 | | 0.08 | 0.33 | | 0.15 | 0.40 | |
| v/c Ratio | 0.63 | 1.12 | | 1.09 | 0.58 | | 0.60 | 1.03 | | 1.07 | 0.70 | |
| Control Delay | 67.4 | 116.5 | | 117.3 | 40.6 | | 74.7 | 71.9 | | 127.7 | 34.8 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 67.4 | 116.5 | | 117.3 | 40.6 | | 74.7 | 71.9 | | 127.7 | 34.8 | |
| LOS | E | F | | F | D | | E | E | | F | C | |
| Approach Delay | | 107.8 | | | 78.0 | | | 72.0 | | | 50.2 | |
| Approach LOS | | F | | | E | | | E | | | D | |

Intersection Summary

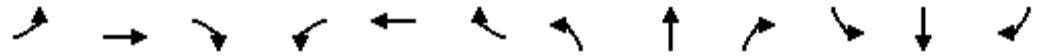
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 130 |
| Actuated Cycle Length: | 130 |
| Natural Cycle: | 130 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.12 |
| Intersection Signal Delay: | 73.5 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 99.8% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St



Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 16 | 1150 | 986 | 135 | 1158 | 0 | 124 | 0 | 71 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 50 | | 180 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | 0.850 | | | | | | 0.850 | | | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (prot) | 1593 | 3185 | 1425 | 1593 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Fl _t Permitted | 0.198 | | | 0.184 | | | 0.950 | | | | | |
| Satd. Flow (perm) | 332 | 3185 | 1425 | 308 | 4577 | 0 | 1593 | 0 | 1425 | 0 | 0 | 1676 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 1072 | | | | | | 77 | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | | 40 |
| Link Distance (ft) | | 2121 | | | 469 | | | 428 | | | | 162 |
| Travel Time (s) | | 36.2 | | | 8.0 | | | 7.3 | | | | 2.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 17 | 1250 | 1072 | 147 | 1259 | 0 | 135 | 0 | 77 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 17 | 1250 | 1072 | 147 | 1259 | 0 | 135 | 0 | 77 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | | 1 | | | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | | Right | | | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | | 20 | | | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | | 20 | | | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | | | | | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | | Perm | | | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 2 | | 2 | | | 6 |

Lanes, Volumes, Timings
 21: I-405 SB Ramps & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|-----|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (s) | 49.0 | 49.0 | 49.0 | 49.0 | 49.0 | | 21.0 | | 21.0 | | | 21.0 |
| Total Split (%) | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | 30.0% | | 30.0% | | | 30.0% |
| Maximum Green (s) | 44.0 | 44.0 | 44.0 | 44.0 | 44.0 | | 16.0 | | 16.0 | | | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | | 1.0 | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | 3.0 |
| Recall Mode | None | None | None | None | None | | Min | | Min | | | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | | 5.0 | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 11.0 | | 11.0 | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | | | 0 |
| Act Effect Green (s) | 38.9 | 38.9 | 38.9 | 38.9 | 38.9 | | 10.5 | | 10.5 | | | |
| Actuated g/C Ratio | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | | 0.18 | | 0.18 | | | |
| v/c Ratio | 0.08 | 0.60 | 0.82 | 0.73 | 0.42 | | 0.48 | | 0.25 | | | |
| Control Delay | 5.6 | 7.8 | 7.6 | 35.2 | 5.7 | | 30.0 | | 8.5 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | | | |
| Total Delay | 5.6 | 7.8 | 7.6 | 35.2 | 5.7 | | 30.0 | | 8.5 | | | |
| LOS | A | A | A | D | A | | C | | A | | | |
| Approach Delay | | 7.7 | | | | | | | | | | 8.8 |
| Approach LOS | | A | | | | | | | | | | A |

Intersection Summary

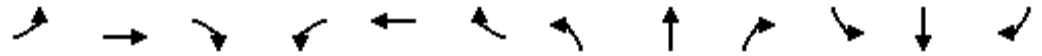
Area Type: CBD
 Cycle Length: 70
 Actuated Cycle Length: 59.8
 Natural Cycle: 70
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 8.8
 Intersection Capacity Utilization 84.5%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service E

Splits and Phases: 21: I-405 SB Ramps & E Carson St



Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

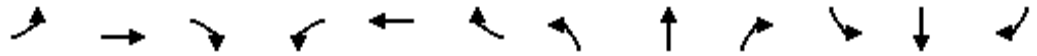
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 194 | 1018 | 36 | 23 | 749 | 417 | 36 | 20 | 20 | 53 | 8 | 494 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 70 | | 0 | 100 | | 180 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.969 | | | 0.959 | |
| Satd. Flow (prot) | 1770 | 3522 | 0 | 1770 | 3539 | 1583 | 0 | 1805 | 1583 | 0 | 1786 | 1583 |
| Flt Permitted | 0.283 | | | 0.151 | | | | 0.834 | | | 0.771 | |
| Satd. Flow (perm) | 527 | 3522 | 0 | 281 | 3539 | 1583 | 0 | 1554 | 1583 | 0 | 1436 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 8 | | | | 453 | | | 36 | | | 118 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 469 | | | 2039 | | | 158 | | | 364 | |
| Travel Time (s) | | 8.0 | | | 34.8 | | | 2.7 | | | 6.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 211 | 1107 | 39 | 25 | 814 | 453 | 39 | 22 | 22 | 58 | 9 | 537 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 211 | 1146 | 0 | 25 | 814 | 453 | 0 | 61 | 22 | 0 | 67 | 537 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | 6 |

Lanes, Volumes, Timings
 22: Recreation Rd/I-405 NB Ramps & E Carson St

1/3/2019

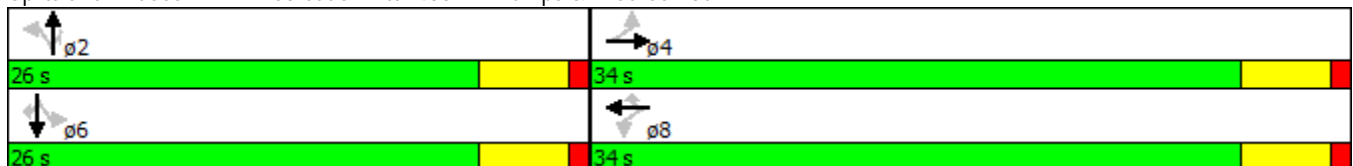


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | 34.0 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 |
| Total Split (%) | 56.7% | 56.7% | | 56.7% | 56.7% | 56.7% | 43.3% | 43.3% | 43.3% | 43.3% | 43.3% | 43.3% |
| Maximum Green (s) | 29.0 | 29.0 | | 29.0 | 29.0 | 29.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | None | Max | Max | Max | Max | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 26.5 | 26.5 | | 26.5 | 26.5 | 26.5 | | 21.2 | 21.2 | | 21.2 | 21.2 |
| Actuated g/C Ratio | 0.46 | 0.46 | | 0.46 | 0.46 | 0.46 | | 0.37 | 0.37 | | 0.37 | 0.37 |
| v/c Ratio | 0.88 | 0.71 | | 0.20 | 0.50 | 0.47 | | 0.11 | 0.04 | | 0.13 | 0.82 |
| Control Delay | 52.2 | 15.1 | | 13.4 | 12.0 | 2.9 | | 13.9 | 3.8 | | 14.2 | 27.0 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 52.2 | 15.1 | | 13.4 | 12.0 | 2.9 | | 13.9 | 3.8 | | 14.2 | 27.0 |
| LOS | D | B | | B | B | A | | B | A | | B | C |
| Approach Delay | | 20.8 | | | 8.8 | | | 11.2 | | | 25.6 | |
| Approach LOS | | C | | | A | | | B | | | C | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 57.7 |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.88 |
| Intersection Signal Delay: | 16.8 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 67.1% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 22: Recreation Rd/I-405 NB Ramps & E Carson St



Future (Year 2023) + Development + Mitigation

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 154 | 414 | 101 | 327 | 1205 | 172 | 202 | 748 | 506 | 58 | 390 | 450 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 2 | | 0 | 1 | | 1 | 2 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frt | | 0.971 | | | 0.981 | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4938 | 0 | 3433 | 3472 | 0 | 1770 | 3539 | 1583 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4938 | 0 | 3433 | 3472 | 0 | 1770 | 3539 | 1583 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 63 | | | 19 | | | | 390 | | | 240 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | | 40 |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | | 2451 |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | | 41.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 167 | 450 | 110 | 355 | 1310 | 187 | 220 | 813 | 550 | 63 | 424 | 489 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 167 | 560 | 0 | 355 | 1497 | 0 | 220 | 813 | 550 | 63 | 424 | 489 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

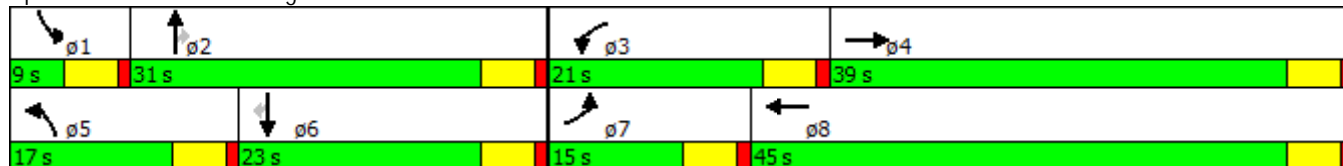


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-------|------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 15.0 | 39.0 | | 21.0 | 45.0 | | 17.0 | 31.0 | 31.0 | 9.0 | 23.0 | 23.0 |
| Total Split (%) | 15.0% | 39.0% | | 21.0% | 45.0% | | 17.0% | 31.0% | 31.0% | 9.0% | 23.0% | 23.0% |
| Maximum Green (s) | 10.0 | 34.0 | | 16.0 | 40.0 | | 12.0 | 26.0 | 26.0 | 4.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 10.0 | 35.5 | | 14.5 | 40.0 | | 12.0 | 27.8 | 27.8 | 4.0 | 18.0 | 18.0 |
| Actuated g/C Ratio | 0.10 | 0.36 | | 0.14 | 0.40 | | 0.12 | 0.28 | 0.28 | 0.04 | 0.18 | 0.18 |
| v/c Ratio | 0.94 | 0.31 | | 0.71 | 1.07 | | 1.04 | 0.83 | 0.76 | 0.46 | 0.67 | 1.02 |
| Control Delay | 100.9 | 21.5 | | 49.0 | 74.8 | | 116.6 | 43.0 | 18.0 | 58.0 | 44.0 | 67.5 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 100.9 | 21.5 | | 49.0 | 74.8 | | 116.6 | 43.0 | 18.0 | 58.0 | 44.0 | 67.5 |
| LOS | F | C | | D | E | | F | D | B | E | D | E |
| Approach Delay | | 39.7 | | | 69.9 | | | 44.5 | | | 56.7 | |
| Approach LOS | | D | | | E | | | D | | | E | |

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 55.3
 Intersection LOS: E
 Intersection Capacity Utilization 90.3%
 ICU Level of Service E
 Analysis Period (min) 15

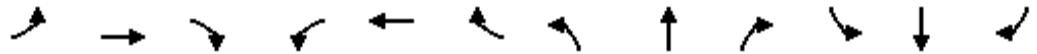
Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings

6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 203 | 899 | 212 | 237 | 1294 | 74 | 178 | 595 | 254 | 72 | 538 | 190 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 1 | 2 | | 0 | 2 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | 0.992 | | | | 0.850 | | 0.961 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 5085 | 1583 | 3433 | 5045 | 0 | 3433 | 3539 | 1583 | 1770 | 4887 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 5085 | 1583 | 3433 | 5045 | 0 | 3433 | 3539 | 1583 | 1770 | 4887 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 208 | | 10 | | | | 276 | | 94 | |
| Link Speed (mph) | | 45 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1251 | | | 1668 | | | 534 | | | 2341 | |
| Travel Time (s) | | 19.0 | | | 25.3 | | | 8.1 | | | 35.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 221 | 977 | 230 | 258 | 1407 | 80 | 193 | 647 | 276 | 78 | 585 | 207 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 221 | 977 | 230 | 258 | 1487 | 0 | 193 | 647 | 276 | 78 | 792 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

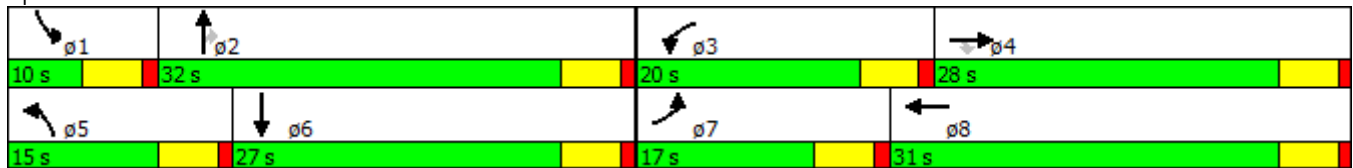


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | |
| Total Split (s) | 17.0 | 28.0 | 28.0 | 20.0 | 31.0 | | 15.0 | 32.0 | 32.0 | 10.0 | 27.0 | |
| Total Split (%) | 18.9% | 31.1% | 31.1% | 22.2% | 34.4% | | 16.7% | 35.6% | 35.6% | 11.1% | 30.0% | |
| Maximum Green (s) | 12.0 | 23.0 | 23.0 | 15.0 | 26.0 | | 10.0 | 27.0 | 27.0 | 5.0 | 22.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | Max | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | 11.0 | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | 0 | | 0 | |
| Act Effect Green (s) | 12.0 | 26.1 | 26.1 | 11.9 | 26.0 | | 9.3 | 28.5 | 28.5 | 5.0 | 22.2 | |
| Actuated g/C Ratio | 0.13 | 0.29 | 0.29 | 0.13 | 0.29 | | 0.10 | 0.32 | 0.32 | 0.06 | 0.25 | |
| v/c Ratio | 0.93 | 0.66 | 0.38 | 0.57 | 1.01 | | 0.54 | 0.57 | 0.40 | 0.79 | 0.62 | |
| Control Delay | 83.8 | 30.9 | 7.3 | 41.1 | 58.4 | | 44.0 | 28.5 | 5.0 | 91.2 | 28.7 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 83.8 | 30.9 | 7.3 | 41.1 | 58.4 | | 44.0 | 28.5 | 5.0 | 91.2 | 28.7 | |
| LOS | F | C | A | D | E | | D | C | A | F | C | |
| Approach Delay | | 35.3 | | | 55.9 | | | 25.4 | | | 34.3 | |
| Approach LOS | | D | | | E | | | C | | | C | |

Intersection Summary

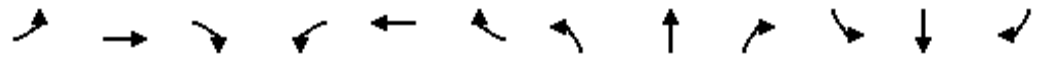
Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 89.5
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 40.0
 Intersection LOS: D
 Intersection Capacity Utilization 75.0%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 394 | 659 | 119 | 186 | 871 | 101 | 311 | 1131 | 301 | 171 | 709 | 391 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 2 | | 0 | 0 | | 0 | 2 | | 1 | 2 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 | 0.97 | 0.91 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.984 | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3483 | 0 | 3433 | 5085 | 1583 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3483 | 0 | 3433 | 5085 | 1583 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 145 | | 14 | | | | 277 | | | 246 |
| Link Speed (mph) | | 45 | | | 45 | | | 35 | | | | 35 |
| Link Distance (ft) | | 3009 | | | 3520 | | | 2946 | | | | 3936 |
| Travel Time (s) | | 45.6 | | | 53.3 | | | 57.4 | | | | 76.7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 428 | 716 | 129 | 202 | 947 | 110 | 338 | 1229 | 327 | 186 | 771 | 425 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 428 | 716 | 129 | 202 | 1057 | 0 | 338 | 1229 | 327 | 186 | 771 | 425 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

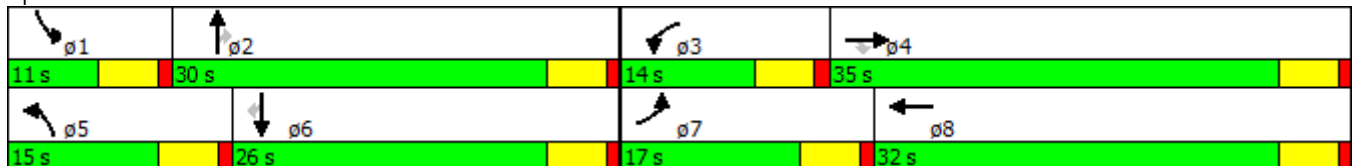


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 17.0 | 35.0 | 35.0 | 14.0 | 32.0 | | 15.0 | 30.0 | 30.0 | 11.0 | 26.0 | 26.0 |
| Total Split (%) | 18.9% | 38.9% | 38.9% | 15.6% | 35.6% | | 16.7% | 33.3% | 33.3% | 12.2% | 28.9% | 28.9% |
| Maximum Green (s) | 12.0 | 30.0 | 30.0 | 9.0 | 27.0 | | 10.0 | 25.0 | 25.0 | 6.0 | 21.0 | 21.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 12.0 | 30.3 | 30.3 | 8.7 | 27.0 | | 10.0 | 25.0 | 25.0 | 6.0 | 21.0 | 21.0 |
| Actuated g/C Ratio | 0.13 | 0.34 | 0.34 | 0.10 | 0.30 | | 0.11 | 0.28 | 0.28 | 0.07 | 0.23 | 0.23 |
| v/c Ratio | 0.94 | 0.60 | 0.21 | 0.61 | 1.00 | | 0.89 | 0.87 | 0.51 | 0.82 | 0.93 | 0.76 |
| Control Delay | 69.0 | 27.5 | 3.9 | 47.2 | 60.7 | | 65.8 | 39.1 | 8.7 | 69.4 | 53.9 | 23.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 69.0 | 27.5 | 3.9 | 47.2 | 60.7 | | 65.8 | 39.1 | 8.7 | 69.4 | 53.9 | 23.6 |
| LOS | E | C | A | D | E | | E | D | A | E | D | C |
| Approach Delay | | 39.1 | | | 58.6 | | | 38.6 | | | 46.7 | |
| Approach LOS | | D | | | E | | | D | | | D | |

Intersection Summary

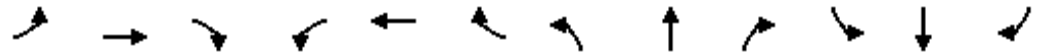
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.00 |
| Intersection Signal Delay: | 45.0 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 83.7% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↕↕↕ | | ↖↖ | ↕↕ | | ↖ | ↕↕ | ↖ | ↖↖ | ↕↕ | |
| Volume (vph) | 119 | 515 | 68 | 505 | 408 | 111 | 68 | 1056 | 518 | 142 | 966 | 59 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 2 | | 0 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 |
| Frt | | 0.982 | | | 0.968 | | | | 0.850 | | 0.991 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4994 | 0 | 3433 | 3426 | 0 | 1770 | 3539 | 1794 | 3433 | 3507 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4994 | 0 | 3433 | 3426 | 0 | 1770 | 3539 | 1794 | 3433 | 3507 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 23 | | | 38 | | | | 354 | | | 7 |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | | 1397 |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | | 27.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 129 | 560 | 74 | 549 | 443 | 121 | 74 | 1148 | 563 | 154 | 1050 | 64 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 129 | 634 | 0 | 549 | 564 | 0 | 74 | 1148 | 563 | 154 | 1114 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 | 1 | | 2 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 | 20 | | 100 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 | 20 | | 6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | | NA |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | | 6 |
| Permitted Phases | | | | | | | | | 2 | | | |

Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019

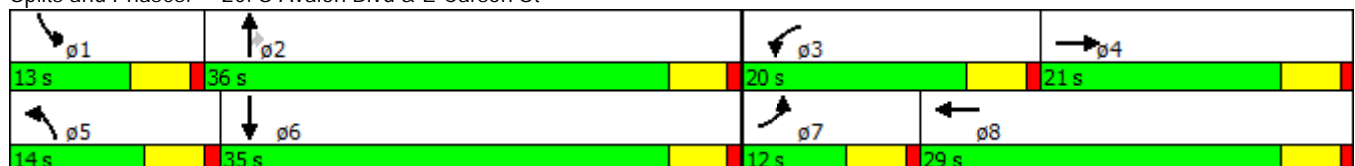


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | |
| Total Split (s) | 12.0 | 21.0 | | 20.0 | 29.0 | | 14.0 | 36.0 | 36.0 | 13.0 | 35.0 | |
| Total Split (%) | 13.3% | 23.3% | | 22.2% | 32.2% | | 15.6% | 40.0% | 40.0% | 14.4% | 38.9% | |
| Maximum Green (s) | 7.0 | 16.0 | | 15.0 | 24.0 | | 9.0 | 31.0 | 31.0 | 8.0 | 30.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | Max | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | 11.0 | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Act Effct Green (s) | 7.0 | 15.1 | | 15.0 | 23.1 | | 8.0 | 31.0 | 31.0 | 7.7 | 32.9 | |
| Actuated g/C Ratio | 0.08 | 0.17 | | 0.17 | 0.26 | | 0.09 | 0.35 | 0.35 | 0.09 | 0.37 | |
| v/c Ratio | 0.93 | 0.73 | | 0.95 | 0.61 | | 0.46 | 0.93 | 0.66 | 0.52 | 0.85 | |
| Control Delay | 103.7 | 39.2 | | 64.7 | 30.2 | | 48.2 | 42.7 | 13.0 | 45.6 | 35.3 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 103.7 | 39.2 | | 64.7 | 30.2 | | 48.2 | 42.7 | 13.0 | 45.6 | 35.3 | |
| LOS | F | D | | E | C | | D | D | B | D | D | |
| Approach Delay | | 50.1 | | | 47.2 | | | 33.6 | | | 36.6 | |
| Approach LOS | | D | | | D | | | C | | | D | |

Intersection Summary

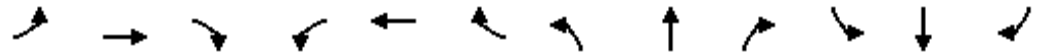
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 88.9 |
| Natural Cycle: | 80 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 40.0 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 75.8% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St



Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

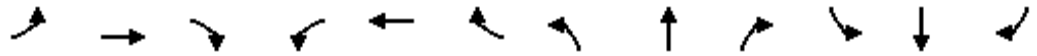
1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 61 | 1361 | 169 | 675 | 1213 | 137 | 55 | 458 | 521 | 220 | 597 | 233 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 60 | | 0 | 240 | | 240 | 240 | | 0 | 245 | | 245 |
| Storage Lanes | 1 | | 0 | 2 | | 0 | 1 | | 1 | 2 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frt | | 0.983 | | | 0.985 | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 4999 | 0 | 3433 | 3486 | 0 | 1770 | 3539 | 1583 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 4999 | 0 | 3433 | 3486 | 0 | 1770 | 3539 | 1583 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 23 | | | 16 | | | | 337 | | | 185 |
| Link Speed (mph) | | 45 | | | 45 | | | 40 | | | | 40 |
| Link Distance (ft) | | 519 | | | 1251 | | | 791 | | | | 2451 |
| Travel Time (s) | | 7.9 | | | 19.0 | | | 13.5 | | | | 41.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 66 | 1479 | 184 | 734 | 1318 | 149 | 60 | 498 | 566 | 239 | 649 | 253 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 66 | 1663 | 0 | 734 | 1467 | 0 | 60 | 498 | 566 | 239 | 649 | 253 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 24 | | | | 24 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
5: S Figueroa St & W Del Amo Blvd

1/3/2019

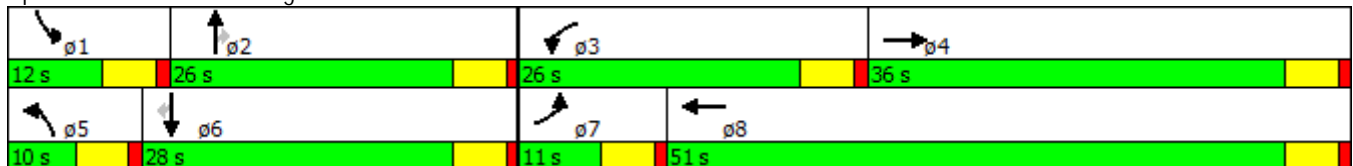


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 11.0 | 36.0 | | 26.0 | 51.0 | | 10.0 | 26.0 | 26.0 | 12.0 | 28.0 | 28.0 |
| Total Split (%) | 11.0% | 36.0% | | 26.0% | 51.0% | | 10.0% | 26.0% | 26.0% | 12.0% | 28.0% | 28.0% |
| Maximum Green (s) | 6.0 | 31.0 | | 21.0 | 46.0 | | 5.0 | 21.0 | 21.0 | 7.0 | 23.0 | 23.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | | None | None | | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 6.0 | 31.0 | | 21.0 | 48.2 | | 5.0 | 21.0 | 21.0 | 7.0 | 25.0 | 25.0 |
| Actuated g/C Ratio | 0.06 | 0.31 | | 0.21 | 0.48 | | 0.05 | 0.21 | 0.21 | 0.07 | 0.25 | 0.25 |
| v/c Ratio | 0.62 | 1.06 | | 1.02 | 0.87 | | 0.68 | 0.67 | 0.95 | 1.00 | 0.73 | 0.47 |
| Control Delay | 71.7 | 75.2 | | 78.5 | 30.6 | | 83.6 | 41.5 | 42.7 | 105.1 | 41.0 | 13.3 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 71.7 | 75.2 | | 78.5 | 30.6 | | 83.6 | 41.5 | 42.7 | 105.1 | 41.0 | 13.3 |
| LOS | E | E | | E | C | | F | D | D | F | D | B |
| Approach Delay | | 75.1 | | | 46.6 | | | 44.3 | | | 48.3 | |
| Approach LOS | | E | | | D | | | D | | | D | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Natural Cycle: | 100 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.06 |
| Intersection Signal Delay: | 54.4 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 85.8% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 5: S Figueroa St & W Del Amo Blvd



Lanes, Volumes, Timings

6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↘ | ↑↑↑ | ↗ | ↘↗ | ↑↑↑ | | ↘↗ | ↑↑ | ↗ | ↘ | ↑↑↑ | |
| Volume (vph) | 248 | 1654 | 343 | 256 | 1212 | 108 | 357 | 501 | 310 | 168 | 838 | 285 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 190 | | 0 | 195 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 1 | 2 | | 0 | 2 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 0.97 | 0.91 | 0.91 | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | 0.850 | | 0.988 | | | | 0.850 | | 0.962 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 5085 | 1583 | 3433 | 5024 | 0 | 3433 | 3539 | 1583 | 1770 | 4892 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 5085 | 1583 | 3433 | 5024 | 0 | 3433 | 3539 | 1583 | 1770 | 4892 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 220 | | 10 | | | | 264 | | 57 | |
| Link Speed (mph) | | 45 | | 45 | | | 45 | | 45 | | 45 | |
| Link Distance (ft) | | 1251 | | 1668 | | | 534 | | 2341 | | | |
| Travel Time (s) | | 19.0 | | 25.3 | | | 8.1 | | 35.5 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 270 | 1798 | 373 | 278 | 1317 | 117 | 388 | 545 | 337 | 183 | 911 | 310 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 270 | 1798 | 373 | 278 | 1434 | 0 | 388 | 545 | 337 | 183 | 1221 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | 24 | | | 24 | | 24 | | 24 | |
| Link Offset(ft) | | 0 | | 0 | | | 0 | | 0 | | 0 | |
| Crosswalk Width(ft) | | 12 | | 12 | | | 12 | | 12 | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | 94 | | | 94 | | 94 | | 94 | |
| Detector 2 Size(ft) | | 6 | | 6 | | | 6 | | 6 | | 6 | |
| Detector 2 Type | | Cl+Ex | | Cl+Ex | | | Cl+Ex | | Cl+Ex | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | 2 | | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |

Lanes, Volumes, Timings
 6: S Main St & W Del Amo Blvd/E Del Amo Blvd

1/3/2019

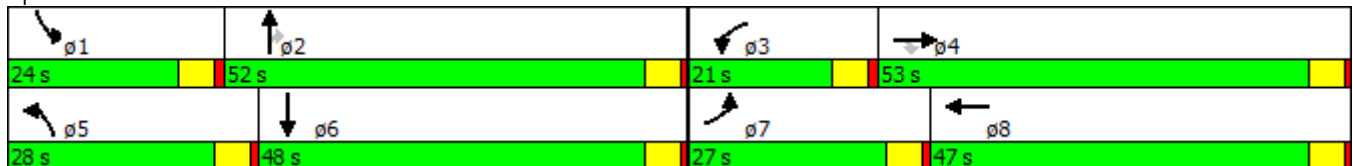


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | |
| Total Split (s) | 27.0 | 53.0 | 53.0 | 21.0 | 47.0 | | 28.0 | 52.0 | 52.0 | 24.0 | 48.0 | |
| Total Split (%) | 18.0% | 35.3% | 35.3% | 14.0% | 31.3% | | 18.7% | 34.7% | 34.7% | 16.0% | 32.0% | |
| Maximum Green (s) | 22.0 | 48.0 | 48.0 | 16.0 | 42.0 | | 23.0 | 47.0 | 47.0 | 19.0 | 43.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | | None | Max | Max | None | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | 11.0 | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | 0 | | 0 | |
| Act Effct Green (s) | 22.0 | 48.7 | 48.7 | 15.3 | 42.0 | | 20.8 | 47.0 | 47.0 | 18.0 | 44.2 | |
| Actuated g/C Ratio | 0.15 | 0.33 | 0.33 | 0.10 | 0.28 | | 0.14 | 0.32 | 0.32 | 0.12 | 0.30 | |
| v/c Ratio | 1.03 | 1.08 | 0.56 | 0.79 | 1.01 | | 0.81 | 0.49 | 0.50 | 0.86 | 0.82 | |
| Control Delay | 125.7 | 94.6 | 20.0 | 81.9 | 78.2 | | 75.8 | 43.3 | 12.1 | 97.1 | 52.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | |
| Total Delay | 125.7 | 94.6 | 20.0 | 81.9 | 78.2 | | 75.8 | 43.3 | 12.3 | 97.1 | 52.1 | |
| LOS | F | F | B | F | E | | E | D | B | F | D | |
| Approach Delay | | 86.7 | | | 78.8 | | | 45.0 | | | 57.9 | |
| Approach LOS | | F | | | E | | | D | | | E | |

Intersection Summary

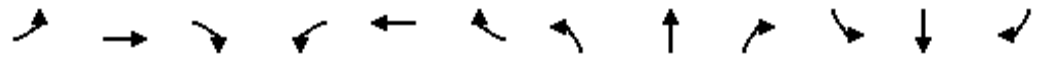
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 149 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.08 |
| Intersection Signal Delay: | 71.0 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 89.0% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 6: S Main St & W Del Amo Blvd/E Del Amo Blvd



Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 459 | 1060 | 410 | 301 | 739 | 147 | 232 | 1330 | 233 | 347 | 1049 | 601 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 160 | | 160 | 195 | | 195 | 180 | | 310 | 100 | | 0 |
| Storage Lanes | 2 | | 0 | 0 | | 0 | 2 | | 1 | 2 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 | 0.97 | 0.91 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frt | | | 0.850 | | 0.975 | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3451 | 0 | 3433 | 5085 | 1583 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3451 | 0 | 3433 | 5085 | 1583 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 155 | | 15 | | | | 215 | | | 272 |
| Link Speed (mph) | | 45 | | 45 | | | | 35 | | | 35 | |
| Link Distance (ft) | | 3009 | | 3520 | | | | 2946 | | | 3936 | |
| Travel Time (s) | | 45.6 | | 53.3 | | | | 57.4 | | | 76.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 499 | 1152 | 446 | 327 | 803 | 160 | 252 | 1446 | 253 | 377 | 1140 | 653 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 499 | 1152 | 446 | 327 | 963 | 0 | 252 | 1446 | 253 | 377 | 1140 | 653 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | 24 | | | 24 | | | 24 | | 24 |
| Link Offset(ft) | | 0 | | 0 | | | 0 | | | 0 | | 0 |
| Crosswalk Width(ft) | | 12 | | 12 | | | 12 | | | 12 | | 12 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | 94 | | | 94 | | | 94 | | 94 |
| Detector 2 Size(ft) | | 6 | | 6 | | | 6 | | | 6 | | 6 |
| Detector 2 Type | | Cl+Ex | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 |
| Turn Type | Prot | NA | Perm | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | 6 |

Lanes, Volumes, Timings
8: S Avalon Blvd & E Del Amo Blvd

1/3/2019

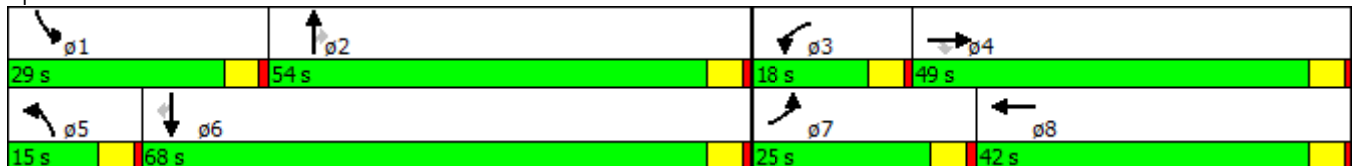


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 25.0 | 49.0 | 49.0 | 18.0 | 42.0 | | 15.0 | 54.0 | 54.0 | 29.0 | 68.0 | 68.0 |
| Total Split (%) | 16.7% | 32.7% | 32.7% | 12.0% | 28.0% | | 10.0% | 36.0% | 36.0% | 19.3% | 45.3% | 45.3% |
| Maximum Green (s) | 20.0 | 44.0 | 44.0 | 13.0 | 37.0 | | 10.0 | 49.0 | 49.0 | 24.0 | 63.0 | 63.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 20.0 | 44.0 | 44.0 | 13.0 | 37.0 | | 10.0 | 52.0 | 52.0 | 21.0 | 63.0 | 63.0 |
| Actuated g/C Ratio | 0.13 | 0.29 | 0.29 | 0.09 | 0.25 | | 0.07 | 0.35 | 0.35 | 0.14 | 0.42 | 0.42 |
| v/c Ratio | 1.09 | 1.11 | 0.78 | 1.10 | 1.12 | | 1.11 | 0.82 | 0.37 | 0.78 | 0.77 | 0.79 |
| Control Delay | 127.9 | 111.3 | 41.6 | 142.8 | 118.0 | | 152.2 | 49.9 | 8.9 | 74.1 | 41.5 | 29.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 127.9 | 111.3 | 41.6 | 142.8 | 118.0 | | 152.2 | 49.9 | 8.9 | 74.1 | 41.5 | 29.6 |
| LOS | F | F | D | F | F | | F | D | A | E | D | C |
| Approach Delay | | 100.4 | | | 124.3 | | | 57.8 | | | 43.6 | |
| Approach LOS | | F | | | F | | | E | | | D | |

Intersection Summary

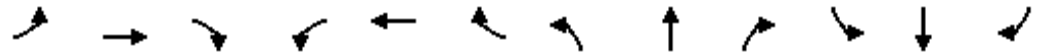
| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Natural Cycle: | 100 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.12 |
| Intersection Signal Delay: | 77.0 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 90.5% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 8: S Avalon Blvd & E Del Amo Blvd



Lanes, Volumes, Timings
 20: S Avalon Blvd & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 172 | 734 | 74 | 501 | 403 | 123 | 78 | 1108 | 478 | 254 | 1155 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 |
| Storage Length (ft) | 225 | | 0 | 215 | | 0 | 140 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 2 | | 0 | 1 | | 1 | 2 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 |
| Frt | | 0.986 | | | 0.965 | | | | 0.850 | | 0.986 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 5014 | 0 | 3433 | 3415 | 0 | 1770 | 3539 | 1794 | 3433 | 3490 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 5014 | 0 | 3433 | 3415 | 0 | 1770 | 3539 | 1794 | 3433 | 3490 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 31 | | | | 294 | | 10 | |
| Link Speed (mph) | | 35 | | | 40 | | | 35 | | | 35 | |
| Link Distance (ft) | | 4293 | | | 2121 | | | 702 | | | 1397 | |
| Travel Time (s) | | 83.6 | | | 36.2 | | | 13.7 | | | 27.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 187 | 798 | 80 | 545 | 438 | 134 | 85 | 1204 | 520 | 276 | 1255 | 134 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 187 | 878 | 0 | 545 | 572 | 0 | 85 | 1204 | 520 | 276 | 1389 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | 2 | | | |

Lanes, Volumes, Timings
20: S Avalon Blvd & E Carson St

1/3/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 21.0 | | 9.0 | 21.0 | | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 | |
| Total Split (s) | 17.0 | 34.0 | | 24.0 | 41.0 | | 17.0 | 48.0 | 48.0 | 24.0 | 55.0 | |
| Total Split (%) | 13.1% | 26.2% | | 18.5% | 31.5% | | 13.1% | 36.9% | 36.9% | 18.5% | 42.3% | |
| Maximum Green (s) | 12.0 | 29.0 | | 19.0 | 36.0 | | 12.0 | 43.0 | 43.0 | 19.0 | 50.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | None | Max | Max | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | 11.0 | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Act Effect Green (s) | 12.0 | 26.9 | | 19.0 | 33.9 | | 10.3 | 45.2 | 45.2 | 15.3 | 50.1 | |
| Actuated g/C Ratio | 0.09 | 0.21 | | 0.15 | 0.27 | | 0.08 | 0.36 | 0.36 | 0.12 | 0.40 | |
| v/c Ratio | 1.11 | 0.82 | | 1.06 | 0.61 | | 0.59 | 0.95 | 0.63 | 0.67 | 1.00 | |
| Control Delay | 154.9 | 53.8 | | 106.3 | 41.3 | | 73.3 | 56.5 | 18.2 | 61.6 | 62.6 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 154.9 | 53.8 | | 106.3 | 41.3 | | 73.3 | 56.5 | 18.2 | 61.6 | 62.6 | |
| LOS | F | D | | F | D | | E | E | B | E | E | |
| Approach Delay | | 71.5 | | | 73.1 | | | 46.3 | | | 62.4 | |
| Approach LOS | | E | | | E | | | D | | | E | |

Intersection Summary

| | |
|------------------------------------|------------------------|
| Area Type: | Other |
| Cycle Length: | 130 |
| Actuated Cycle Length: | 126.4 |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Uncoordinated |
| Maximum v/c Ratio: | 1.11 |
| Intersection Signal Delay: | 61.1 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 87.0% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 20: S Avalon Blvd & E Carson St

