APPENDIX J.2 (Non-CEQA Traffic Study):

City of Los Angeles Inter-Departmental Correspondence
from LADOT to the Department of City Planning
Re: Transportation Impact Analysis For The
Proposed Mixed-Use Development Located At 2800 Casitas Avenue
(ENV-2016-2862-EIR/CPC-2016-3054-GPA-VZC-CU-DB-CDO-SPR-MSC/VTT-74366)
DOT Case No. CEN 17-45791
August 16, 2017

The Mobility Group
Bow Tie Yard Lofts Project Traffic Study,
May 19, 2017

FORM GEN. 160A (Rev. 1/82)

# CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

2800 Casitas Ave
DOT Case No. CEN 17-45791

Date: August 16, 2017

To: Karen Hoo, City Planner
Department of City Planning

From: Wes Pringle, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION IMPACT ANALYSIS FOR THE PROPOSED MIXED-USE DEVELOPMENT LOCATED AT 2800 CASITAS AVENUE (ENV-2016-2862-EIR/CPC-2016-3054-GPA-VZC-CU-DB-CDO-SPR-MSC/VTT-74366)**

The Department of Transportation (DOT) has reviewed the transportation impact analysis dated May 19, 2017 prepared by The Mobility Group for the proposed mixed-use development located at 2750-2800 Casitas Avenue. In order to evaluate the effects of the project's traffic on the available transportation infrastructure, the significance of the project's traffic impacts is measured in terms of change to the volume-to-capacity (V/C) ratio between the "future no project" and the "future with project" scenarios. This change in the V/C ratio is compared to DOT's established threshold standards to assess the project-related transportation impacts. The transportation impact analysis included the detailed analysis of 12 signalized intersections, of which 11 intersections are located in the City of Los Angles. Based on DOT's transportation impact criteria[1], two of the study signalized intersections in the transportation impact analysis is expected to be significantly impacted by the project-related traffic and is summarized in **Attachments 1a & 1b**. The results of the transportation impact analysis which accounted for other known development projects in evaluating potential cumulative impacts, adequately evaluated the project's transportation impacts on the surrounding community.

**DISCUSSION AND FINDINGS**

A. Project Description

The project proposes to replace approximately 87,000 square feet (sf) of manufacturing space, approximately 25,000 sf of warehouse space and approximately 5,000 sf of production space with 419 apartment units, 19,000 sf of creative office space, 3,000 sf of high-turnover restaurant space, and a 42,000 sf urban farm. Vehicle access to the project site will be provided via a driveway on Casitas Avenue. The project is expected to be completed by 2023.

[1] Per the DOT Transportation Impact Analysis Policies and Procedures, a significant impact is identified as an increase in the Critical Movement Analysis (CMA) value, due to project related traffic, of 0.01 or more when the final ("with project") Level of Service (LOS) is LOS E or F; an increase of 0.020 or more when the final LOS is LOS D; or an increase of 0.040 or more when the final LOS is LOS C.

B. Trip Generation

The project is estimated to generate 2,551 daily trips, a net increase of 199 trips in the a.m. peak hour, and a net increase of 239 trips in the p.m. peak. The trip generation estimates are based on formulas published by the Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition, 2012. A copy of the trip generation table can be found in **Attachments 2a, 2b & 2c**.

C. Freeway Analysis

The transportation impact analysis included a freeway impact analysis that was prepared in accordance with the State-mandated Congestion Management Program (CMP) administered by the Los Angeles County Metropolitan Transportation Authority (MTA). To comply with the Freeway Impact Analysis Agreement executed between Caltrans and DOT in October 2013, the study also included a screening analysis to determine if additional evaluation of freeway mainline and ramp segments was necessary beyond the CMP requirements. Exceeding one of the four screening criteria would require the applicant to work directly with Caltrans to prepare more detailed freeway analyses. However, the project did not meet or exceed any of the four thresholds defined in the latest agreement, updated in December 2015; therefore, no additional freeway analysis was required.

D. Traffic Impacts

The Project is anticipated to result in significant traffic impacts under Future with Project (Year 2023) conditions, before mitigation, at the following intersections:

1. San Fernando Road & Fletcher Drive (A.M. & P.M. Peak Hour)
2. Riverside Road & Fletcher Drive (P.M. Peak Hour)

Physical traffic mitigation improvement options at these impacted intersections were evaluated in an attempt to fully mitigate the impacts; however, no feasible mitigations were identified due to the constraints of the existing physical conditions. With the recent adoption of Vision Zero, Mobility Plan 2035 and Complete Streets Design Guide, the roadway width has been set along the majority of arterials in area of Atwater Village.

The transportation mitigation program (discussed in the "Project Requirements" section below) would help reduce vehicle trips generated by the Project and partially reduce these significant impacts. However, both intersections would remain significantly impacted and considered unmitigated after the implementation of the proposed mitigation program.

The project traffic study also included a neighborhood street segment analysis. Per the applicable impact data, the proposed project could potentially create a significant impact at each of the 3 street segments analyzed. A copy of the Neighborhood Segment Analysis summary tables (Table 4.8 and through 4.10) is provided as **Attachment 3**.

**PROJECT REQUIREMENTS**

A. Traffic Mitigation Program

Consistent with City policies on sustainability and smart growth and with DOT's trip reduction and multi-modal transportation goals, the project's mitigation first focuses on developing a trip reduction program and on solutions that promote other modes of travel. The Project traffic mitigation program should include the following improvements:

1. **Transportation Demand Management (TDM)**
The purpose of a TDM plan is to reduce the use of single occupant vehicles (SOV) by increasing the number of trips by walking, bicycle, carpool, vanpool and transit. A TDM plan should include design features, transportation services, education, and incentives intended to reduce the amount of SOV during commute hours. Through strategic building design and orientation, this project can facilitate access to transit, can provide a pedestrian-friendly environment, can promote non-automobile travel and can support the goals of a trip-reduction program.

A preliminary TDM program shall be prepared and provided for DOT review prior to the issuance of the first building permit for this project and a final TDM program approved by DOT is required prior to the issuance of the first certificate of occupancy for the project. As recommended by the traffic impact study, the TDM program should include, but is not limited to, the following:

- Provide an on-site transportation coordinator to promote the TDM program and alternatives to the car and facilitate rideshare;
- Implementation of vehicle trip reduction incentives and services for Project employees and/or tenants; provide on-site education on alternative transportation modes;
- Provide amenities such as racks and showers for employees to promote bicycling and walking;
- Transit Welcome Package – Provide all new employees with a Transit Welcome Package which could include information on area bus/rail transit route and connections/transfers information, bicycle facilities, and convenient local services and restaurant within walking distance of the project;
- Carpool program for employees;
- Preferential rideshare parking location;
- Convenient parking and facilities for bicycle riders;
- Unbundling and lease of parking spaces for residents;
- Record a Covenant and Agreement to ensure that the TDM program will be maintained;
- Encourage flexible/alternative work schedules and telecommuting programs;
- Contribute a one-time fixed fee contribution of **$50,000** to be deposited into the City's Bicycle Plan Trust fund to implement bicycle improvements in the vicinity of the project.

The following improvements proposed by the project should be part of the TDM program:

- Support existing and/or future efforts by LADOT for Mobility Hubs by providing parking spaces for flex/share cars;

2. **Transportation System Improvements**
Transit system improvements are aimed at enhancing and improving service between the existing transit service and the developmental study area to reduce peak hour trips. The following improvement is being proposed by the project as part of transit and mobility

improvement program. To address the significant traffic impacts at the study intersections associated with construction of the project, the developer will contribute a fixed fee of $100,000 to a trust fund to be administered by LADOT in support of two planned DASH routes (DASH Elysian Park/Cypress Park and DASH Glassell Park/Highland Park) servicing the area providing one or both of these routes is approved by the City. In accordance with the project's transportation mitigation plan, prior to the issuance of any building permit and completed prior to the issuance of any certificate of occupancy, DOT must receive the total transit system improvement funds from the project applicant.

3. **Neighborhood Traffic Management (NTM) Program**
The traffic study identified the following three neighborhood streets as locations that can potentially experience an increase in vehicle traffic due to project related trips:

1. Carillon Street – between Casistas Avenue and La Clede Avenue
2. La Clede Avenue – between Carillon Street and Fletcher Drive
3. Larga Avenue – between Carillon Street and Fletcher Drive

In order to address these potential impacts, the applicant shall fund implementation of a Neighborhood Traffic Management Program (NTMP). The Program shall be developed in cooperation with DOT, Council District 1 staff and affected neighborhood residents.

The Program shall include an implementation plan that sets key milestones and identifies a proposed process in developing a NTM plan for the three locations. Typical NTM measures include, but are not limited to, traffic circles, speed humps, roadway narrowing effects (raised medians, traffic chokers, etc.), landscaping features, roadway striping changes, and stop sign pattern.

The NTMP should be formalized through an agreement between the applicant and DOT prior to the issuance of the first building permit for this project. The agreement should include a funding guarantee and outreach process, selection and approval criteria for any evaluated NTM measures and an implementation phasing plan. The agreement shall also guarantee funding for constructing approved NTM measures, up to $100,000.

The final implementation plan, if consensus is reached among the stakeholders, would be subject to review and approval by DOT's Central District Office and it would be the applicant's responsibility to implement any approved NTM measures through the Bureau of Engineering's B-permit process.

C. <u>Highway Dedication and Street Widening Requirements</u>
On January 20, 2016, the City Council adopted the Mobility Plan 2035 which is the new Mobility Element of the General Plan. A key feature of the updated plan is to revise street standards in an effort to provide a more enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. Per the new Mobility Element, **Casitas Avenue** has been designated as a Local Street-Standard, which would require a 18-foot half-width roadway within a 30-foot half-width right-of-way. The applicant should check with BOE's Land Development Group to determine the specific highway dedication, street widening and/or sidewalk requirements for this project.

D. Construction Impacts

DOT recommends that a construction work site traffic control plan be submitted to DOT for review and approval prior to the start of any construction work. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that all construction related traffic be restricted to off-peak hours, to the extent feasible.

E. Parking Requirements

The number of parking spaces that will be provided by the project was not disclosed in the traffic study. The applicant should also check with the Department of Building and Safety on the number of Code-required parking spaces needed for the project.

F. Driveway Access and Circulation

The proposed site plan illustrated in **Attachment 4** is acceptable to DOT; however, review of the study does not constitute approval of internal circulation schemes and driveway dimensions. Those require separate review and approval and should be coordinated with DOT's Citywide Planning Coordination Section 201 N. Figueroa Street, 5th Floor, Room 550, at (213) 482-7024. Any changes to the project's site access, circulation scheme, or loading/unloading area after issuance of this report would require separate review and approval and should be coordinated as well. In order to minimize potential building design changes, the applicant should contact DOT for driveway width and internal circulation requirements so that such traffic flow considerations are designed and incorporated early into the building and parking layout plans.

G. Development Review Fees

An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to DOT for permit issuance activities was adopted by the Los Angeles City Council in 2009 and updated in 2014. This ordinance identifies specific fees for transportation impact analysis review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Eduardo Hermoso of my staff at (213) 972-8451.

Attachments

*J:\Letters\2017\CEN17-45791_2800 Casitas Ave_ts ltr.docx*

c: Gerald Gubatan, Council District No. 1
Mehrdad Moshksar, Central District, DOT
Taimour Tanavoli, Case Management Office, DOT
Carl Mills, BOE Development Services
Mike Bates, The Mobility Group

2. Riverside Dr & Fletcher Dr LOS F
7. San Fernando Rd & Fletcher Dr LOS E

**Table 4.2 Future With Project Conditions - Intersection Level of Service AM Peak Hour**

| Intersection | AM Peak Hour | | | | Change in V / C | Significant Impact |
|---|---|---|---|---|---|---|
| | Future Without Project | | Future With Project | | | |
| | V / C | LOS | V / C | LOS | | |
| 1. Glendale Blvd. & Fletcher Dr. | 0.630 | B | 0.637 | B | 0.007 | No |
| 2. Riverside Dr. & Fletcher Dr. | 1.020 | F | 1.024 | F | 0.004 | No |
| 3. Ripple St. & Fletcher Dr. | 0.643 | B | 0.660 | B | 0.017 | No |
| 4. SR-2 SB Off-Ramp & Fletcher Dr. | 0.639 | B | 0.657 | B | 0.018 | No |
| 5. Larga Ave. & Fletcher Dr. | 0.556 | A | 0.589 | A | 0.033 | No |
| 6. La Clede Ave. & Fletcher Dr. | 0.593 | A | 0.695 | B | 0.102 | No |
| 7. San Fernando Rd. & Fletcher Dr. | 0.799 | C | 0.828 | D | 0.029 | Yes |
| 8. San Fernando Rd. & S. Glendale Ave. | 0.736 | C | 0.743 | C | 0.007 | No |
| 9. Estara Ave. & Fletcher Dr. | 0.745 | C | 0.749 | C | 0.004 | No |
| 10. San Fernando Rd & SR-2 SB Ramps | 0.694 | B | 0.708 | C | 0.014 | No |
| 11. Glendale Blvd & Riverside Dr. | 0.658 | B | 0.661 | B | 0.003 | No |
| 12. Riverside Dr. & Gilroy St. | 0.499 | A | 0.499 | A | 0.000 | No |

It is therefore concluded that the Project would cause one significant traffic impact in the AM peak hour, and would cause two significant traffic impacts in the PM peak hour.

## 4.3 CMP Analysis

The Los Angeles County Congestion Management Program (CMP) requires that new development projects analyze potential project impacts on CMP monitoring locations, if an EIR is prepared for the Project. When a CMP analysis is needed, the CMP methodology requires that the Traffic Study analyze traffic conditions at all CMP arterial monitoring intersections where the Project will add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic. The CMP also requires that traffic studies analyze mainline freeway monitoring stations where the Project will add 150 or more trips in either direction during either AM or PM weekday peak hours. If, based on these criteria, the Traffic Study identifies no facilities for study, then no further traffic analysis is required.

**Table 4.3 Future With Project Conditions - Intersection Level of Service PM Peak Hour**

| Intersection | PM Peak Hour | | | | Change in V / C | Significant Impact |
|---|---|---|---|---|---|---|
| | Future Without Project | | Future With Project | | | |
| | V / C | LOS | V / C | LOS | | |
| 1. Glendale Blvd. & Fletcher Dr. | 0.639 | B | 0.650 | B | 0.011 | No |
| 2. Riverside Dr. & Fletcher Dr. | 1.149 | F | 1.166 | F | 0.017 | Yes |
| 3. Ripple St. & Fletcher Dr. | 0.764 | C | 0.779 | C | 0.015 | No |
| 4. SR-2 SB Off-Ramp & Fletcher Dr. | 0.407 | A | 0.422 | A | 0.015 | No |
| 5. Larga Ave. & Fletcher Dr. | 0.445 | A | 0.497 | A | 0.052 | No |
| 6. La Clede Ave. & Fletcher Dr. | 0.379 | A | 0.477 | A | 0.098 | No |
| 7. San Fernando Rd. & Fletcher Dr. | 0.909 | E | 0.959 | E | 0.050 | Yes |
| 8. San Fernando Rd. & S. Glendale Ave. | 0.742 | C | 0.747 | C | 0.005 | No |
| 9. Estara Ave. & Fletcher Dr. | 0.513 | A | 0.524 | A | 0.011 | No |
| 10. San Fernando Rd & SR-2 SB Ramps | 0.721 | C | 0.726 | C | 0.005 | No |
| 11. Glendale Blvd & Riverside Dr. | 0.679 | B | 0.682 | B | 0.003 | No |
| 12. Riverside Dr. & Gilroy St. | 0.415 | A | 0.415 | A | 0.000 | No |

CMP Arterial Monitoring Locations

As shown in Table 4.1, the Project would generate 199 AM peak hour trips and 239 PM peak hour trips. A review of the 2010 CMP indicated the following arterial monitoring stations that are closest to the Project Site:

- Sunset Boulevard & Alvarado Street
- Santa Monica Boulevard & Western Avenue

The additional trips estimated to be added by Project at these intersections are shown in Table 4.4.

**Table 4.4 CMP Arterial Analysis - Number of Trips Added by Project**

| *No.* | *Location* | *No. of Trips Added by Project* | |
|---|---|---|---|
| | | *AM* | *PM* |
| 1 | Sunset Blvd. & Alvarado St. | 2 | 2 |
| 2 | Santa Monica Blvd. & Western Ave. | 10 | 12 |

**Table 4.1 2800 Casitas Avenue Project - Trip Generation Estimates**

**Daily**

| Land Use Assumptions | Source [1] & Code | Quantity | Units | Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Trip Rate | | Total Trips |
| **Existing Uses** | | | | | | | |
| Manufacturing | ITE 140 | 87,000 | S.F | | 3.82 | | -332 |
| Net Manufacturing | | | | | | | -332 |
| Warehousing[2] | ITE 150 | 25,000 | SF | | 3.56 | | -89 |
| Net Warehousing | | | | | | | -89 |
| Production Space [4] | | 5,000 | SF | | 4.00 | | -20 |
| (Reduction for transit trips) - 5% | | | | | | | 1 |
| Net Production Space | | | | | | | -19 |
| Total Existing | | | | | | | -440 |
| **Proposed Uses** | | | | | | | |
| Apartments [2] | ITE 220 | 419 | DU | | 6.65 | | 2,786 |
| (Reduction for transit trips) - 5% | | | | | | | -139 |
| Net Apartments | | | | | | | 2,647 |
| Creative Office [2] | ITE 710 | 19,000 | SF | | 11.03 | | 210 |
| (Reduction for internal trips) - 5% | | | | | | | -11 |
| (Reduction for transit trips) - 5% | | | | | | | -10 |
| Net Creative Office | | | | | | | 189 |
| High-Turnover Restaurant [2] | ITE 932 | 3,000 | SF | | 127.15 | | 381 |
| (Reduction for internal trips) - 80% | | | | | | | -305 |
| Net High-Turnover Restaurant | | | | | | | 77 |
| Urban Farm[3] | | 42,000 | SF | | | | 78 |
| Net Urban Farm | | | | | | | 78 |
| Total Proposed | | | | | | | 2,991 |
| Total Net | | | | | | | 2,551 |

**Table 4.1 2800 Casitas Avenue Project - Trip Generation Estimates**

**AM Peak**

| Land Use Assumptions | Source [1] & Code | Quantity | Units | AM Peak Hour | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Trip Rate | | | Total Trips | | |
| | | | | In | Out | Total | In | Out | Total |
| **Existing Uses** | | | | | | | | | |
| Manufacturing | ITE 140 | 87,000 | SF | 0.53 | 0.20 | 0.73 | -46 | -18 | -64 |
| Net Manufacturing | | | | | | | -46 | -18 | -64 |
| Warehousing[2] | ITE 150 | 25,000 | SF | 0.24 | 0.06 | 0.30 | -6 | -2 | -8 |
| Net Warehousing | | | | | | | -6 | -2 | -8 |
| Production Space [4] | | 5,000 | SF | 0.40 | 0.04 | 0.44 | -2 | 0 | -2 |
| (Reduction for transit trips) - 5% | | | | | | | 0 | 0 | 0 |
| Net Production Space | | | | | | | -2 | 0 | -2 |
| Total Existing | | | | | | | -54 | -20 | -74 |
| **Proposed Uses** | | | | | | | | | |
| Apartments [2] | ITE 220 | 419 | DU | 0.10 | 0.41 | 0.51 | 42 | 172 | 214 |
| (Reduction for transit trips) - 5% | | | | | | | -2 | -9 | -11 |
| Net Apartments | | | | | | | 40 | 163 | 203 |
| Creative Office [2] | ITE 710 | 19,000 | SF | 1.37 | 0.19 | 1.56 | 26 | 4 | 30 |
| (Reduction for internal trips) - 5% | | | | | | | -2 | 0 | -2 |
| (Reduction for transit trips) - 5% | | | | | | | -1 | 0 | -1 |
| Net Creative Office | | | | | | | 23 | 4 | 27 |
| High-Turnover Restaurant [2] | ITE 932 | 3,000 | SF | 5.95 | 4.86 | 10.81 | 18 | 14 | 32 |
| (Reduction for internal trips) - 80% | | | | | | | -14 | -12 | -26 |
| Net High-Turnover Restaurant | | | | | | | 4 | 2 | 6 |
| Urban Farm[3] | | 42,000 | SF | | | | 35 | 2 | 37 |
| Net Urban Farm | | | | | | | 35 | 2 | 37 |
| Total Proposed | | | | | | | 102 | 171 | 273 |
| Total Net | | | | | | | 48 | 151 | 199 |

## Table 4.1 2800 Casitas Avenue Project - Trip Generation Estimates

**PM Peak**

| Land Use Assumptions | Source [1] & Code | Quantity | Units | PM Peak Hour | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Trip Rate | | | Total Trips | | |
| | | | | In | Out | Total | In | Out | Total |
| **Existing Uses** | | | | | | | | | |
| Manufacturing | ITE 140 | 87,000 | SF | 0.32 | 0.41 | 0.73 | -28 | -36 | -64 |
| Net Manufacturing | | | | | | | -28 | -36 | -64 |
| Warehousing[2] | ITE 150 | 25,000 | SF | 0.08 | 0.24 | 0.32 | -2 | -6 | -8 |
| Net Warehousing | | | | | | | -2 | -6 | -8 |
| Production Space [4] | | 5,000 | SF | 0.04 | 0.45 | 0.49 | 0 | -2 | -2 |
| (Reduction for transit trips) - 5% | | | | | | | 0 | 0 | 0 |
| Net Production Space | | | | | | | 0 | -3 | -3 |
| Total Existing | | | | | | | -30 | -45 | -75 |
| **Proposed Uses** | | | | | | | | | |
| Apartments [2] | ITE 310 | 419 | DU | 0.40 | 0.22 | 0.62 | 168 | 92 | 260 |
| (Reduction for transit trips) - 5% | | | | | | | -8 | -5 | -13 |
| Net Apartments | | | | | | | 160 | 87 | 247 |
| Creative Office [2] | ITE 710 | 19,000 | SF | 0.25 | 1.24 | 1.49 | 5 | 23 | 28 |
| (Reduction for internal trips) - 5% | | | | | | | 0 | -1 | -1 |
| (Reduction for transit trips) - 5% | | | | | | | 0 | -1 | -1 |
| Net Creative Office | | | | | | | 5 | 21 | 26 |
| High-Turnover Restaurant [2] | ITE 932 | 3,000 | SF | 5.91 | 3.94 | 9.85 | 18 | 12 | 30 |
| (Reduction for internal trips) - 80% | | | | | | | -14 | -10 | -24 |
| Net High-Turnover Restaurant | | | | | | | 4 | 2 | 6 |
| Urban Farm[3] | | 42,000 | SF | | | | 1 | 34 | 35 |
| Net Urban Farm | | | | | | | 1 | 34 | 35 |
| Total Proposed | | | | | | | 170 | 144 | 314 |
| Total Net | | | | | | | 140 | 99 | 239 |

Notes:

1. ITE Trip Rates from Trip Generation, 9th Edition, Institute of Transportation Engineers, Washington, DC, 2012, except otherwise noted.
2. Trip rate reductions were applied per LADOT's *Traffic Study Policies and Procedures,* August 2014.
3. This land use was analyzed from empirical data: Cars: 35 Full-Time Employees, 100% arrive in AM peak hour, 100% leave in PM peak hour, 5% transit. Trucks: 1 truck (2 PCEs) per day bringing in external supplies, 50% arriving and leaving in AM peak hour. 2 trucks (4 PCEs) per day taking out farm produce, 25% arriving and leaving in AM peak hour, 25% arriving and leaving in PM peak hour.
4. From data on production studios (Warner Hollywood Studios & KTCA Studios).

Note: Trip totals may differ marginally due to rounding.

**Table 4.8** **Neighborhood Street Daily Traffic Volumes - Future With Project Conditions**

| Street | Between | And | Street Type | Existing ADT | Added ADT from Related Projects [1] | Future Without Project ADT | Project-Related Increase in ADT [2] | Future With Project ADT | Project Related Increase In ADT % | Impact Threshold | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Larga Avenue | Fletcher Drive | Carillon Street | Local Street | 600 | 0 | 600 | 954 | 1,554 | 61% | 12% | Yes |
| 2. La Clede Avenue | Fletcher Drive | Carillon Street | Local Street | 634 | 0 | 634 | 1,597 | 2,231 | 72% | 10% | Yes |
| 3. Carillon Street | La Clede Avenue | Casitas Avenue | Local Street | 718 | 0 | 718 | 2,551 | 3,269 | 78% | 8% | Yes |

Attachment 3

**Table 4.9 Neighborhood Street Traffic Volumes - Future With Project Conditions - AM Peak Hour**

| Street | Between | And | Street Type | Existing Volume | Added Volume from Related Projects | Future Without Project Volume | Project-Related Increase in Volume | Future With Project Volume | Project Related Increase In Volume % |
|---|---|---|---|---|---|---|---|---|---|
| 1. Larga Avenue | Fletcher Drive | Carillon Street | Local Street | 47 | 0 | 47 | 70 | 117 | 60% |
| 2. La Clede Avenue | Fletcher Drive | Carillon Street | Local Street | 41 | 0 | 41 | 129 | 170 | 76% |
| 3. Carillon Street | La Clede Avenue | Casitas Avenue | Local Street | 58 | 0 | 58 | 199 | 257 | 77% |

Attachment 3

**Table 4.10 Neighborhood Street Traffic Volumes - Future With Project Conditions - PM Peak Hour**

| Street | Between | And | Street Type | Existing Volume | Added Volume from Related Projects | Future Without Project Volume | Project-Related Increase in Volume | Future With Project Volume | Project Related Increase In Volume % |
|---|---|---|---|---|---|---|---|---|---|
| 1. Larga Avenue | Fletcher Drive | Carillon Street | Local Street | 39 | 0 | 39 | 92 | 131 | 70% |
| 2. La Clede Avenue | Fletcher Drive | Carillon Street | Local Street | 66 | 0 | 66 | 147 | 213 | 69% |
| 3. Carillon Street | La Clede Avenue | Casitas Avenue | Local Street | 79 | 0 | 79 | 239 | 318 | 75% |

Attachment 3

12/23/16

Figure 1.2
Project Site Plan

**Bow Tie Yard Lofts Project**

The **Mobility** Group
*Transportation Strategies & Solutions*

**Attachment 4**

# Bow Tie Yard Lofts Project

# Traffic Study

May 19, 2017

Prepared by

The **Mobility** Group

# Bow Tie Yard Lofts Project

# Traffic Study

Matthew L. Simons
TR 2154

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# 1. Introduction

This report documents a traffic impact analysis for the proposed 2750-2800 Casitas Avenue Project in the City of Los Angeles. The Project is generally bounded by Glendale Freeway (SR- 2) to the north, the Los Angeles River to the south, and Union Pacific Rail Road Tracks to the east. The Project location is shown in Figure 1.1.

## 1.1 Project Description

The Project Site is currently occupied by 87,000 sq. ft. of manufacturing space, 25,000 sq. ft. of warehousing space and 5,000 sq. ft. of production space. The Project will consist of 419 apartments, 19,000 sq. ft. of creative office space, 3,000 sq. ft. of restaurant space, and a 42,000 sq. ft. urban farm. A ground floor plan is shown in Figure 1.2. Vehicle access into the Project Site will be provided by a driveway on Casitas Avenue. The Project Site is located between the Los Angeles River to the west and railroad tracks to the east.

## 1.2 Study Scope

The scope and methodology of this analysis was determined in conjunction with the City of Los Angeles Department of Transportation (LADOT) and conducted in accordance with the LADOT Traffic Study Guidelines.

The analysis addresses the following time periods:

- AM peak hour
- PM peak hour

The analysis also addresses the following scenarios:

- Existing Conditions
- Future Without Project Conditions
- Future With Project Conditions
- Existing With Project Conditions

The analysis assumes completion of the Project by the end of 2023. The impact analysis therefore addresses the year 2023 for the Project.

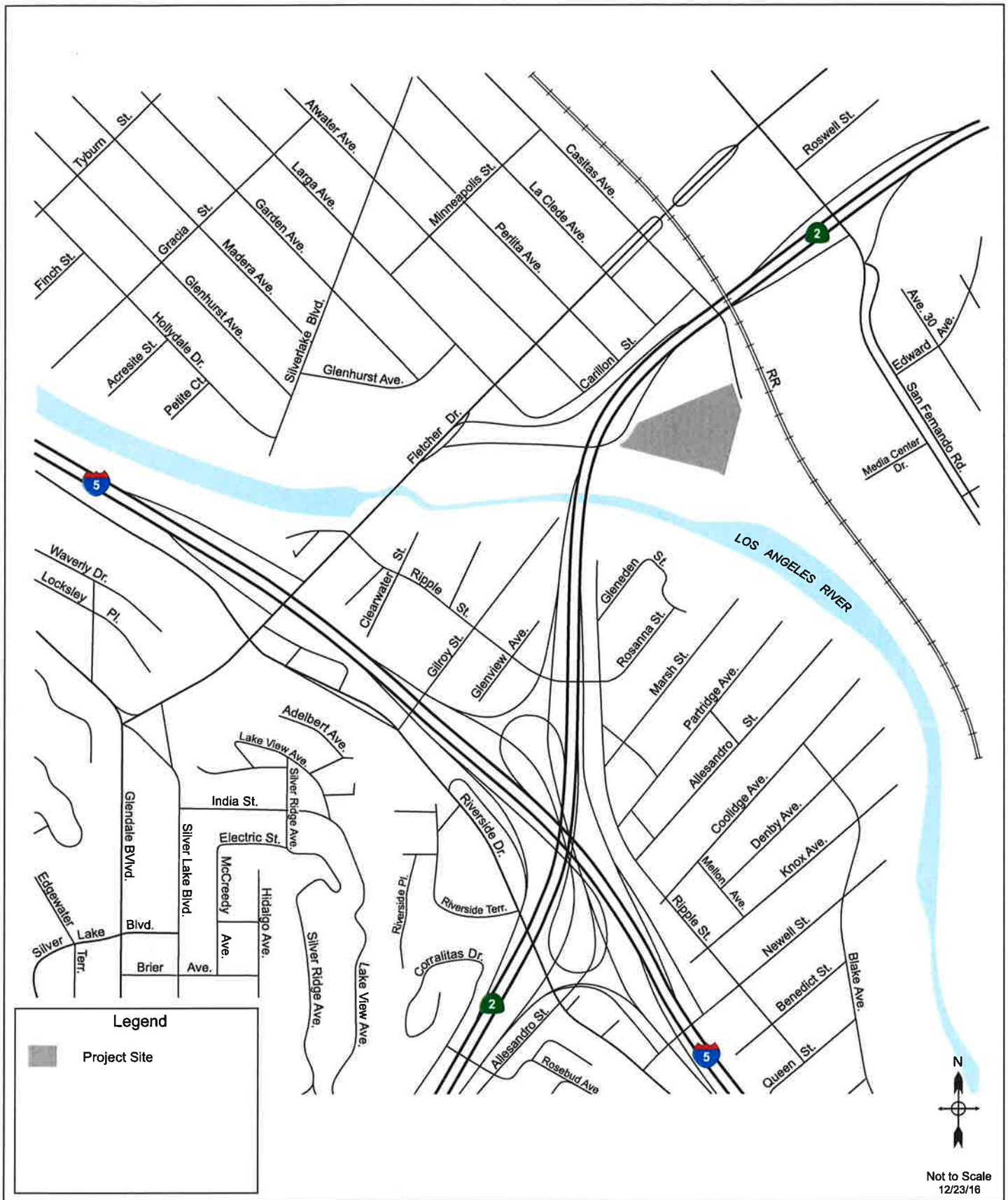


Figure 1.1
Project Location

**Bow Tie Yard Lofts Project**

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Source: Rios Clementi Hale Studios

12/23/16

Figure 1.2
Project Site Plan

**Bow Tie Yard Lofts Project**

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## 1.3 Organization of this Report

The remainder of this report is organized as follows. Chapter 2 describes the existing transportation conditions in the area of the Project. Chapter 3 addresses future conditions (year 2023) without the Project and sets the future cumulative baseline for analysis of Project impacts. Chapter 4 provides a description of the proposed Project and its transportation characteristics, including trip generation, distribution of Project trips, and analyzes potential transportation impacts of the Project, including traffic, transit, and a Congestion Management Program evaluation. Chapter 5 describes the evaluation of potential transportation mitigation measures for the Project.

# 2. Existing Conditions

## 2.1 Roadway System

The Project Site is located just north of the I-5 / SR-2 interchange in the Glassell Park / Atwater Village area of Los Angeles. Primary regional access to the general area of the site is provided by the Glendale Freeway (SR-2) and the Golden State Freeway (I-5). The Glendale Freeway runs in a north-south direction and is located northwest of the Project Site. The Golden State Freeway runs in a north-south direction and is located southwest of the Project Site. The key surface streets serving the area of the Project are described below.

*North-South Streets*

Glendale Boulevard: Glendale Boulevard is a two-way street providing two travel lanes in each direction to the west of the Project Site. It is classified as an Avenue II under the City of Los Angeles Mobility Plan 2035. On-street parking is provided with some restrictions.

Riverside Drive: Riverside Drive is a two-way street providing two travel lanes in each direction to the west of the Project Site. It is classified as an Avenue I under the City of Los Angeles Mobility Plan 2035. On-street parking is provided with some restrictions.

San Fernando Road: San Fernando Road. is a two-way street providing two travel lanes in each direction to the east of the Project Site. It is classified as an Avenue I under the City of Los Angeles Mobility Plan 2035. On-street parking is not permitted.

*East-West Streets*

Fletcher Drive: Fletcher Drive is a two-way street providing two travel lanes in each direction to the north of the Project Site. It is classified as an Avenue II under the City of Los Angeles Mobility Plan 2035. On-street parking is provided with some restrictions.

Project Access

The Project is located on Casitas Avenue south of Fletcher Drive. Casitas Avenue does not connect directly to but rather passes over Fletcher Drive due to the Fletcher Drive undercrossing of the railroad. The Casitas Avenue overcrossing connects to Fletcher Drive west of Casitas Avenue via slip roads but not to the east. The streets between Fletcher Drive and the Project Site are described below.

Casitas Avenue: Casitas Avenue a two-way street providing one travel lane in each direction. It is classified as a Local Street under the City of Los Angeles Mobility Plan 2035. On-street parking is not permitted south of Carillon Street, but parking is provided with some restrictions north of Carillon Street.

Carillon Street: Carillon Street a two-way street providing one travel lane in each direction. It is classified as a Local Street under the City of Los Angeles Mobility Plan 2035. It runs from Casitas Avenue to Fletcher Drive at Larga Avenue, and connects to other north south local streets. On-street parking is not permitted on the south side of the street, but parking is permitted on the north side of the street.

La Clede Avenue: La Clede Avenue is a two-way street providing one travel lane in each direction and provides access between Carillon Street and Fletcher Drive. The intersection of La Clede Avenue and Fletcher Drive is signalized. It is classified as a Local Street under the City of Los Angeles Mobility Plan 2035. On-street parking is provided with some restrictions.

Perlita Avenue: Perlita Avenue is a two-way street providing one travel lane in each direction and provides access between Carillon Street and Fletcher Drive. The intersection of Perlita Avenue and Fletcher Drive is unsignalized. It is classified as a Local Street under the City of Los Angeles Mobility Plan 2035. On-street parking is provided without restrictions.

Atwater Avenue: Atwater Avenue is a two-way street providing one travel lane in each direction and provides access between Carillon Street and Fletcher Drive. The intersection of Atwater Avenue and Fletcher Drive is unsignalized. It is classified as a Local Street under the City of Los Angeles Mobility Plan 2035. On-street parking is provided without restrictions.

Larga Avenue: Larga Avenue is a two-way street providing one travel lane in each direction in the vicinity of the Project Site. The intersection of Larga Avenue and Fletcher Drive is signalized. It is classified as a Collector Street north of Fletcher Drive and a Local Street south of Fletcher Drive under the City of Los Angeles Mobility Plan 2035. On-street parking is provided with some restrictions.

## 2.2 Study Intersections

A total of twelve study intersections were identified, in conjunction with LADOT staff, for inclusion in the traffic analysis. The analyzed locations are shown in Figure 2.1 and correspond to locations where potential traffic impacts from the Project are most likely to occur. All of these intersections are signalized. The existing lane configurations for these seven analyzed intersections are shown in Figure 2.2. The intersections identified for analysis are as follows:

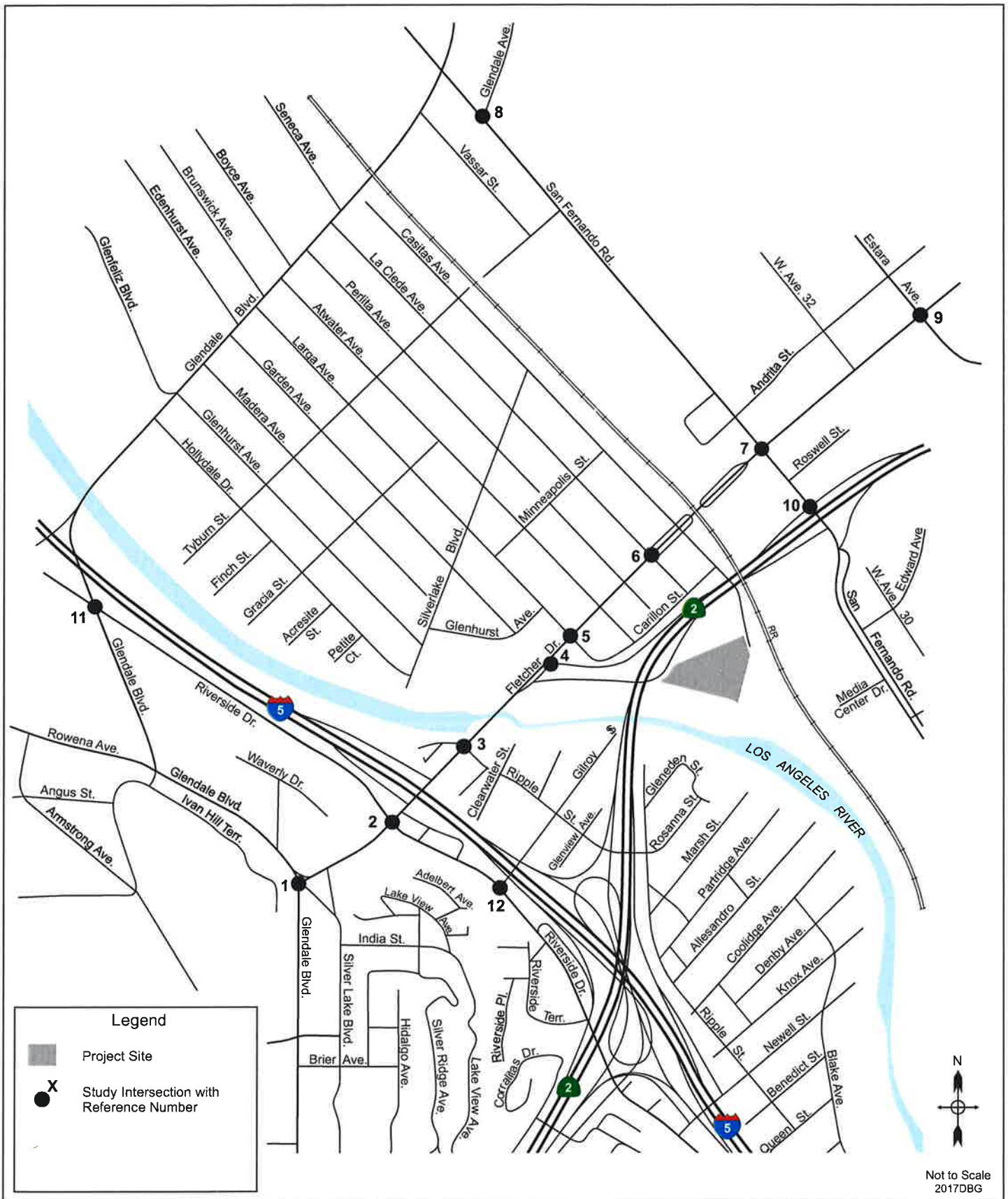


Figure 2.1
Location of Study Intersections

**Bow Tie Yard Lofts Project**

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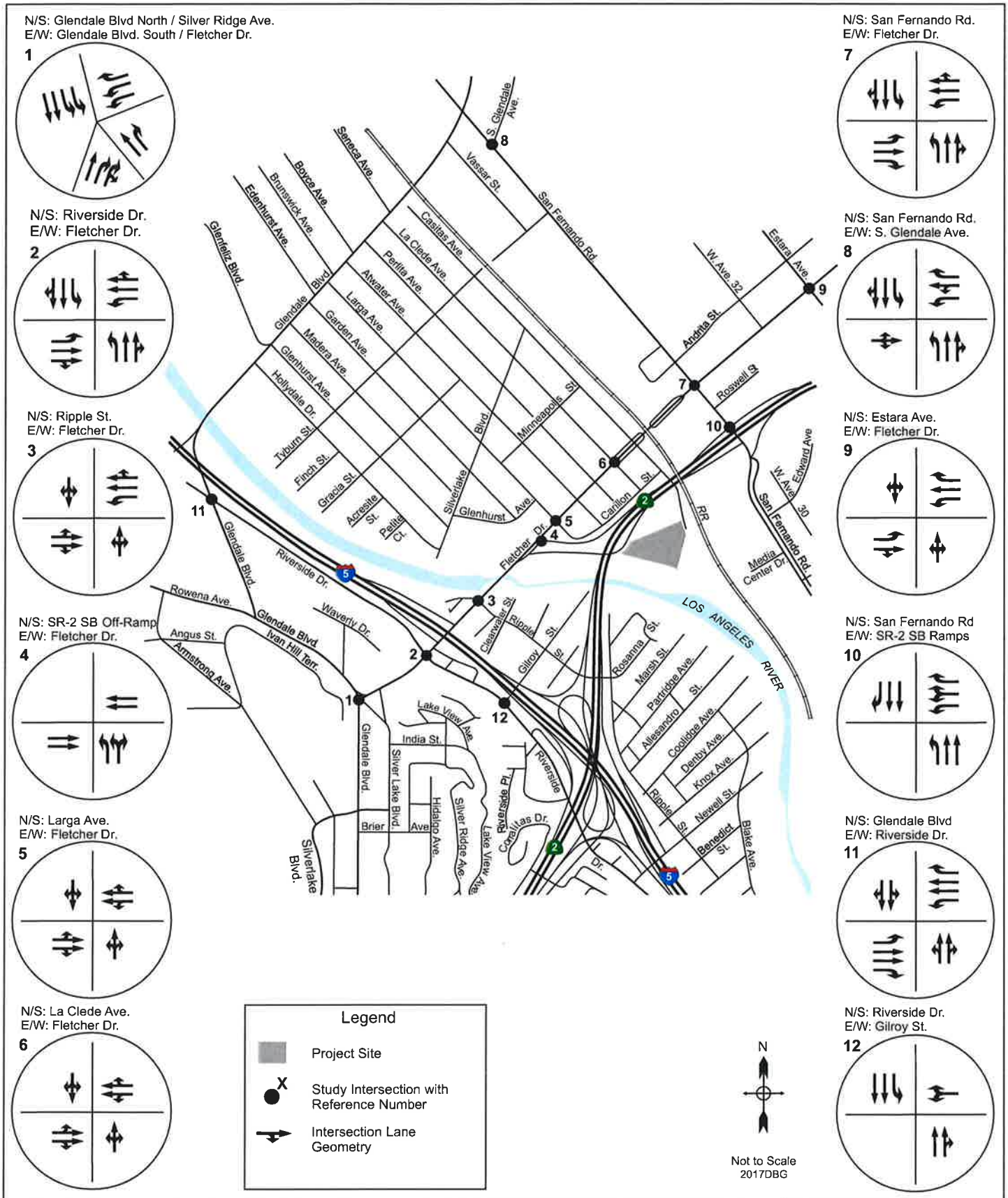


Figure 2.2
Configuration of Analyzed Intersections

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**Bow Tie Yard Lofts Project**

1. Glendale Boulevard & Fletcher Drive (City of Los Angeles)
2. Riverside Drive & Fletcher Drive (City of Los Angeles)
3. Ripple Street & Fletcher Drive (City of Los Angeles)
4. SR-2 SB Off-Ramp & Fletcher Drive (City of Los Angeles)
5. Larga Avenue & Fletcher Drive (City of Los Angeles)
6. La Clede Avenue & Fletcher Drive (City of Los Angeles)
7. San Fernando Road & Fletcher Drive (City of Los Angeles)
8. San Fernando Road & South Glendale Avenue (City of Glendale)
9. Estara Ave. & Fletcher Dr. (City of Los Angeles)
10. San Fernando Rd & SR-2 SB Ramps (City of Los Angeles)
11. Glendale Blvd & Riverside Dr. (City of Los Angeles)
12. Riverside Dr. & Gilroy St (City of Los Angeles)

Eleven intersections are located in the City of Los Angeles. One intersection, at San Fernando Road and South Glendale Avenue is located in the City of Glendale.

All study intersections within the City of Los Angeles are signalized and currently operate under the City's ATSAC system (Automated Traffic Surveillance and Control) which is a centralized control system that provides for the coordination of traffic signal timing to maximize the street capacities and to minimize traffic delays on City streets. All of the signalized intersections also operate under the City's second generation ATCS (Adaptive Traffic Control System) which utilizes enhanced surveillance and control technologies to adapt traffic signal timings to respond to actual traffic conditions on the ground to further improve the effectiveness of the ATSAC system. The intersection of San Fernando Road and South Glendale Avenue, located in the City of Glendale, is not included in the City of Los Angeles ATSAC and ATCS systems.

## 2.3 Existing Intersection Conditions

Existing Traffic Volumes

Recent traffic counts were used for all of the analyzed intersections. AM and PM peak period traffic counts (between 7:00am and 10:00am and between 3:00pm and 6:00pm) were conducted at all of the study intersections in June and November of 2016. The existing peak hour traffic volumes are illustrated in Figures 2.3 and 2.4 for the AM and PM peak hours respectively (highest volume hours within the peak periods).

Level of Service Methodology

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F, with each

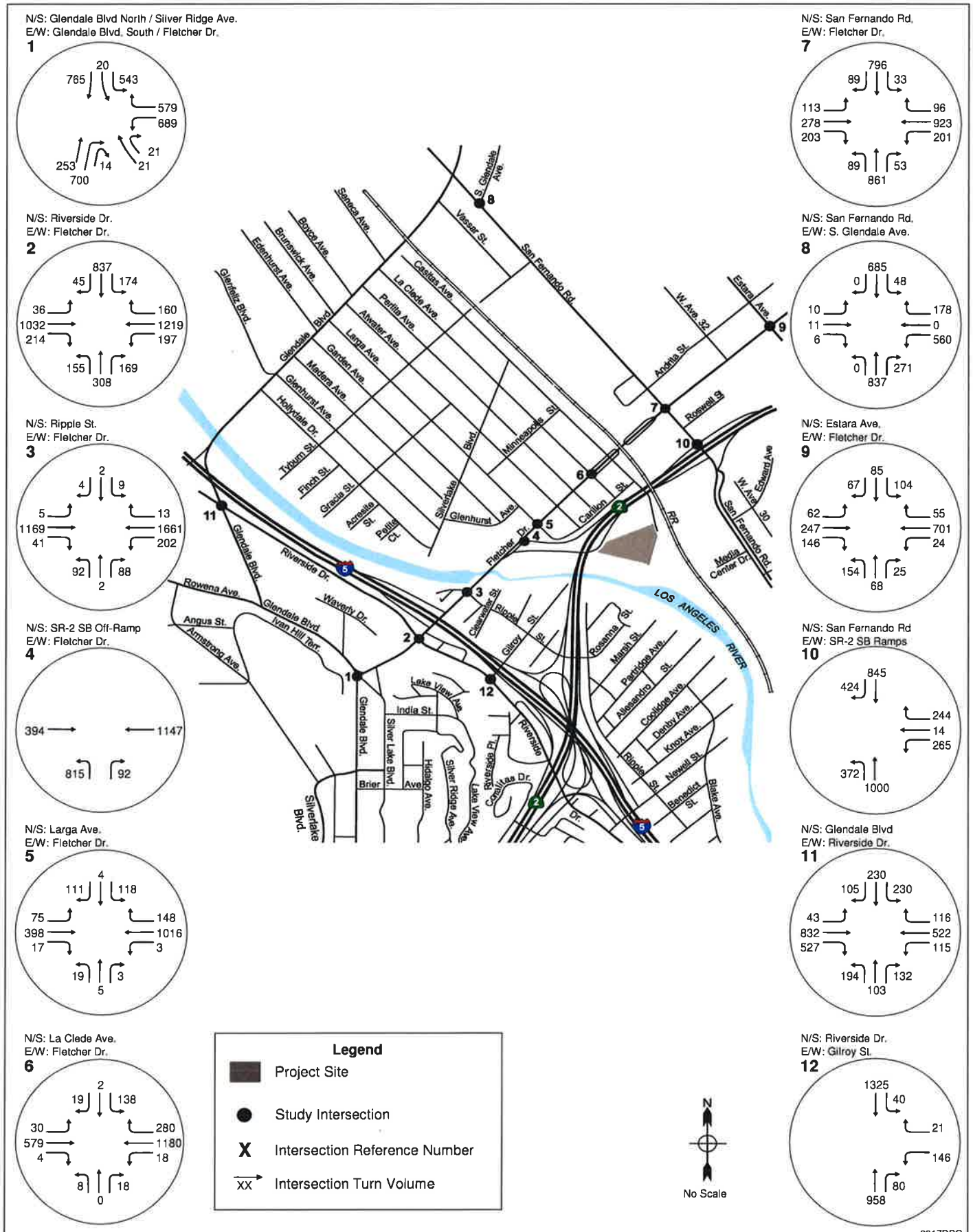


Figure 2.3
Existing Traffic Volumes - AM Peak Hour

**Bow Tie Yard Lofts Project**

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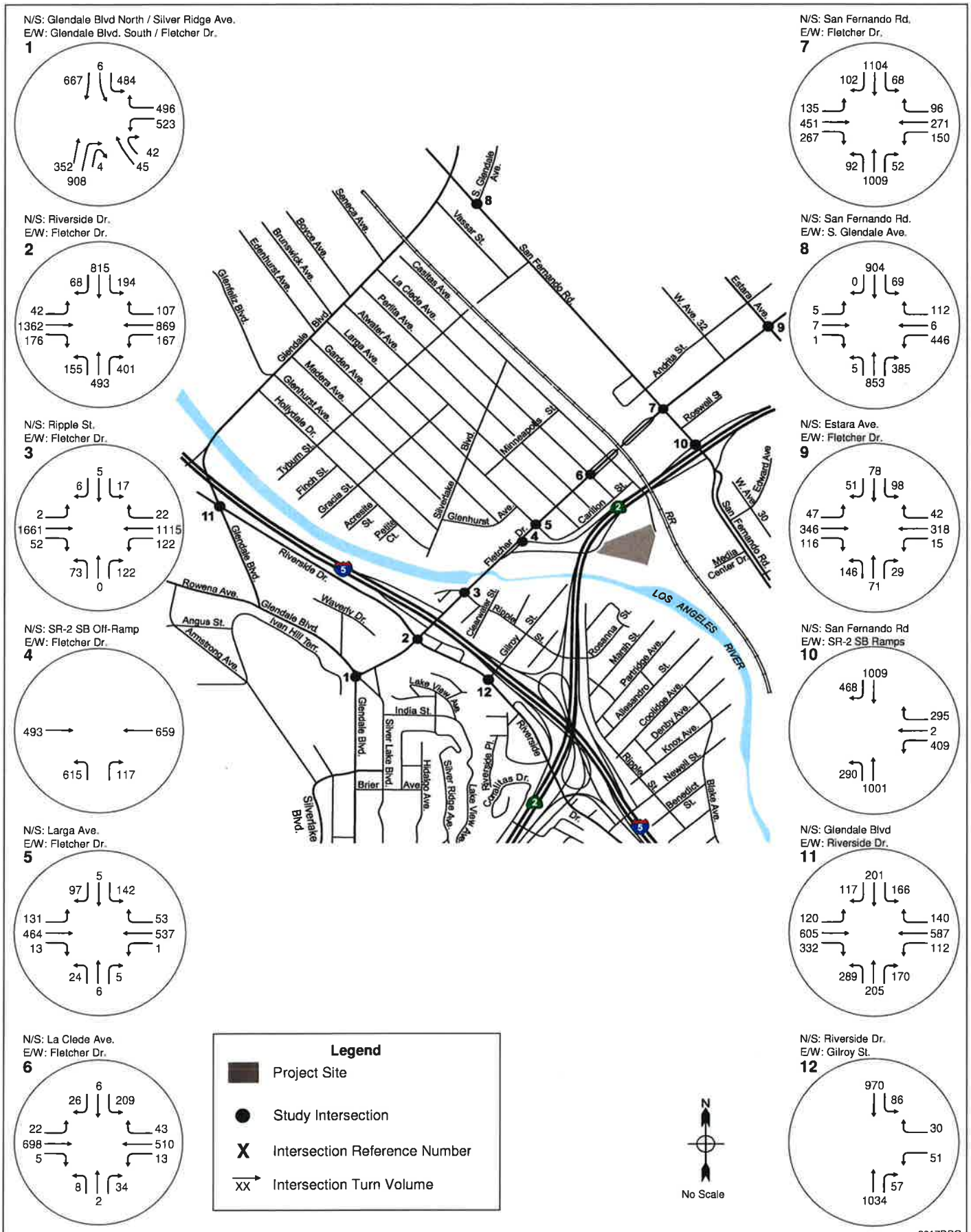


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Figure 2.4
Existing Traffic Volumes - PM Peak Hour

**Bow Tie Yard Lofts Project**

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level defined by a range of volume/capacity (V/C) ratios. Table 2.1 defines the ranges of V/C ratios and their corresponding levels of service for signalized intersections.

**Table 2.1 Level of Service Definitions for Signalized Intersections**

| Level of Service | Description | Volume to Capacity Ratio |
|---|---|---|
| A | Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation. | <0.600 |
| B | Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form. | 0.601 – 0.700 |
| C | Good operation. Occasionally drivers may have to wait for more than 60 seconds, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted. | 0.701 – 0.800 |
| D | Fair operation. Cars are sometimes required to wait for more than 60 seconds during short peaks. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods. | 0.801 – 0.900 |
| E | Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes. | 0.901 – 1.000 |
| F | Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersections approach lanes; therefore, volumes carried are not predictable. Potential for stop-and-go type traffic flow. | Over 1.000 |

Source: *Highway Capacity Manual*, Special Report 209, Transportation Research Board, Washington, D.C., 1985 and *Interim Materials on Highway Capacity*, MCHRP Circular 212, 1982.

Intersection analysis was conducted using the "Critical Movement Analysis (Planning Method)" as described in "Transportation Research Circular 212, Transportation Research Board, Washington D.C. 1980", to obtain volume/capacity (V/C) ratios for each intersection, per the LADOT Traffic Study guidelines. The exception was the intersection in the City of Glendale which was analyzed with the Intersection Capacity Utilization Method (ICU) per City of Glendale Guidelines.

Existing Peak Hour Levels of Service

Table 2.2 summarizes the existing AM and PM peak hour V/C ratios and corresponding levels of service at the analyzed intersections.

*AM Peak Hour*

All of the studied intersections currently operate at LOS C or better during the AM peak hour, except for the intersection of Riverside Drive & Fletcher Drive which operates at LOS E.

*PM Peak Hour*

All of the studied intersections currently operate at LOS D or better during the PM peak hour, except for the intersection of Riverside Drive & Fletcher Drive which operates at LOS F.

## 2.4 Existing Transit Service

Summary of Transit Service on Major Streets in the Project Vicinity

The Project Area is currently served by a total of five local and inter-city transit operators including one Metro Rapid bus line (794), four Metro Local Bus lines (90, 91, 94, 96) and one Metro Circulator Bus line (603). Table 2.3 lists the individual bus and rail lines serving the Project Area, and indicates the frequency of service (headways) during the key analysis times.

*Fletcher Dive*

Located north of the Project Site, Fletcher Drive carries one Metro Circulator Bus line (603).

*Glendale Boulevard*

Located west of the Project Site, Glendale Boulevard carries two Metro Local Bus

**Table 2.2 Existing Conditions – Intersection Level of Service**

| Intersection | Existing Conditions | | | |
|---|---|---|---|---|
| | AM Peak Hour | | PM Peak Hour | |
| | V / C | LOS | V / C | LOS |
| 1. Glendale Blvd. & Fletcher Dr. | 0.555 | A | 0.557 | A |
| 2. Riverside Dr. & Fletcher Dr. | 0.930 | E | 1.047 | F |
| 3. Ripple St. & Fletcher Dr. | 0.589 | A | 0.698 | B |
| 4. SR-2 SB-WB Off-Ramp & Fletcher Dr. | 0.585 | A | 0.364 | A |
| 5. Larga Ave. & Fletcher Dr. | 0.508 | A | 0.363 | A |
| 6. La Clede Ave. & Fletcher Dr. | 0.530 | A | 0.327 | A |
| 7. San Fernando Rd. & Fletcher Dr. | 0.711 | C | 0.809 | D |
| 8. San Fernando Rd. & South Glendale Ave. | 0.668 | B | 0.679 | B |
| 9. Estara Ave. & Fletcher Dr. | 0.682 | B | 0.467 | A |
| 10. San Fernando Rd & SR-2 SB Ramps | 0.578 | A | 0.623 | B |
| 11. Glendale Blvd & Riverside Dr. | 0.581 | A | 0.581 | A |
| 12. Riverside Dr. & Gilroy St. | 0.453 | A | 0.375 | A |

lines (90, and 91).

*Riverside Drive*

Located west of the Project Site, Riverside Drive carries one Metro Local Bus line (96).

*San Fernando Road*

Located east of the Project Site, San Fernando Road carries three Metro Local Bus lines (90, 91, and 94), one Metro Circulator Bus line (603), and one Rapid line (794).

**Table 2.3 Existing Public Transit Services**

| Route | Description | Approximate Headway (minutes) | |
|---|---|---|---|
| | | AM Peak | PM Peak |
| Metro Rapid | | | |
| 794 | Downtown Los Angeles - Sylmar | 20 | 20 |
| Metro Local | | | |
| 90/91 | Downtown Los Angeles - Sylmar | 17 | 20 |
| 94 | Downtown Los Angeles - Sunvalley | 20 | 24 |
| 96 | Downtown Los Angeles - Burbank | 30 | 30 |
| Metro Circulator | | | |
| 603 | Downtown Los Angeles - Glendale | 15 | 10 |

# 3. Future Conditions Without The Project

## 3.1 Traffic Forecasts

In order to evaluate the potential traffic impacts of the Project, it was necessary to first estimate and then analyze future traffic conditions without the Project. The year selected for this analysis was 2023 which is the expected year of completion of the Project.

Future traffic forecasts were estimated by forecasting two separate components of traffic growth in the study area. The first component represents the ambient growth that is a general growth in traffic volumes due to minor new developments in the Project Area, and regional growth and development outside the study area. A growth rate of 1% per year was assumed for this ambient traffic growth in conjunction with LADOT. The existing traffic counts were therefore adjusted upward by a total of 7% to represent the ambient growth to the Project completion year.

The second component of future growth relates to specific development projects located in the study area that are either under construction, approved, or under formal planning consideration and potentially could be in place by the year 2023 when the Project will be completed. The following section of this chapter describes the process of estimating traffic from these related projects.

This approach is conservative in that not all of the related projects may be ultimately built, and not all may be built by 2023 (the buildout year of the Project). Along with the fact that the analysis includes a list of specific related projects and a general background growth factor, the analysis likely overstates the future growth in traffic without the Project.

## 3.2 Related Projects

Project List

A list of proposed development projects that could affect traffic conditions in the Project Area was prepared based on information obtained from a variety of sources including the City of Los Angeles, other studies and reports, and field verification and observations. A total of 14 potential development projects were identified, in conjunction with LADOT and City of Glendale, the locations of which are shown in Figure 3.1 and are listed in Table 3.1.

It should also be noted that, (again) for purposes of preparing a conservative worst case analysis, no potential street improvements or transportation mitigation measures that might be

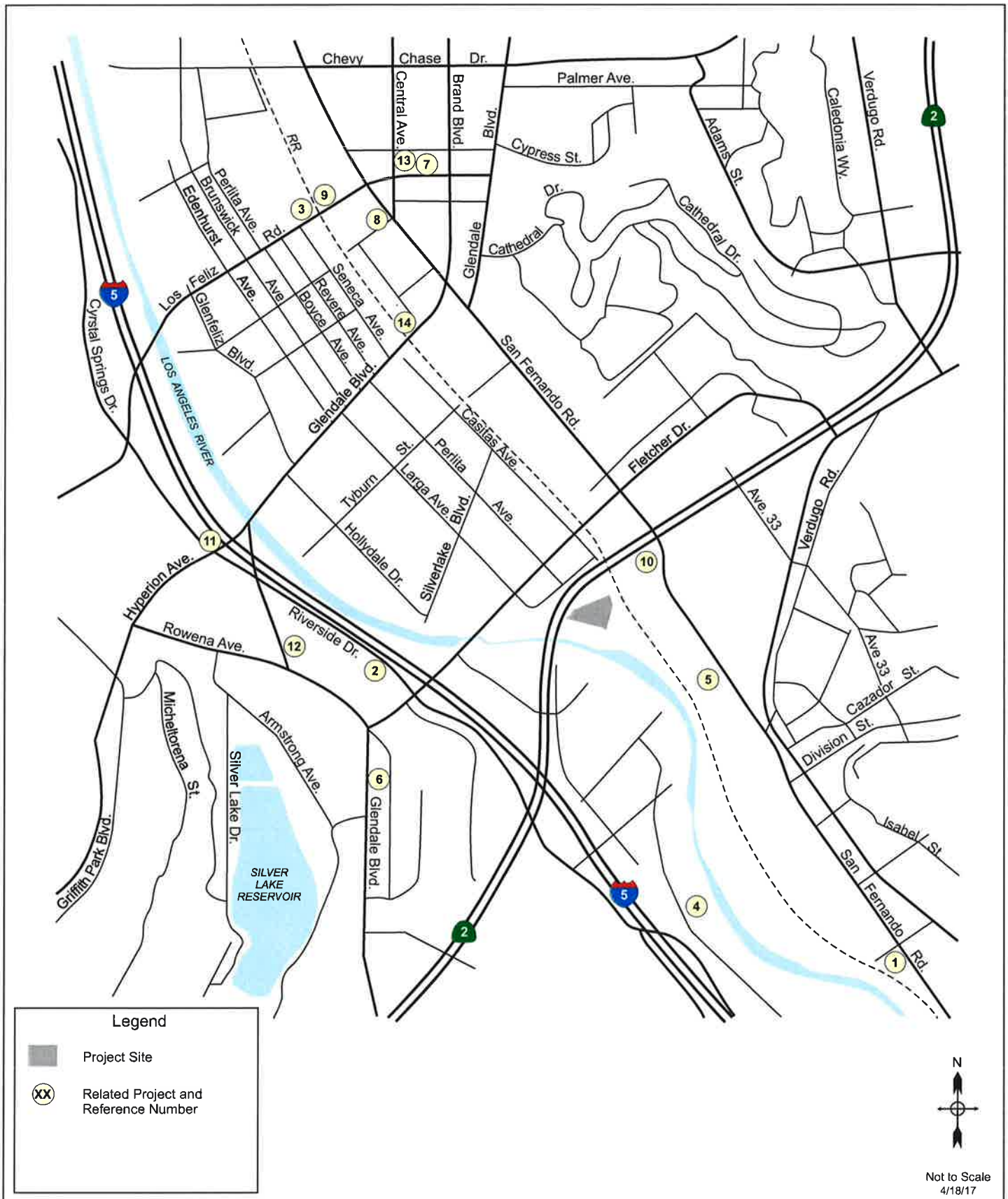


Figure 3.1
Location of Related Projects

**Bow Tie Yard Lofts Project**

The **Mobility** Group
*Transportation Strategies & Solutions*

## Table 3.1 Related Project List and Trip Generation Estimates

| Project # | Source | Project Name - EAF # / DOT Case # | Location / Address | Project Description | | Daily Trips | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | In | Out | Total | In | Out | Total |
| 1 | LADOT | Mixed-Use - Taylor Yard Village | 1555 N San Fernando Rd | 25,000 S.F. | Retail | 2,694 | 8 | 5 | 13 | 23 | 25 | 48 |
| 2 | LADOT | 2600 Riverside Dr Condos | 2600 W Riverside Dr. | 120 Units | Condominiums | 703 | 8 | 45 | 53 | 42 | 20 | 62 |
| 3 | LADOT | New Life Vision Church | 2861 W Los Feliz Blvd. | 85,631 S.F. | Church | 602 | 23 | 14 | 37 | 18 | 18 | 36 |
| 4 | LADOT | Blake Ave Riverfront (Blake / Blimp) | 1901 W Blake Ave. | 142 Units | Condominiums | 1,248 | 28 | 81 | 109 | 72 | 24 | 96 |
| | | | | 4,898 S.F. | Retail | | | | | | | |
| | | | | 3,760 S.F. | Restaurant | | | | | | | |
| | | | | 1,000 S.F. | Coffee/Donut Shop no Drive Thru | | | | | | | |
| 5 | LADOT | Charter School | 2588 N San Fernando Rd | 200 Seats | Enrollement - High School | 562 | 123 | 107 | 230 | 36 | 5 | 41 |
| | | | | 150 Seats | Enrollement - Middle School | | | | | | | |
| | | | | 300 Seats | Enrollement - Elementry School | | | | | | | |
| 6 | LADOT | Glendale Apartments | 2468 N Glendale Blvd. | 50 Units | Apartments | 216 | 4 | 20 | 24 | 22 | 16 | 38 |
| | | | | 559 S.F. | Retail | | | | | | | |
| 7 | City of Glendale | Medical Office | 129 W Los Feliz Blvd. | 24,194 S.F. | Medical Office | 914 | 47 | 12 | 59 | 26 | 64 | 90 |
| | | | | 435 S.F. | Pharmacy | | | | | | | |
| 8 | City of Glendale | Multi - Family | 3901-3915 San Fernando Rd | 142 D.U. | Multi - Family | 932 | -5 | 52 | 47 | 58 | 20 | 78 |
| | | Commercial | | 11,600 S.F. | Commercial | | | | | | | |
| | | Studio | | 5,000 S.F. | Studio | | | | | | | |
| 9 | City of Glendale | Tropico Apartments | 435 W Los Feliz Blvd. | 238 D.U. | Multi - Family | 1,350 | 20 | 47 | 67 | 52 | 36 | 88 |
| 10 | LADOT | 2910 San Fernando | 2910 San Fernando | 370 Units | Condominiums | 2,461 | 31 | 129 | 160 | 125 | 70 | 195 |
| 11 | LADOT | 3061 Riverside Dr. Residential Project | 3061 Riverside Dr. | 84 Units | Apartments | 479 | 0 | 33 | 33 | 33 | 8 | 41 |
| 12 | LADOT | Play Silverlake | 2828 N Glendale Blvd. | 175 Students | Childcare | 618 | 65 | 57 | 122 | 58 | 66 | 124 |
| 13 | City of Glendale | Medical Office | 1300 S Central Ave. | 6,782 S.F. | Medical Office | 233 | 12 | 3 | 15 | 6 | 17 | 23 |
| 14 | City of Glendale | Glendale Beeline Bus Maintenance Facility | 1749-1761 Gardena Ave. | 25,500 S.F. | Bus Maintenance Facility | 169 | 20 | 2 | 22 | 3 | 20 | 23 |
| | **Total** | | | | | **13,181** | **384** | **607** | **991** | **574** | **409** | **983** |

associated with any of the related projects were included in the future conditions traffic analysis.

Project Trip Generation and Distribution

Trip generation estimates for the related projects were prepared, as shown in Table 3.1. These were generally taken from the environmental and/or traffic studies prepared for the individual projects. Where the information was not available from previous reports, the trip generation was estimated using trip rates developed by the Institute of Transportation Engineers (ITE). Similarly, trip distribution estimates were also taken from previous studies where available or were estimated based on an understanding of the type of the project, its location, and the downtown roadway and circulation system.

As shown in Table 3.1, the related projects would generate a total of about 991 vehicle trips in the AM peak hour and about 983 vehicle trips in the PM peak hour. It should be noted that because of the large geographic distribution of these projects, that not all of these trips would travel through the study area and traverse the study intersections.

Future Traffic Forecasts for 2023 Without Project Condition

The trip estimates shown in Table 3.1 were then added to the roadway network and combined with existing volumes and ambient traffic growth (described earlier) to provide forecasts of future traffic conditions in the study area in 2023, for both the AM and PM peak periods, representing the Future Without Project conditions.

The Future Without Project peak hour traffic volumes are illustrated in Figures 3.2 and 3.3 for the AM and PM peak hours respectively.

## 3.3 Transportation System Improvement Projects

Glendale Boulevard-Hyperion Avenue Complex of Bridges Improvement Project

The Glendale Boulevard-Hyperion Avenue Complex of Bridges provides access across the I-5 Golden State Freeway and Los Angeles River for Hyperion Avenue and Glendale Boulevard. The improvements to the complex of bridges will include a revised configuration of the I-5 northbound off-ramp to Glendale Boulevard, which will permit a northbound left turn onto Glendale Boulevard – a movement which is not currently permitted. The Glendale Boulevard-Hyperion Avenue Complex of Bridges Improvement Project is planned for completion before 2023, so this modification has been incorporated in the future conditions analysis.

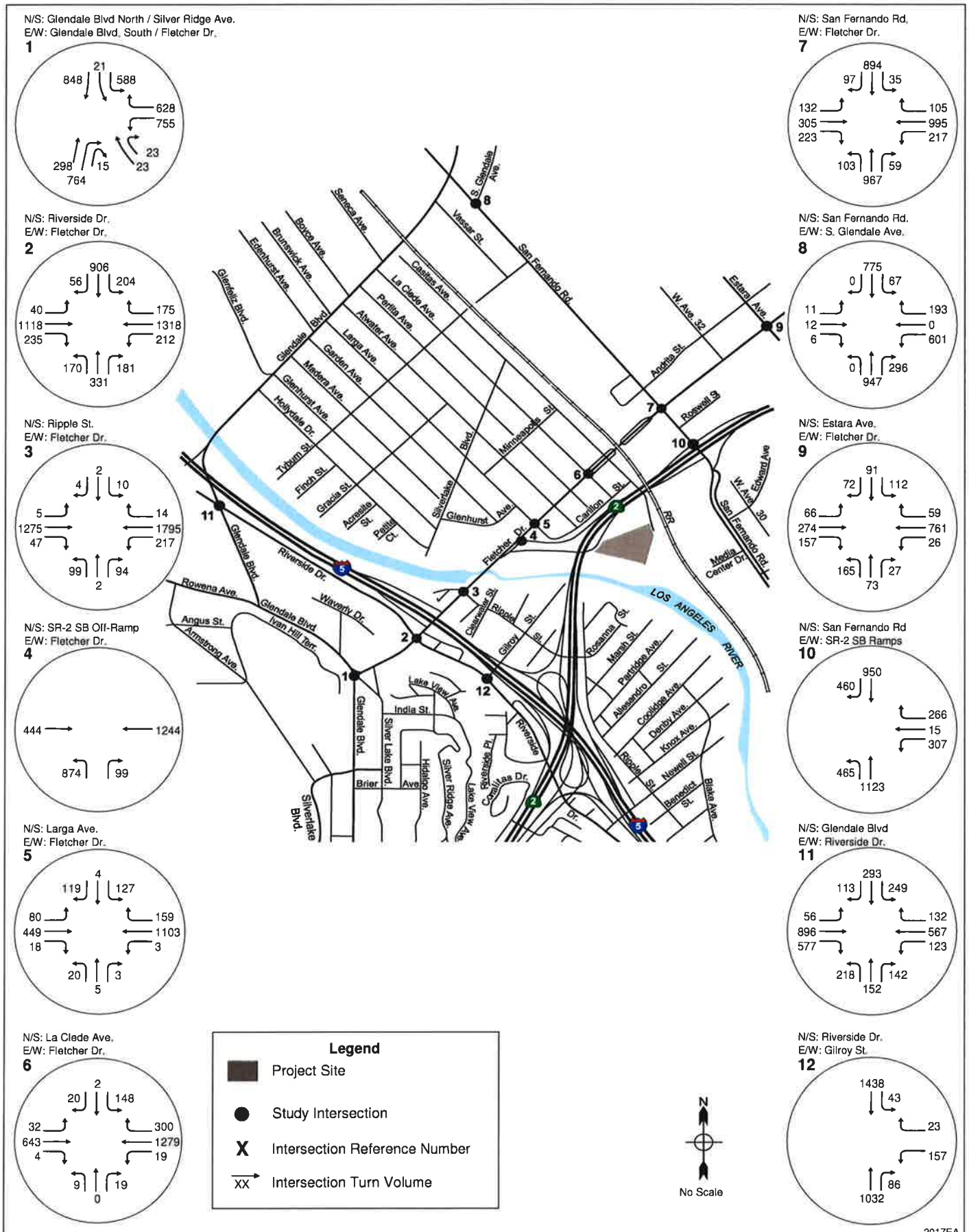


Figure 3.2
Future Without Project Traffic Volumes - AM Peak Hour

**Bow Tie Yard Lofts Project**

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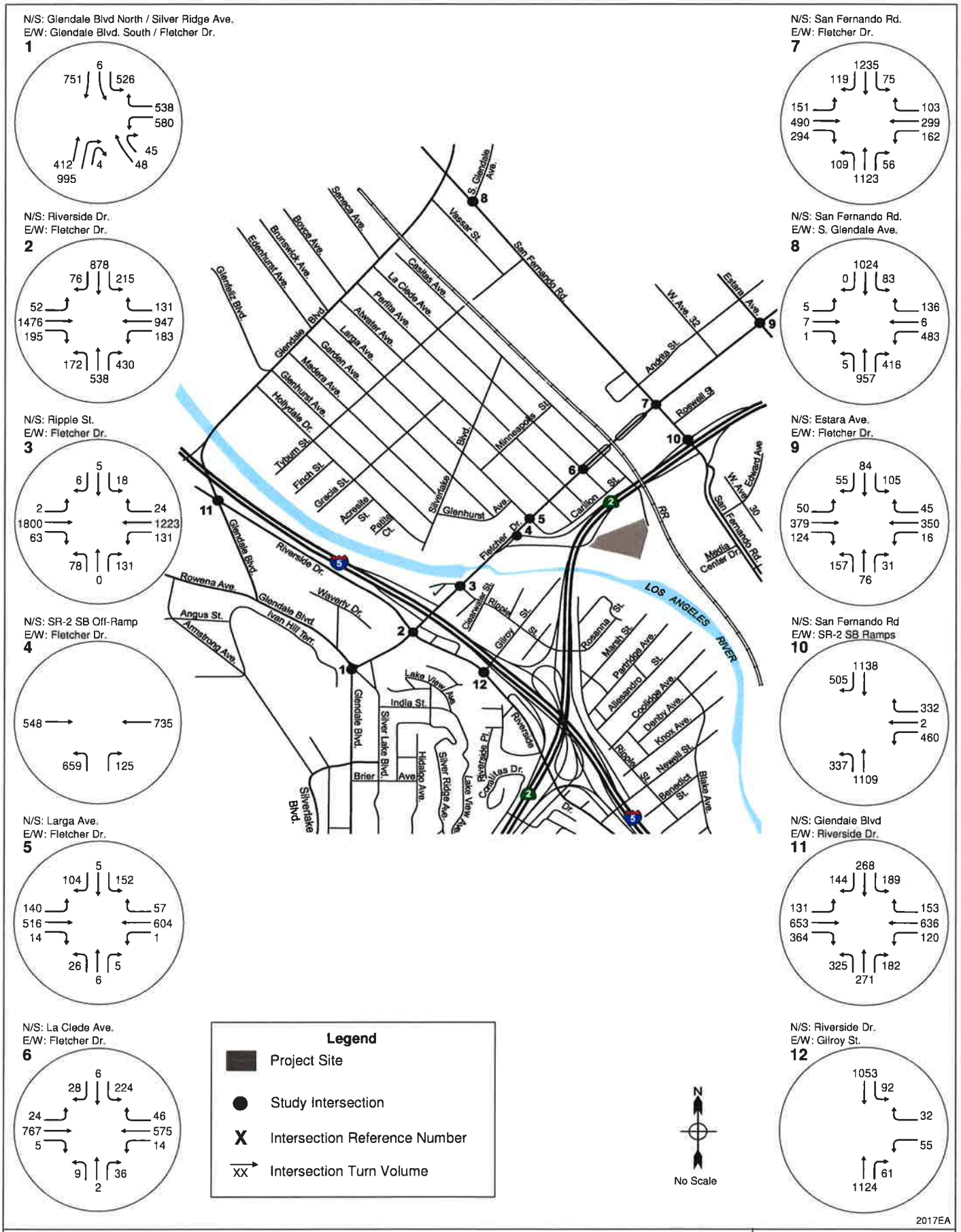


Figure 3.3
Future Without Project Traffic Volumes - PM Peak Hour

**Bow Tie Yard Lofts Project**

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## 3.4 Future Intersection Conditions

Future Without Project Intersection Level of Service

The Future Without Project traffic forecasts were evaluated to determine the V/C ratio and LOS for the analyzed intersections for both the AM peak hour and the PM peak hour. The results are shown in Table 3.2 and Table 3.3, which summarize the intersection levels of

service calculated for the Future Without Project conditions, and compares them to existing conditions levels of service.

**Table 3.2 Future Without Project Conditions – Intersection Level of Service AM Peak Hour**

| Intersection | AM Peak Hour | | | |
|---|---|---|---|---|
| | Existing | | Future Without Project | |
| | V / C | LOS | V / C | LOS |
| 1. Glendale Blvd. & Fletcher Dr. | 0.555 | A | 0.630 | B |
| 2. Riverside Dr. & Fletcher Dr. | 0.930 | E | 1.020 | F |
| 3. Ripple St. & Fletcher Dr. | 0.589 | A | 0.643 | B |
| 4. SR-2 SB-WB Off-Ramp & Fletcher Dr. | 0.585 | A | 0.639 | B |
| 5. Larga Ave. & Fletcher Dr. | 0.508 | A | 0.556 | A |
| 6. La Clede Ave. & Fletcher Dr. | 0.530 | A | 0.593 | A |
| 7. San Fernando Rd. & Fletcher Dr. | 0.711 | C | 0.799 | C |
| 8. San Fernando Rd. & South Glendale Ave. | 0.668 | B | 0.736 | C |
| 9. Estara Ave. & Fletcher Dr. | 0.682 | B | 0.745 | C |
| 10. San Fernando Rd & SR-2 SB Ramps | 0.578 | A | 0.694 | B |
| 11. Glendale Blvd & Riverside Dr. | 0.581 | A | 0.658 | B |
| 12. Riverside Dr. & Gilroy St. | 0.453 | A | 0.499 | A |

*AM Peak Hour*

All studied intersections would operate at LOS C or better during the AM peak hour, except for Riverside Drive & Fletcher Drive which would operate at LOS E.

*PM Peak Hour*

All studied intersections would operate at LOS D or better during the PM peak hour, except for Riverside Drive & Fletcher Drive which would operate at LOS F and San Fernando Road & Fletcher Drive which would operate at LOS E.

**Table 3.3 Future Without Project Conditions – Intersection Level of Service PM Peak Hour**

| Intersection | PM Peak Hour | | | |
|---|---|---|---|---|
| | Existing | | Future Without Project | |
| | V / C | LOS | V / C | LOS |
| 1. Glendale Blvd. & Fletcher Dr. | 0.557 | A | 0.639 | B |
| 2. Riverside Dr. & Fletcher Dr. | 1.047 | F | 1.149 | F |
| 3. Ripple St. & Fletcher Dr. | 0.698 | B | 0.764 | C |
| 4. SR-2 SB-WB Off-Ramp & Fletcher Dr. | 0.364 | A | 0.407 | A |
| 5. Larga Ave. & Fletcher Dr. | 0.363 | A | 0.445 | A |
| 6. La Clede Ave. & Fletcher Dr. | 0.327 | A | 0.379 | A |
| 7. San Fernando Rd. & Fletcher Dr. | 0.809 | D | 0.909 | E |
| 8. San Fernando Rd. & South Glendale Ave. | 0.679 | B | 0.742 | C |
| 9. Estara Ave. & Fletcher Dr. | 0.467 | A | 0.513 | A |
| 10. San Fernando Rd & SR-2 SB Ramps | 0.623 | B | 0.721 | C |
| 11. Glendale Blvd & Riverside Dr. | 0.581 | A | 0.679 | B |
| 12. Riverside Dr. & Gilroy St. | 0.375 | A | 0.415 | A |

# 4. Future With Project Conditions

This section of the report describes the transportation characteristics of the Project and documents the analysis of potential Project traffic impacts in the study area.

## 4.1 Project Transportation Characteristics

The Project Site is currently occupied by 87,000 sq. ft. of manufacturing space, 25,000 sq. ft. of warehousing space and 5,000 sq. ft. of production space. The Project will consist of 419 apartments, 19,000 sq. ft. of creative office space, 3,000 sq. ft. of high-turnover restaurant space, and a 42,000 sq. ft urban farm. A ground floor plan is shown in Figure 1.2. Vehicle access into the Project Site will be provided by a driveway on Casitas Street.

Project Trip Generation

Trip generation for the Project was estimated using trip rates from *Trip Generation Manual – 9th Edition* (Institute of Transportation Engineers, 2012). The mixed use nature of the Project will provide for some synergy between the land uses in terms of trip making. Some of the office employees may also live in the project, and office employees, project residents and nearby residents would be patrons of the small restaurant – particularly in the peak hours. The Project Site is also served by a number of transit lines.

Certain adjustments to the trip generation were therefore made, with LADOT approval, to reflect these conditions. For the trips generated by office uses, a reduction of 5% for internal trips was applied. For the trips generated by all land uses in the Project, a reduction of 5% for transit trips was applied to the residential and office uses. For the restaurant use, a reduction of 80% for internal trips was applied for the peak periods.

Table 4.1 summarizes the trip generation estimates for the daily, AM peak & PM peak hour periods respectively. As shown in Table 4.1, the analysis estimates that the Project would generate a total of 2,551 daily vehicle trips, 199 AM peak hour vehicle trips and 239 PM peak hour vehicle trips.

Trip Distribution

The likely distribution of Project trips was identified based on the type of land uses in the Project, the likely origins and destinations of Project residents and employees, and the characteristics of the street system in the area of the Project. The following distribution was assumed:

**Table 4.1 2800 Casitas Avenue Project - Trip Generation Estimates**

**Daily**

| Land Use Assumptions | Source [1] & Code | Quantity | Units | Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Trip Rate | | Total Trips |
| **Existing Uses** | | | | | | | |
| Manufacturing | ITE 140 | 87,000 | S.F | | 3.82 | | -332 |
| Net Manufacturing | | | | | | | -332 |
| Warehousing[2] | ITE 150 | 25,000 | SF | | 3.56 | | -89 |
| Net Warehousing | | | | | | | -89 |
| Production Space [4] | | 5,000 | SF | | 4.00 | | -20 |
| (Reduction for transit trips) - 5% | | | | | | | 1 |
| Net Production Space | | | | | | | -19 |
| Total Existing | | | | | | | -440 |
| **Proposed Uses** | | | | | | | |
| Apartments [2] | ITE 220 | 419 | DU | | 6.65 | | 2,786 |
| (Reduction for transit trips) - 5% | | | | | | | -139 |
| Net Apartments | | | | | | | 2,647 |
| Creative Office [2] | ITE 710 | 19,000 | SF | | 11.03 | | 210 |
| (Reduction for internal trips) - 5% | | | | | | | -11 |
| (Reduction for transit trips) - 5% | | | | | | | -10 |
| Net Creative Office | | | | | | | 189 |
| High-Turnover Restaurant [2] | ITE 932 | 3,000 | SF | | 127.15 | | 381 |
| (Reduction for internal trips) - 80% | | | | | | | -305 |
| Net High-Turnover Restaurant | | | | | | | 77 |
| Urban Farm[3] | | 42,000 | SF | | | | 78 |
| Net Urban Farm | | | | | | | 78 |
| Total Proposed | | | | | | | 2,991 |
| Total Net | | | | | | | 2,551 |

**Table 4.1 2800 Casitas Avenue Project - Trip Generation Estimates**

**AM Peak**

| Land Use Assumptions | Source [1] & Code | Quantity | Units | AM Peak Hour | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Trip Rate | | | Total Trips | | |
| | | | | In | Out | Total | In | Out | Total |
| **Existing Uses** | | | | | | | | | |
| Manufacturing | ITE 140 | 87,000 | SF | 0.53 | 0.20 | 0.73 | -46 | -18 | -64 |
| Net Manufacturing | | | | | | | -46 | -18 | -64 |
| Warehousing[2] | ITE 150 | 25,000 | SF | 0.24 | 0.06 | 0.30 | -6 | -2 | -8 |
| Net Warehousing | | | | | | | -6 | -2 | -8 |
| Production Space [4] | | 5,000 | SF | 0.40 | 0.04 | 0.44 | -2 | 0 | -2 |
| (Reduction for transit trips) - 5% | | | | | | | 0 | 0 | 0 |
| Net Production Space | | | | | | | -2 | 0 | -2 |
| Total Existing | | | | | | | -54 | -20 | -74 |
| **Proposed Uses** | | | | | | | | | |
| Apartments [2] | ITE 220 | 419 | DU | 0.10 | 0.41 | 0.51 | 42 | 172 | 214 |
| (Reduction for transit trips) - 5% | | | | | | | -2 | -9 | -11 |
| Net Apartments | | | | | | | 40 | 163 | 203 |
| Creative Office [2] | ITE 710 | 19,000 | SF | 1.37 | 0.19 | 1.56 | 26 | 4 | 30 |
| (Reduction for internal trips) - 5% | | | | | | | -2 | 0 | -2 |
| (Reduction for transit trips) - 5% | | | | | | | -1 | 0 | -1 |
| Net Creative Office | | | | | | | 23 | 4 | 27 |
| High-Turnover Restaurant [2] | ITE 932 | 3,000 | SF | 5.95 | 4.86 | 10.81 | 18 | 14 | 32 |
| (Reduction for internal trips) - 80% | | | | | | | -14 | -12 | -26 |
| Net High-Turnover Restaurant | | | | | | | 4 | 2 | 6 |
| Urban Farm[3] | | 42,000 | SF | | | | 35 | 2 | 37 |
| Net Urban Farm | | | | | | | 35 | 2 | 37 |
| Total Proposed | | | | | | | 102 | 171 | 273 |
| Total Net | | | | | | | 48 | 151 | 199 |

## Table 4.1 2800 Casitas Avenue Project - Trip Generation Estimates

**PM Peak**

| Land Use Assumptions | Source [1] & Code | Quantity | Units | PM Peak Hour | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Trip Rate | | | Total Trips | | |
| | | | | In | Out | Total | In | Out | Total |
| **Existing Uses** | | | | | | | | | |
| Manufacturing | ITE 140 | 87,000 | SF | 0.32 | 0.41 | 0.73 | -28 | -36 | -64 |
| Net Manufacturing | | | | | | | -28 | -36 | -64 |
| Warehousing[2] | ITE 150 | 25,000 | SF | 0.08 | 0.24 | 0.32 | -2 | -6 | -8 |
| Net Warehousing | | | | | | | -2 | -6 | -8 |
| Production Space [4] | | 5,000 | SF | 0.04 | 0.45 | 0.49 | 0 | -2 | -2 |
| (Reduction for transit trips) - 5% | | | | | | | 0 | 0 | 0 |
| Net Production Space | | | | | | | 0 | -3 | -3 |
| Total Existing | | | | | | | -30 | -45 | -75 |
| **Proposed Uses** | | | | | | | | | |
| Apartments [2] | ITE 310 | 419 | DU | 0.40 | 0.22 | 0.62 | 168 | 92 | 260 |
| (Reduction for transit trips) - 5% | | | | | | | -8 | -5 | -13 |
| Net Apartments | | | | | | | 160 | 87 | 247 |
| Creative Office [2] | ITE 710 | 19,000 | SF | 0.25 | 1.24 | 1.49 | 5 | 23 | 28 |
| (Reduction for internal trips) - 5% | | | | | | | 0 | -1 | -1 |
| (Reduction for transit trips) - 5% | | | | | | | 0 | -1 | -1 |
| Net Creative Office | | | | | | | 5 | 21 | 26 |
| High-Turnover Restaurant [2] | ITE 932 | 3,000 | SF | 5.91 | 3.94 | 9.85 | 18 | 12 | 30 |
| (Reduction for internal trips) - 80% | | | | | | | -14 | -10 | -24 |
| Net High-Turnover Restaurant | | | | | | | 4 | 2 | 6 |
| Urban Farm[3] | | 42,000 | SF | | | | 1 | 34 | 35 |
| Net Urban Farm | | | | | | | 1 | 34 | 35 |
| Total Proposed | | | | | | | 170 | 144 | 314 |
| Total Net | | | | | | | 140 | 99 | 239 |

Notes:

1. ITE Trip Rates from Trip Generation, 9th Edition, Institute of Transportation Engineers, Washington, DC, 2012, except otherwise noted.
2. Trip rate reductions were applied per LADOT's *Traffic Study Policies and Procedures,* August 2014.
3. This land use was analyzed from empirical data: Cars: 35 Full-Time Employees, 100% arrive in AM peak hour, 100% leave in PM peak hour, 5% transit. Trucks: 1 truck (2 PCEs) per day bringing in external supplies, 50% arriving and leaving in AM peak hour. 2 trucks (4 PCEs) per day taking out farm produce, 25% arriving and leaving in AM peak hour, 25% arriving and leaving in PM peak hour.
4. From data on production studios (Warner Hollywood Studios & KTCA Studios).

Note: Trip totals may differ marginally due to rounding.

- 25% of the trips towards the north
- 35% of the trips towards the south
- 20% of the trips towards the east
- 20% of the trips towards the west

Traffic generated by the Project was added to the Future Without Project traffic volumes to obtain future traffic volumes with the Project for both peak periods at each of the study intersections.

The Project Only peak hour traffic volumes are illustrated in Figures 4.1 and 4.2 for the AM and PM peak hours respectively and the total Future With Project conditions peak hour traffic volumes are illustrated in Figures 4.3 and 4.4 for the AM and PM peak hours.

Project Driveways

The Project will have one driveway located on Casitas Avenue. Casitas Avenue will dead-end at the Project Site and the Project will be the only land use accessing Casitas Avenue at that location.

## 4.2 Project Impacts - Intersections

The appropriate significant impact thresholds were applied for the jurisdiction in which each intersection is located.

Significant Impact Thresholds for City of Los Angeles

LADOT has established criteria to determine if Project impacts are significant at an intersection. These criteria are shown below.

**Definition of Significant Impact at Intersection**

| With Project Traffic | | Project-Related Increase in V/C Ratio |
|---|---|---|
| LOS | V/C Ratio | |
| C | 0.701 – 0.800 | equal to or greater than 0.040 |
| D | 0.801 – 0.900 | equal to or greater than 0.020 |
| E, F | > 0.900 | equal to or greater than 0.010 |

Using these criteria, for example, a Project would not have a significant impact at an intersection if it is operating at LOS C after the addition of project traffic and the incremental change in the volume/capacity (V/C) ratio is less than 0.040. However, in another example, if

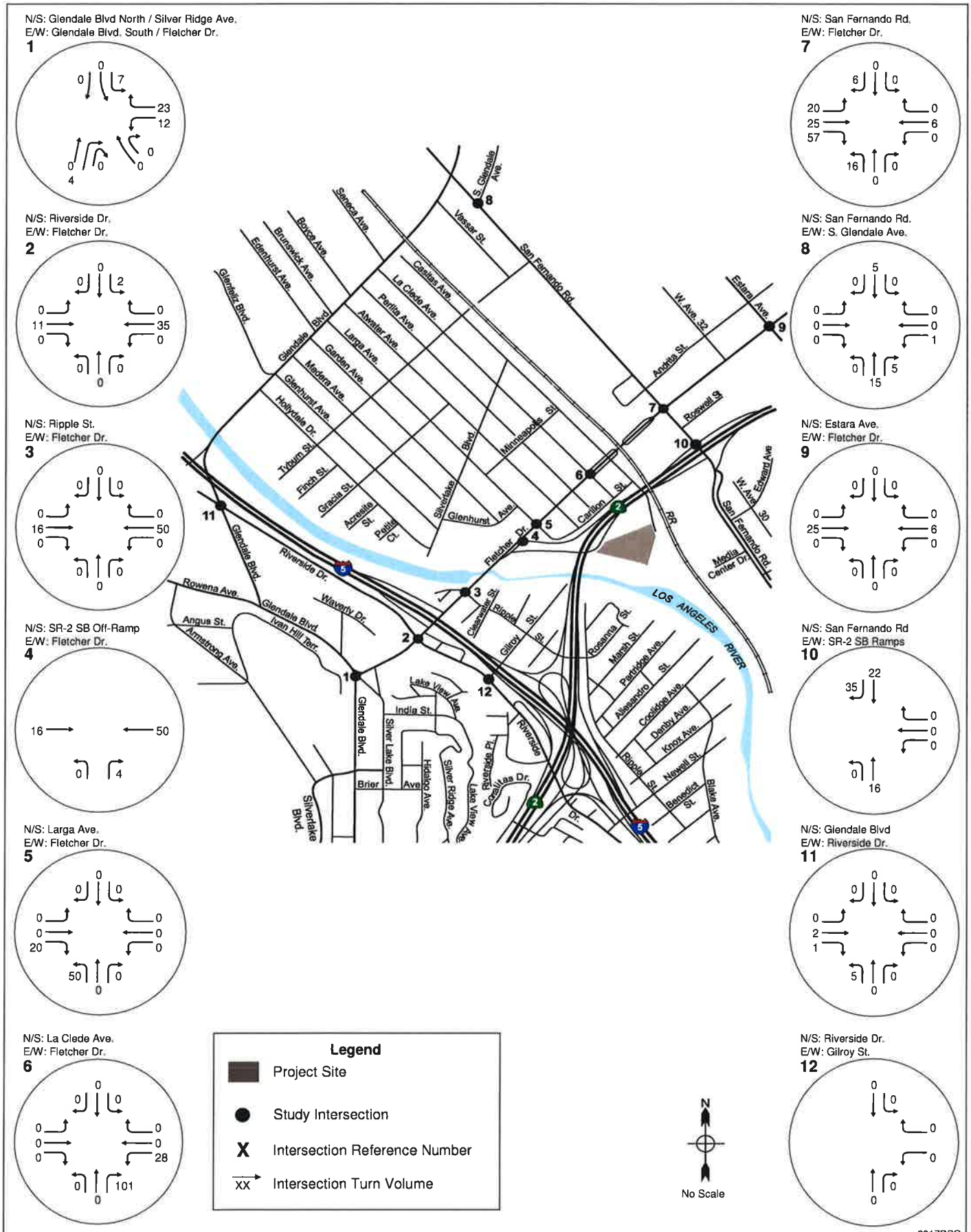



Figure 4.1
Project Only Traffic Volumes - AM Peak Hour

**Bow Tie Yard Lofts Project**

The **Mobility** Group
*Transportation Strategies & Solutions*

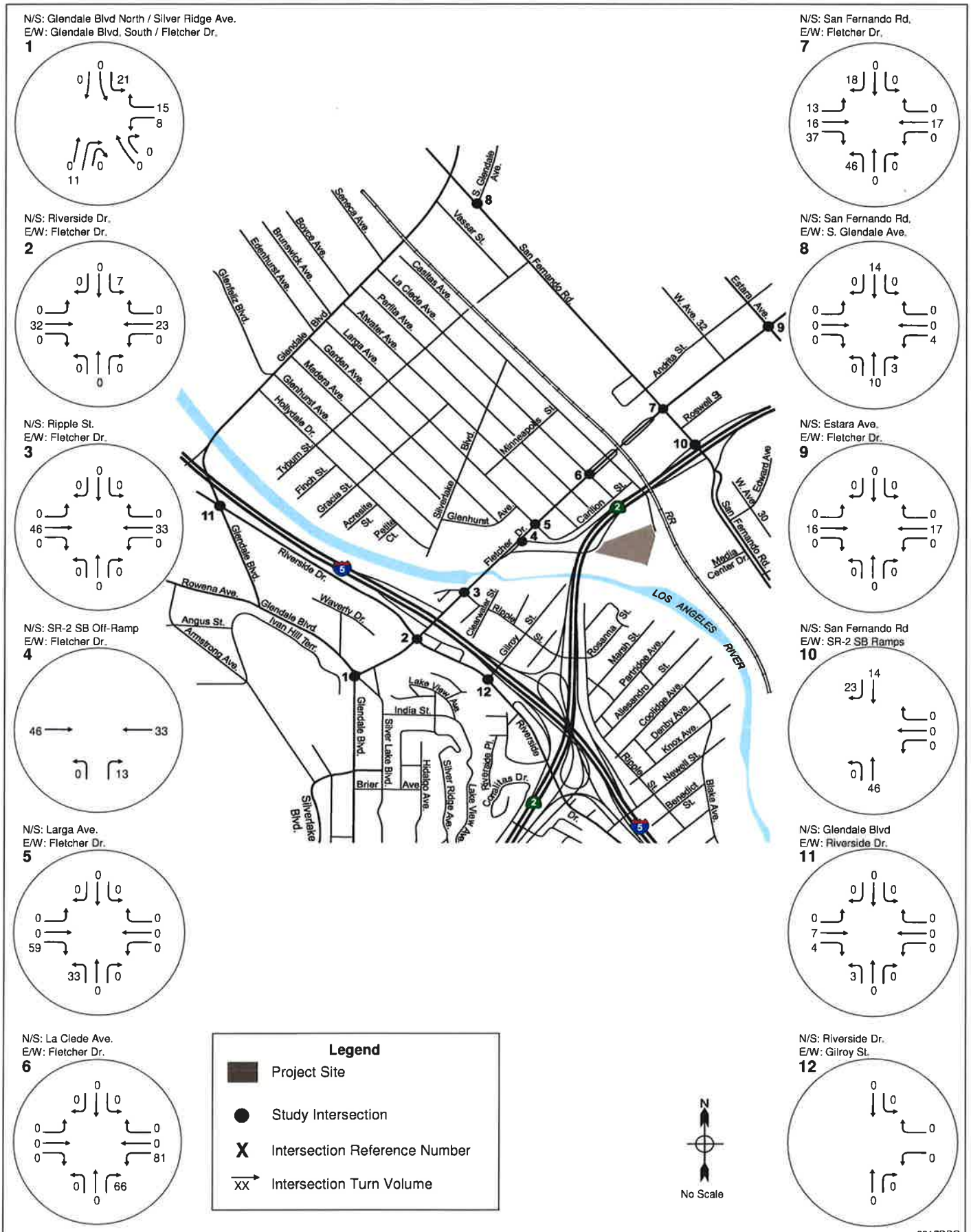



Figure 4.2
Project Only Traffic Volumes - PM Peak Hour

**Bow Tie Yard Lofts Project**

The **Mobility** Group
*Transportation Strategies & Solutions*

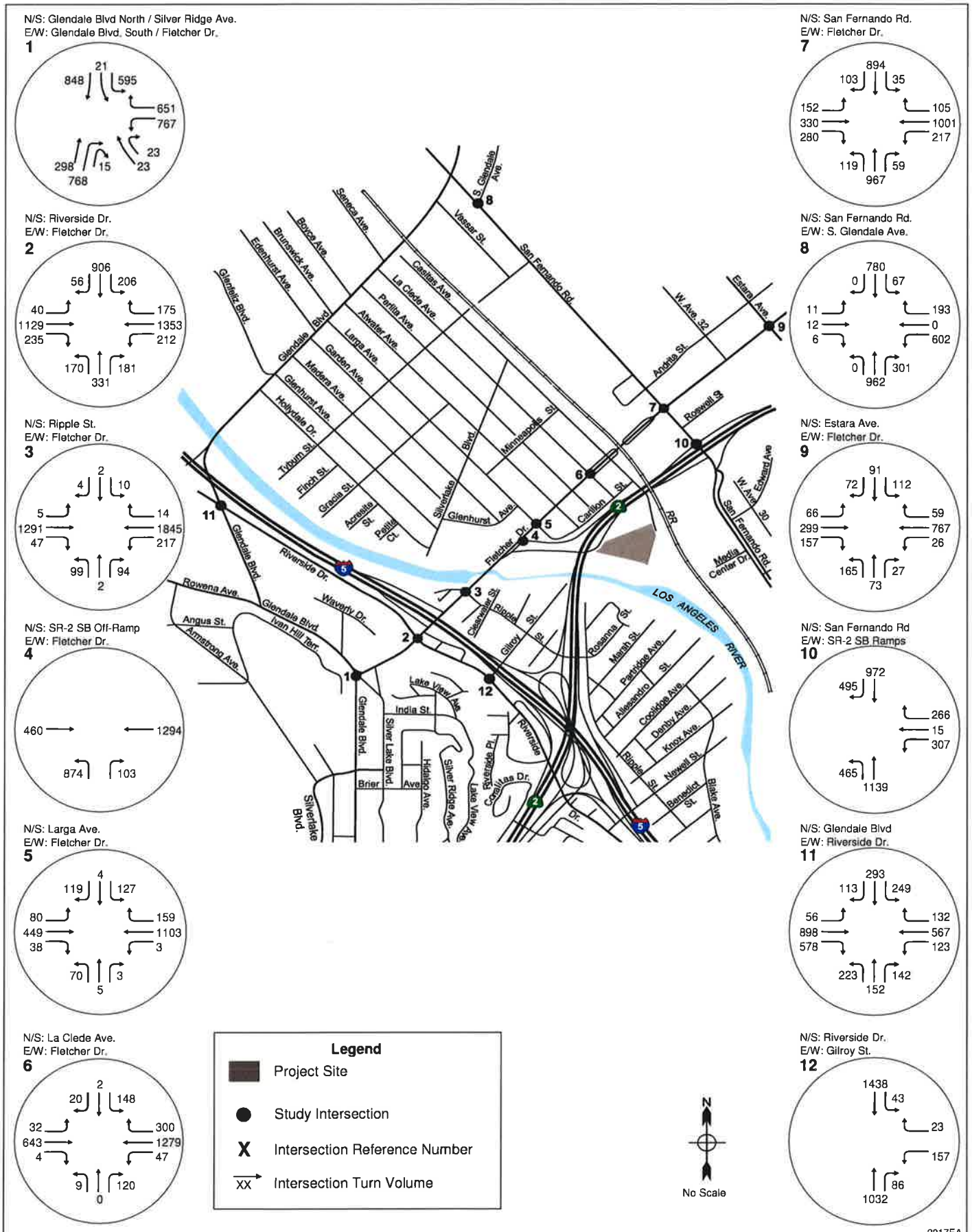



Figure 4.3
Future With Project Traffic Volumes - AM Peak Hour

**Bow Tie Yard Lofts Project**

The **Mobility** Group
*Transportation Strategies & Solutions*

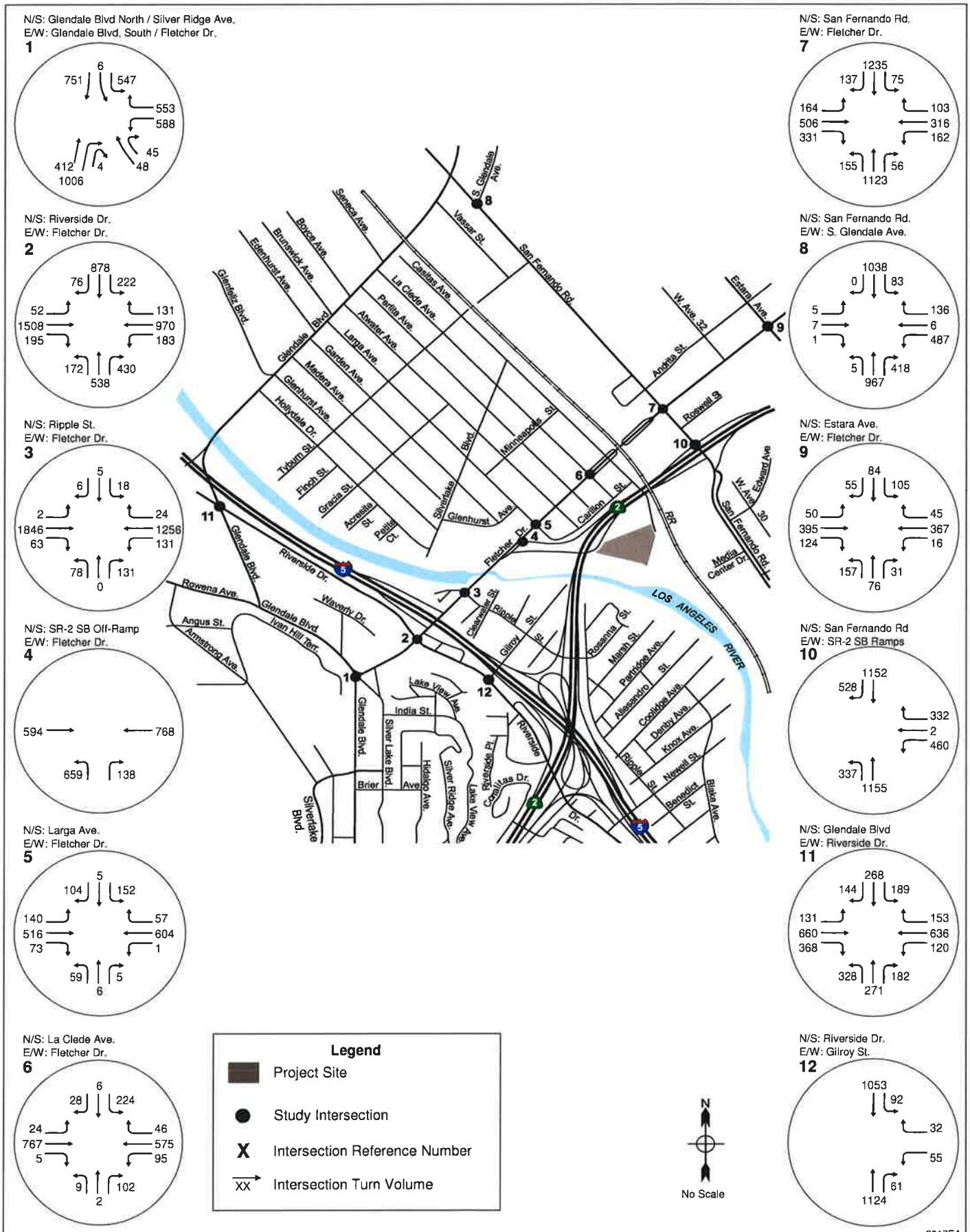



Figure 4.4
Future With Project Traffic Volumes - PM Peak Hour

**Bow Tie Yard Lofts Project**

The **Mobility** Group
*Transportation Strategies & Solutions*

the intersection is operating at LOS E or LOS F and the incremental change in V/C ratio is 0.010 or greater, then the Project would be considered to have a significant impact at that location.

Significant Impact Thresholds for City of Glendale

The City of Glendale has established criteria to determine if Project impacts are significant at a signalized intersection. These criteria are shown below.

**Definition of Significant Impact at Intersection**

| With Project Traffic | | Project-Related Increase in V/C Ratio |
|---|---|---|
| LOS | V/C Ratio | |
| D | 0.801 – 0.900 | equal to or greater than 0.020 |
| E, F | > 0.900 | equal to or greater than 0.020 |

Project Impact Analysis - Future With Project Intersection Level of Service

The intersection level of service analysis for the Future With Project conditions is summarized in Table 4.2 for the AM peak hour and in Table 4.3 for the PM peak hour. These tables also compare the level of service for without Project and with Project conditions, show the increase in V/C ratios at each intersection due to the Project, and identify if the increase constitutes a significant impact.

The analysis summarized in Table 4.2 indicates that for the AM peak hour, the addition of Project traffic would not cause the level of service to change at any of the study intersections, except at La Clede Ave & Fletcher Dr where it would change from LOS A to LOS B, San Fernando Rd & Fletcher Dr where it would change from LOS C to LOS D and at San Fernando Rd & SR-2 SB Ramps where it would change from LOS B to LOS C. All increases in volume/capacity (V/C) ratios would be less than the threshold for a significant impact to occur, except at one location where the increase would be sufficient to cause a significant impact:

7. San Fernando Rd & Fletcher Dr LOS D

The analysis summarized in Table 4.3 indicates that for the PM peak hour, the addition of Project traffic would not cause the level of service to change at any of the study intersections. All increases in volume/capacity (V/C) ratios would be less than the threshold for a significant impact to occur, except at two locations where the increase would be sufficient to cause a significant impact:

2. Riverside Dr & Fletcher Dr LOS F
7. San Fernando Rd & Fletcher Dr LOS E

**Table 4.2 Future With Project Conditions - Intersection Level of Service AM Peak Hour**

| Intersection | AM Peak Hour | | | | Change in V / C | Significant Impact |
|---|---|---|---|---|---|---|
| | Future Without Project | | Future With Project | | | |
| | V / C | LOS | V / C | LOS | | |
| 1. Glendale Blvd. & Fletcher Dr. | 0.630 | B | 0.637 | B | 0.007 | No |
| 2. Riverside Dr. & Fletcher Dr. | 1.020 | F | 1.024 | F | 0.004 | No |
| 3. Ripple St. & Fletcher Dr. | 0.643 | B | 0.660 | B | 0.017 | No |
| 4. SR-2 SB Off-Ramp & Fletcher Dr. | 0.639 | B | 0.657 | B | 0.018 | No |
| 5. Larga Ave. & Fletcher Dr. | 0.556 | A | 0.589 | A | 0.033 | No |
| 6. La Clede Ave. & Fletcher Dr. | 0.593 | A | 0.695 | B | 0.102 | No |
| 7. San Fernando Rd. & Fletcher Dr. | 0.799 | C | 0.828 | D | 0.029 | Yes |
| 8. San Fernando Rd. & S. Glendale Ave. | 0.736 | C | 0.743 | C | 0.007 | No |
| 9. Estara Ave. & Fletcher Dr. | 0.745 | C | 0.749 | C | 0.004 | No |
| 10. San Fernando Rd & SR-2 SB Ramps | 0.694 | B | 0.708 | C | 0.014 | No |
| 11. Glendale Blvd & Riverside Dr. | 0.658 | B | 0.661 | B | 0.003 | No |
| 12. Riverside Dr. & Gilroy St. | 0.499 | A | 0.499 | A | 0.000 | No |

It is therefore concluded that the Project would cause one significant traffic impact in the AM peak hour, and would cause two significant traffic impacts in the PM peak hour.

## 4.3 CMP Analysis

The Los Angeles County Congestion Management Program (CMP) requires that new development projects analyze potential project impacts on CMP monitoring locations, if an EIR is prepared for the Project. When a CMP analysis is needed, the CMP methodology requires that the Traffic Study analyze traffic conditions at all CMP arterial monitoring intersections where the Project will add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic. The CMP also requires that traffic studies analyze mainline freeway monitoring stations where the Project will add 150 or more trips in either direction during either AM or PM weekday peak hours. If, based on these criteria, the Traffic Study identifies no facilities for study, then no further traffic analysis is required.

**Table 4.3 Future With Project Conditions - Intersection Level of Service PM Peak Hour**

| Intersection | PM Peak Hour | | | | Change in V / C | Significant Impact |
|---|---|---|---|---|---|---|
| | Future Without Project | | Future With Project | | | |
| | V / C | LOS | V / C | LOS | | |
| 1. Glendale Blvd. & Fletcher Dr. | 0.639 | B | 0.650 | B | 0.011 | No |
| 2. Riverside Dr. & Fletcher Dr. | 1.149 | F | 1.166 | F | 0.017 | Yes |
| 3. Ripple St. & Fletcher Dr. | 0.764 | C | 0.779 | C | 0.015 | No |
| 4. SR-2 SB Off-Ramp & Fletcher Dr. | 0.407 | A | 0.422 | A | 0.015 | No |
| 5. Larga Ave. & Fletcher Dr. | 0.445 | A | 0.497 | A | 0.052 | No |
| 6. La Clede Ave. & Fletcher Dr. | 0.379 | A | 0.477 | A | 0.098 | No |
| 7. San Fernando Rd. & Fletcher Dr. | 0.909 | E | 0.959 | E | 0.050 | Yes |
| 8. San Fernando Rd. & S. Glendale Ave. | 0.742 | C | 0.747 | C | 0.005 | No |
| 9. Estara Ave. & Fletcher Dr. | 0.513 | A | 0.524 | A | 0.011 | No |
| 10. San Fernando Rd & SR-2 SB Ramps | 0.721 | C | 0.726 | C | 0.005 | No |
| 11. Glendale Blvd & Riverside Dr. | 0.679 | B | 0.682 | B | 0.003 | No |
| 12. Riverside Dr. & Gilroy St. | 0.415 | A | 0.415 | A | 0.000 | No |

CMP Arterial Monitoring Locations

As shown in Table 4.1, the Project would generate 199 AM peak hour trips and 239 PM peak hour trips. A review of the 2010 CMP indicated the following arterial monitoring stations that are closest to the Project Site:

- Sunset Boulevard & Alvarado Street
- Santa Monica Boulevard & Western Avenue

The additional trips estimated to be added by Project at these intersections are shown in Table 4.4.

**Table 4.4 CMP Arterial Analysis - Number of Trips Added by Project**

| *No.* | *Location* | *No. of Trips Added by Project* | |
|---|---|---|---|
| | | *AM* | *PM* |
| 1 | Sunset Blvd. & Alvarado St. | 2 | 2 |
| 2 | Santa Monica Blvd. & Western Ave. | 10 | 12 |

The arterial monitoring stations are located some distance from the Project Site (between 2.4 miles and 3.8 miles). As Project trips will disperse onto numerous roadways away from the site before reaching the arterial monitoring stations identified above, it is clear that Project traffic volumes would not exceed the threshold for analysis at either of the two locations. It is therefore concluded that the Project would not create any significant traffic impacts at any CMP arterial monitoring locations.

CMP Freeway Monitoring Stations

A review of the 2010 CMP also indicated the following freeway monitoring stations that are closest to the Project Site.

- I-5 at Stadium Way
- SR-2 at Round Top Road
- I-5 South of Colorado Boulevard
- SR-110 North of Alpine Street

The additional trips estimated to be added by the Project along these freeway segments are shown in Table 4.5 below.

**Table 4.5 CMP Freeway Analysis - Number of Trips Added by Project**

| *No.* | *Location* | *Direction* | *No. of Trips Added by Project* | |
|---|---|---|---|---|
| | | | *AM* | *PM* |
| 1 | I-5 at Stadium Way | NB | 10 | 29 |
| | | SB | 32 | 21 |
| 2 | SR-2 at Round Top Rd. | NB | 14 | 9 |
| | | SB | 4 | 13 |
| 3 | I-5 South of Colorado Blvd. | NB | 15 | 10 |
| | | SB | 2 | 7 |
| 4 | SR-110 at Alpine St. | NB | 7 | 20 |
| | | SB | 21 | 14 |

Of these segments, only the first one is located relatively close to the Project Site (1.0 mile). The remaining segments are located some considerable distance from the Project Site (2.0 to 3.1 miles). Nevertheless, the number of Project vehicle trips expected to pass through these stations was estimated based on the Project trip distribution and the Project trip generation (shown in Table 4.1). Including these CMP monitoring stations, the maximum number of one-

way Project trips that would be added to any other single freeway segment would be 32 southbound trips at the I-5 at Stadium Way station. With these low incremental volumes, which are well below the CMP threshold of 150 trips, it is concluded that the Project would not cause any significant impacts to freeway operations.

CMP Transit Impact Analysis

An analysis of potential project impacts on the transit system serving the Project Site has also conducted, per the CMP requirements and guidelines.

*Significant Impact Thresholds*

Based on factors in the *L.A. CEQA Thresholds Guide,* City of Los Angeles (2006), the following criterion was established to determine if there would be any significant transit impacts due to the Project:

- The capacity of the transit system serving the Project area would be substantially exceeded.

*Transit Analysis*

The number of transit trips that would be generated by the Project was estimated based on the trip generation methodology described in Chapter 4.

The estimate of base vehicle trips (unadjusted) for each Project land use (from Table 4.1) was converted to person trips by applying a conversion factor of 1.4, as per CMP guidelines. The person trip numbers were then multiplied by the estimated percent taking transit for each land use, as previously determined and discussed earlier in this Chapter. These numbers are project specific and more appropriate than the default countywide guidelines in the CMP as they reflect the estimated transit use that would occur for the Project because of its location.

The estimated number of transit trips for the CMP analysis is shown in Table 4.6. There would be approximately 20 net additional transit trips (6 inbound trips and 14 outbound trips) in the AM peak hour due to the Project, and approximately 23 additional transit trips (14 inbound and 9 outbound) in the PM peak hour, as shown in Table 4.6. The highest number of additional transit trips would therefore occur in the PM peak hour.

The peak capacity of the transit system serving the Project Site is approximately 736 persons per direction. The highest directional volume of peak hour trips added by the Project would be 14 trips. As this would be less than 2% of total transit capacity during the peak hour, it is concluded that the Project would not cause the capacity of the transit system to be substantially exceeded and therefore that the Project would not create any significant impacts on the transit systems serving the Project area.

## Table 4.6 Transit Trips Generated by The Project

| Land Use | Base (Unadjusted) [1] Vehicle Trips | | Person Trips [2] | | % By Transit [3] | | Transit Trips | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | AM Peak Hour | | | PM Peak Hour | | |
| | AM Peak Hour | PM Peak Hour | AM Peak Hour | PM Peak Hour | AM Peak Hour | PM Peak Hour | Total | In [4] | Out [4] | Total | In [4] | Out [4] |
| Proposed Uses | | | | | | | | | | | | |
| Apartments | 214 | 260 | 300 | 364 | 5% | 5% | 15 | 3 | 12 | 18 | 12 | 6 |
| Creative Office | 28 | 27 | 39 | 36 | 5% | 5% | 2 | 1 | 1 | 2 | 1 | 1 |
| High-Turnover Restaurant | 6 | 6 | 8 | 8 | 0% | 0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Urban Farm | 37 | 35 | 52 | 49 | 5% | 5% | 3 | 2 | 1 | 3 | 1 | 2 |
| Total | 285 | 328 | 399 | 457 | | | 20 | 6 | 14 | 23 | 14 | 9 |

1. From Table 4.1 - Trip Generation Estimates. Excludes internal trips.
2. Conversion factor of 1.4 from vehicle trips to person trips, per CMP guidelines.
3. Transit percentage from Table 4.1 - Trip Generation Estimates.
4. In/out distribution from Table 4.1 - Trip Generation Estimates.

## 4.4 Freeway Analysis

An MOU between LADOT and Caltrans (Agreement Between the City of Los Angeles and Caltrans District 7 on Freeway Impact Analysis Procedures (December 2015)) sets forth criteria for when a freeway impact analysis should be conducted. An initial evaluation was conducted that determined the Project would not meet either the freeway mainline criteria or the freeway off-ramp criteria. This check is shown in Appendix A. According to the procedures provided in the LADOT and Caltrans MOU, no further freeway analysis is necessary.

## 4.5 Local Neighborhood Street Analysis

Casitas Avenue is the main access route to the Project Site. However it does not connect directly to Fletcher Drive, but rather passes over Fletcher Drive with ramps down to Fletcher Drive at La Clede Avenue. Access via Casitas Avenue is therefore possible only to/from the west, but not the east. Other streets that could potentially be used to access the Project are La Clede Avenue, Perlita Avenue, Atwater Avenue, and Larga Avenue

The following analysis investigated the potential for traffic impacting the local residential streets in the Project area.

LADOT Guidelines for Residential Street Analysis

LADOT has established guidelines (LADOT *Traffic Study Policies and Procedures*) for analysis of local residential streets, and identify that local residential streets can potentially be impacted through increased vehicle trips if traffic uses local residential streets as cut-thru routes to by-pass a congested arterial roadway. The guidelines address Local Streets but not Collector Streets. The guidelines further state that when selecting street segments for analysis, all of the following conditions must be present:

1. The proposed project is a non-residential development and not a school.

2. The arterial is sufficiently congested, such that motorists traveling on the arterial may opt to divert to a parallel route through a residential street; the congestion level of the arterial is based on the estimated level of service (LOS) under project conditions of the study intersections; LOS E and F are considered to represent congested conditions.

3. The local residential street(s) provide motorists with a viable alternative route.

4. The project is projected to add a significant amount of traffic to the congested arterial that can potentially shift to an alternative route; project traffic would need to exceed

the daily minimum significance thresholds listed in Table 4.7 under "Project-Related Increase in ADT".

When an analysis is appropriate, the LADOT procedures identify that a project would have a significant impact on neighborhood residential streets if project traffic increases the average daily traffic volume as listed in Table 4.7. For example, as shown in Table 4.7, a significant neighborhood intrusion impact would occur if a project increased average daily traffic (ADT) by more than 10 percent on a local residential street where the future/projected ADT (including project trips) would be 2,500 ADT.

**Table 4.7 Definition of Significant Impact Criteria for Local Streets**

| A local residential street shall be deemed significantly impacted based on an increase in projected average daily traffic (ADT) volumes on the street as follows: | |
|---|---|
| Projected Average Daily Traffic with Project (Final ADT) | Project-Related Increase in ADT |
| 0 to 999 | 120 trips or more |
| 1,000 to 1,999 | 12% or more of final ADT |
| 2,000 to 2,999 | 10% or more of final ADT |
| 3,000 or more | 8% or more of final ADT |

Source: LADOT

Applicability of Residential Street Impact Guidelines to Study Area

A review of the conditions that must be present to require a residential street impact analysis was conducted and the results are provided below:

*Condition #1 - The proposed project is a non-residential development and not a school.*
The Project is primarily a residential project (419 apartments). However there are some commercial uses (about 65,000 sq. ft). although these generate only about 20% of the overall trips generated by the project. As the project is largely a residential project, it appears this condition is not strictly applicable.

*Condition #2 – The arterial providing access to the Project Site is sufficiently congested such that motorists traveling on the arterial may opt to divert to a parallel route through a residential street; the congested level of the arterial can be determined based on the estimated LOS under project conditions of the study intersection(s); LOS E and F are considered to represent congested conditions.*

The arterial providing access to the Project site is Fletcher Drive. The analysis in Tables 4.2 and 4.3 shows that under the Future With Project Conditions, in the AM peak hour of the eight intersections analyzed along Fletcher Drive one will operate at LOS F (Fletcher Drive & Riverside Drive) in the AM peak hour. In the PM peak hour, two intersections will operating at LOS E or LOS F (Fletcher Drive & Riverside Drive at LOS F, and Fletcher Drive & San Fernando Road at LOS E). Although there are intersections operating along the Fletcher Drive corridor at LOS D or better, there are some that operate at LOS E/F. Further, there are no parallel routes for traffic to divert to through a residential area. Fletcher Drive therefore appears to partly meet the congested criteria.

*Condition #3 – The Project is projected to add a significant amount of traffic to the congested arterial that can potentially shift to an alternative route; Project traffic would need to exceed the daily minimum significance threshold listed in Table 4.7, under "Project-Related Increase in ADT".*
As there is no alternate route to Fletcher Drive, the Project could not cause diversion of traffic through the neighborhood to an alternate route. This condition is therefore not applicable.

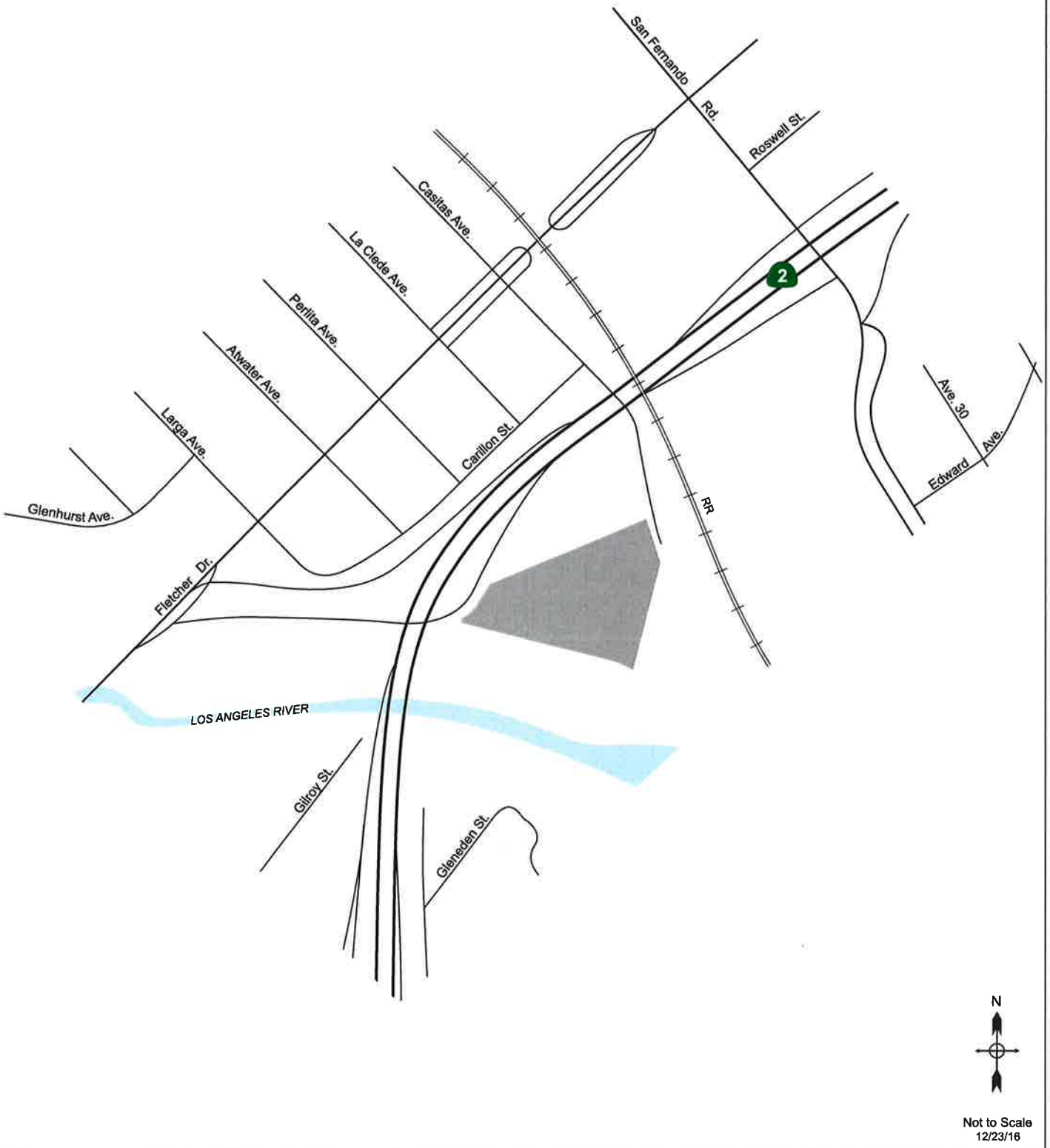
*Condition #4 – The local residential street(s) provides motorists with a viable alternative route.*
The local residential streets do not provide motorists with a viable alternate route to Fletcher Drive. However, they do provide a route to the Project Site from Fletcher Drive. Therefore this condition is considered to be applicable.

In summary, of the four conditions, one is fully applicable, with two others being partially applicable. Nevertheless, because the residential streets in the neighborhood provide the only access routes to the Project Site, a residential impact analysis was conducted, and is described below.

Residential Street Analysis

Other than Casitas Avenue, there are four local streets between the Project Site and Fletcher Drive. These are La Clede Avenue, Perlita Avenue, Atwater Avenue, and Larga Avenue, as shown in Figure 4.5. The intersections of both La Clede Avenue and Larga Avenue with Fletcher Dive are signalized, and thus most likely to be used by Project traffic. The intersections of Perlita Avenue and Atwater Avenue with Fletcher Drive are unsignalized and therefore unlikely to be used by Project traffic. An additional street which could be used by Project traffic is Carillon Street which runs between Casitas Avenue and Larga Avenue, and connects all five streets providing access to Fletcher Drive. Casitas Avenue connects to Fletcher Drive via the overpass and slip ramps to Fletcher Drive at La Clede Avenue. While movements from/to Fletcher Drive west are possible, they are complicated by the geometric configuration of the slip ramps at La Clede Avenue.

The analysis identified existing daily traffic volumes (from traffic counts) at the following three residential street locations:




Not to Scale
12/23/16

Figure 4.5
Local Streets in Project Area

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1. Carillon Street – between Casitas Ave. & La Clede Ave.
2. La Clede Ave – between Carillon St & Fletcher Dr.
3. Larga Avenue – between Carillon St & Fletecher Dr.

Projected future daily traffic volumes with the Project were estimated and added to the existing volumes. The total projected volumes were then compared against the appropriate thresholds to determine if a significant impact was expected to occur. The results of this analysis are provided in Table 4.8. As identified earlier, about 80% of the additional traffic would be generated by residential land uses in the Project.

It should be noted that this is a most conservative analysis in that it has assumed that no Project traffic would use Casitas Avenue from Fletcher Drive, and that all Project traffic would use either Larga Avenue or La Clede Avenue because of the traffic signals at the intersections of those streets with Fletcher Drive

The analysis shows that the increase in daily traffic due to the Project would exceed the thresholds identified by LADOT and that significant impacts would occur at all three locations. For informational purposes, the AM and PM peak hour traffic volumes for same scenarios are also shown in Table 4.9 and 4.10.

It is noted that it is unlikely that Project traffic would use residential streets to the north of Fletcher Drive to reach Glendale Boulevard. These residential streets extend approximately three quarters of a mile between Fletcher Drive and Glendale Boulevard, and have numerous stop signs. Further, Casitias Avenue does not connect to Glendale Boulevard. By their nature and configuration they do therefore not provide a convenient alternative to the arterial routes.

## 4.6 Existing With Project Impacts

This section addresses an analysis of potential Project impacts for the existing conditions with Project scenario. Project traffic was added to existing conditions traffic and the potential for impacts evaluated.

Existing With Project Intersection Level of Service

The total Existing With Project conditions peak hour traffic volumes are illustrated in Figures 4.6 and 4.7 for the AM and PM peak hours.

Project Impacts

The analysis summarized in Table 4.11 indicates that for the AM peak hour, the addition of Project traffic would not cause the level of service to change at eight of the study

**Table 4.8** **Neighborhood Street Daily Traffic Volumes - Future With Project Conditions**

| Street | Between | And | Street Type | Existing ADT | Added ADT from Related Projects [1] | Future Without Project ADT | Project-Related Increase in ADT [2] | Future With Project ADT | Project Related Increase In ADT % | Impact Threshold | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Larga Avenue | Fletcher Drive | Carillon Street | Local Street | 600 | 0 | 600 | 954 | 1,554 | 61% | 12% | Yes |
| 2. La Clede Avenue | Fletcher Drive | Carillon Street | Local Street | 634 | 0 | 634 | 1,597 | 2,231 | 72% | 10% | Yes |
| 3. Carillon Street | La Clede Avenue | Casitas Avenue | Local Street | 718 | 0 | 718 | 2,551 | 3,269 | 78% | 8% | Yes |

**Table 4.9 Neighborhood Street Traffic Volumes - Future With Project Conditions - AM Peak Hour**

| Street | Between | And | Street Type | Existing Volume | Added Volume from Related Projects | Future Without Project Volume | Project-Related Increase in Volume | Future With Project Volume | Project Related Increase In Volume % |
|---|---|---|---|---|---|---|---|---|---|
| 1. Larga Avenue | Fletcher Drive | Carillon Street | Local Street | 47 | 0 | 47 | 70 | 117 | 60% |
| 2. La Clede Avenue | Fletcher Drive | Carillon Street | Local Street | 41 | 0 | 41 | 129 | 170 | 76% |
| 3. Carillon Street | La Clede Avenue | Casitas Avenue | Local Street | 58 | 0 | 58 | 199 | 257 | 77% |

**Table 4.10 Neighborhood Street Traffic Volumes - Future With Project Conditions - PM Peak Hour**

| Street | Between | And | Street Type | Existing Volume | Added Volume from Related Projects | Future Without Project Volume | Project-Related Increase in Volume | Future With Project Volume | Project Related Increase In Volume % |
|---|---|---|---|---|---|---|---|---|---|
| 1. Larga Avenue | Fletcher Drive | Carillon Street | Local Street | 39 | 0 | 39 | 92 | 131 | 70% |
| 2. La Clede Avenue | Fletcher Drive | Carillon Street | Local Street | 66 | 0 | 66 | 147 | 213 | 69% |
| 3. Carillon Street | La Clede Avenue | Casitas Avenue | Local Street | 79 | 0 | 79 | 239 | 318 | 75% |

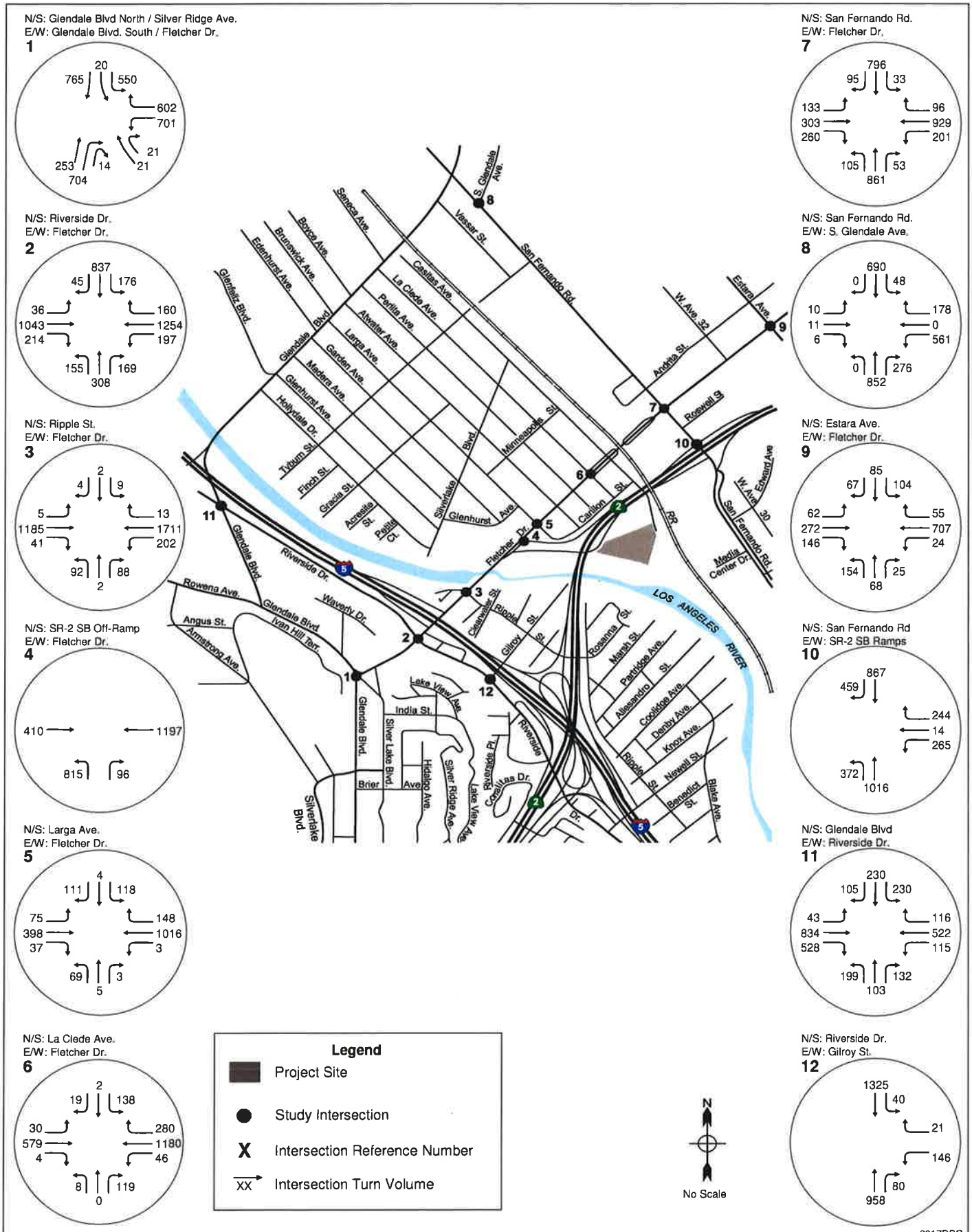


Figure 4.6
Existing With Project Traffic Volumes - AM Peak Hour

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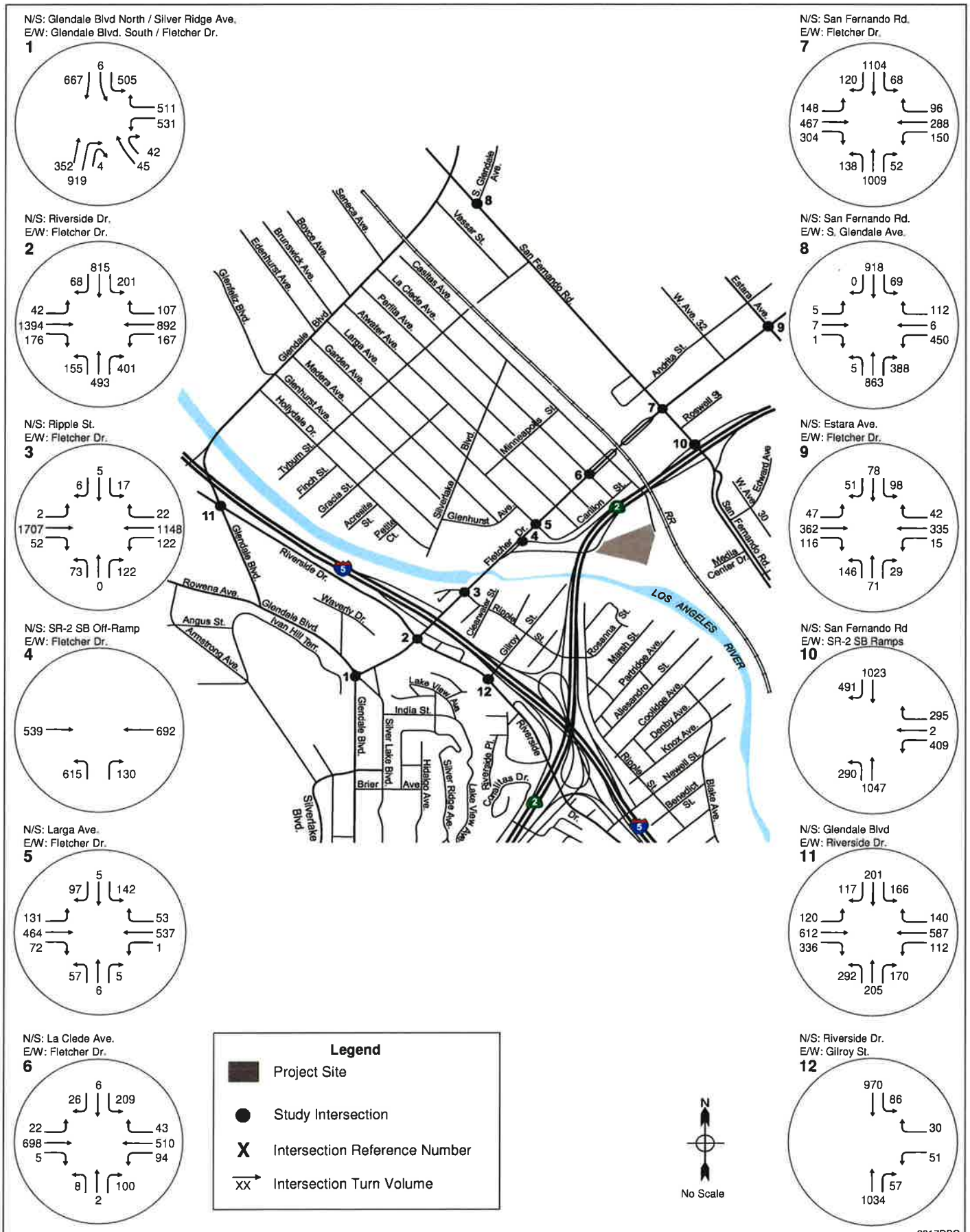


Figure 4.7
Existing With Project Traffic Volumes - PM Peak Hour

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**Table 4.11 Existing With Project Conditions - Intersection Level of Service AM Peak Hour**

| Intersection | AM Peak Hour | | | | Change in V / C | Significant Impact |
|---|---|---|---|---|---|---|
| | Existing | | Existing With Project | | | |
| | V / C | LOS | V / C | LOS | | |
| 1. Glendale Blvd. & Fletcher Dr. | 0.555 | A | 0.562 | A | 0.007 | No |
| 2. Riverside Dr. & Fletcher Dr. | 0.930 | E | 0.934 | E | 0.004 | No |
| 3. Ripple St. & Fletcher Dr. | 0.589 | A | 0.605 | B | 0.016 | No |
| 4. SR-2 SB Off-Ramp & Fletcher Dr. | 0.585 | A | 0.603 | B | 0.018 | No |
| 5. Larga Ave. & Fletcher Dr. | 0.508 | A | 0.541 | A | 0.033 | No |
| 6. La Clede Ave. & Fletcher Dr. | 0.530 | A | 0.614 | B | 0.084 | No |
| 7. San Fernando Rd. & Fletcher Dr. | 0.711 | C | 0.740 | C | 0.029 | No |
| 8. San Fernando Rd. & S. Glendale Ave. | 0.668 | B | 0.675 | B | 0.007 | No |
| 9. Estara Ave. & Fletcher Dr. | 0.682 | B | 0.686 | B | 0.004 | No |
| 10. San Fernando Rd & SR-2 SB Ramps | 0.578 | A | 0.602 | B | 0.024 | No |
| 11. Glendale Blvd & Riverside Dr. | 0.581 | A | 0.584 | A | 0.003 | No |
| 12. Riverside Dr. & Gilroy St. | 0.453 | A | 0.453 | A | 0.000 | No |

intersections. However, at Ripple St & Fletcher Dr, SR-2 SB Off-Ramp & Fletcher Dr, La Clede Ave & Fletcher Dr and San Fernando Rd & SR-2 SB Ramps, the level of service would change from LOS A to LOS B. All increases in volume/capacity (V/C) ratios would be less than the threshold for a significant impact to occur.

The analysis summarized in Table 4.12 indicates that for the PM peak hour, the addition of Project traffic would not cause the level of service to change at any of the study intersections, except at Ripple St & Fletcher Dr where it would change from LOS B to LOS C. All increases in volume/capacity (V/C) ratios would be less than the threshold for a significant impact to occur, except at two locations where the increase would be sufficient to cause a significant impact:

| | |
|---|---|
| 2. Riverside Dr & Fletcher Dr | LOS F |
| 7. San Fernando Rd & Fletcher Dr | LOS D |

It is therefore concluded that the Project would not cause any significant traffic impacts in the AM peak hour, and would cause two temporary significant traffic impacts in the PM peak hour.

**Table 4.12 Existing With Project Conditions - Intersection Level of Service PM Peak Hour**

| Intersection | PM Peak Hour | | | | Change in V / C | Significant Impact |
|---|---|---|---|---|---|---|
| | Existing | | Existing With Project | | | |
| | V / C | LOS | V / C | LOS | | |
| 1. Glendale Blvd. & Fletcher Dr. | 0.557 | B | 0.568 | B | 0.011 | No |
| 2. Riverside Dr. & Fletcher Dr. | 1.047 | F | 1.064 | F | 0.017 | Yes |
| 3. Ripple St. & Fletcher Dr. | 0.698 | B | 0.713 | C | 0.015 | No |
| 4. SR-2 SB Off-Ramp & Fletcher Dr. | 0.364 | A | 0.379 | A | 0.015 | No |
| 5. Larga Ave. & Fletcher Dr. | 0.363 | A | 0.385 | A | 0.022 | No |
| 6. La Clede Ave. & Fletcher Dr. | 0.327 | A | 0.437 | A | 0.110 | No |
| 7. San Fernando Rd. & Fletcher Dr. | 0.809 | D | 0.859 | D | 0.050 | Yes |
| 8. San Fernando Rd. & S. Glendale Ave. | 0.679 | B | 0.685 | B | 0.006 | No |
| 9. Estara Ave. & Fletcher Dr. | 0.467 | A | 0.477 | A | 0.010 | No |
| 10. San Fernando Rd & SR-2 SB Ramps | 0.623 | B | 0.628 | B | 0.005 | No |
| 11. Glendale Blvd & Riverside Dr. | 0.581 | A | 0.585 | A | 0.004 | No |
| 12. Riverside Dr. & Gilroy St. | 0.375 | A | 0.375 | A | 0.000 | No |

# 5. Mitigation Measures

Revised April 21, 2017

Revised May 5, 2017

This report Chapter addresses the evaluation of potential mitigation measures to address significant impacts from the Project.

## 5.1 Review of Significant Impacts

Intersections – Existing With Project

The analysis in Chapter 4 (see Tables 4.11 and 4.12) identified two significant traffic impacts in the Existing With Project conditions. In the PM peak hour, the Proposed Project would result in significant impacts at two intersections.

| | |
|---|---|
| 2. Riverside Dr & Fletcher Dr | LOS F |
| 7. San Fernando Rd & Fletcher Dr | LOS D |

The intersection resulting in LOS F would also operate at LOS F without the Project and the intersection resulting in LOS D would also operate at LOS D without the Project.

Intersections – Future With Project

The analysis in Chapter 4 (see Tables 4.2 and 4.3) identified three significant traffic impacts in the Future With Project conditions. In the AM peak hour, the Proposed Project would result in a significant impact at one intersection:

| | |
|---|---|
| 7. San Fernando Rd & Fletcher Dr | LOS D |

In the P.M. peak hour, the Proposed Project would result in significant impacts at two intersections.

| | |
|---|---|
| 2. Riverside Dr & Fletcher Dr | LOS F |
| 7. San Fernando Rd & Fletcher Dr | LOS E |

The intersection resulting in LOS F would also operate at LOS F without the Project and the intersection resulting in LOS E would also operate at LOS E without the Project.

Local Neighborhood Streets

The analysis in Chapter 4 (see Table 4.5) identified that significant traffic impacts could occur on three local streets:

- Carillon Street
- La Clede Avenue
- Larga Avenue

## 5.2 Review of Potential Mitigations – Intersection Impacts

The Project is located in an urbanized area where the street system is essentially fully built out, and is already typically striped for the maximum traffic capacity and operational effectiveness within the available right-of-way. The feasibility of physical roadway/intersection improvements was nonetheless investigated for the two intersection locations where the Project would cause significant traffic impacts.

This evaluation, which was conducted in conjunction with LADOT staff, looked at the feasibility of re-striping traffic lanes and/or adding traffic lanes to modify intersection lane configurations, and potential changes to signal timing and phasing. Roadway widenings were not feasible (due to the lack of available right-of-way because of existing buildings or lack of control over adjacent right-of-way). The evaluation also investigated the potential for ATSAC/ATCS improvements (signal controller upgrades, cameras, detection loops) but LADOT advised that there is no current need at the impacted locations.

The following potential mitigation measures were explored.

Fletcher Drive & Riverside Drive

*Add Northbound Right Turn Lane*

This could be accomplished within the existing roadway width. However it would require the relocation of an existing bus-stop, and would also require a northbound right turn/westbound left turn overlap. The overlap would eliminate the westbound U-turn, and westbound U-turns would need to be made further west at Glendale Boulevard. This would mitigate the significant impact at this location, but because of the negative effects described above of the measure it was deemed infeasible.

*Restripe Westbound Approach to Add Left Turn Lane*

This would modify the westbound approach from one left turn lane to two left turn lanes. The entire roadway east of Riverside Drive would need to be restriped and the lanes reconfigured and it would require on-street parking to be removed from the south side of Fletcher Drive between Riverside Drive and the freeway. The roadway geometrics would need to be approved by LADOT. This could mitigate the significant impact at this location. However it was determined by LADOT to be infeasible as LADOT considers that retention of existing on-street parking is important to local businesses and for access to the Los Angeles River.

Fletcher Drive & San Fernando Road

*Roadway Restriping to Add Lanes*

Restriping Fletcher Drive to add traffic lanes is not feasible as LADOT has recently restriped the roadway to reduce the number of traffic lanes as a part of a project to calm traffic along the roadway.

*Adding Signal Overlap*

This would add an eastbound right-turn/northbound left-turn overlap phase to the traffic signal (to allow both movements to occur at the same time). It would require also installing a northbound protected left turn phase at the signal. This measure was evaluated and while considered to be feasible, would not partially nor fully mitigate the significant impact.

Other Measures

*Trip Reduction*

The Project will implement a trip reduction program comprising of support to residents and tenants for rideshare programs, and the provision of parking spaces for flex/share cars. The Project will also contribute a one-time payment of $100,000 to LADOT in support of two planned DASH routes serving the area providing one or both of these routes is approved by the City in the future with full funding. While these measures would help reduce vehicle trips generated by the Project, it was conservatively assumed that such a program would not fully mitigate the significant impacts.

## 5.3 Review of Potential Mitigation Measures - Local Residential Street Impacts

*Neighborhood Traffic Management Measures*

The analysis of local residential streets in Chapter 4 identified significant impacts could occur on three local streets: Carillon Street, La Clede Avenue, and Larga Avenue. The analysis in Chapter 4 conservatively assumed that all Project traffic from the west would use Larga Avenue & Carillon Street to Casitas Avenue, and that all Project traffic from the east would use La Clede Avenue, because of the signals at the intersections of both these streets with Fletcher Drive. The lack of signals at Fletcher Drive & Atwater Avenue, and Fletcher Drive & Perlita Avenue, make it unlikely that project traffic would use those streets.

In order to address these potential impacts, a number of potential traffic management measures were studied for reducing impacts to the local neighborhood. See also Figure 4.5 for a map of the local streets in the area of the Project.

Measures such as speed humps, curb extensions, and bulbouts could be employed to slow down traffic. However they would be unlikely to divert any traffic. The following options were therefore investigated.

Option 1: Barricade Carillon Street Immediately West of Casitas Avenue

This would prevent traffic on Casitas Avenue using Carillon Street to reach the other local streets accessing Fletcher Drive. The local street system immediately west of the barricade (i.e. all streets except Casitas) would operate as today for local residents. This measure could be effective to require all Project traffic to/from the west to use Casitas Avenue to access the Project. However, it would not allow for Project access to/from the east via Casitas Avenue (as Casitas does not directly intersect with Fletcher Drive and traffic has to use the slip/frontage roads from Casitas Avenue at La Clede Avenue - but movements to/from the east are not feasible from the slip roads at the intersection of Fletcher Drive & La Clede Avenue). For this reason this measure was considered to be not feasible.

Option 2: Barricade Carillon Street Immediately West of La Clede Avenue

This would allow Project access only via La Clede Avenue and Casitas Avenue by preventing Project traffic using streets west of La Clede Avenue. The traffic volumes on La Clede Avenue would (probably) remain largely the same as Project traffic to/from the east would continue to use La Clede Avenue. However, it could reduce traffic volumes on Carillon Street and Larga Avenue, as traffic to/from the west could instead use Casitas Avenue. However, there would be no guarantee that traffic to/from the west would use Casitas Avenue rather than La Clede Avenue and Carillon Street, so traffic volumes on La Clede Avenue could be higher. Nevertheless this could potentially be a feasible measure.

Option 3: Partial Cul-de-Sac of Le Clede Avenue, Perlita Avenue, and Atwater Avenue, Immediately north of Carillon Street

This would provide a partial cul-de-sac at the south end of La Clede Avenue, Perlita Avenue, and Atwater Avenue that would prevent vehicles from travelling west on Carillon Street (i.e. from the Project) and turning north onto those streets. Access from La Clede Avenue, Perlita Avenue, and Atwater Avenue south to Carillon Street eastbound (i.e. to the Project) would also be prevented by the design of the partial cul-de-sac. Access to Fletcher Drive would still be possible from Le Clede Avenue, Perlita Avenue, and Atwater Avenue for local residents on those streets, as well as to Carillon Street westbound. This option would result in no Project traffic using La Clede Avenue, Perlita Avenue, or Atwater Avenue, with the majority of Project traffic on Carillon Street and Larga Avenue (some traffic might also use Casitas Avenue to Fletcher Drive). This may be a more optimal solution, as Larga Avenue is fronted by numerous commercial uses and less residential uses than La Clede Avenue, and because Carillon Street has parking only on one side so it has a wider effective street width for traffic (compared to La Clede Avenue which has parking on both sides of the street). This measure is therefore considered to be feasible.

Conclusion

There are therefore a number of options (and not necessarily limited to those described above) that might reduce the impacts on the local neighborhood streets. Neighborhood traffic management solutions are typically most effective when evaluated by, and determined to be acceptable to, the neighborhood as a whole. It is proposed that, rather than this study imposing any one particular solution at this time, the Project will address the potential impacts by providing a monetary contribution of $100,000 to enable LADOT and the Project Team to assist the neighborhood to review, evaluate, and adopt a preferred traffic management plan and to install identified measures in the plan.

## 5.4 Remaining Significant and Unavoidable Traffic Impacts

While the above measures would reduce and partially mitigate the significant impacts identified in the study, they would not eliminate them.

There would be one remaining significant impact in the AM peak hour, at the following location:

7. San Fernando Rd & Fletcher Dr D

There would be two remaining significant impacts in the PM peak hour, at the following locations:

| | |
|---|---|
| 2. Riverside Dr & Fletcher Dr | F |
| 7. San Fernando Rd & Fletcher Dr | E |

Potential neighborhood traffic management measures could reduce or eliminate additional project traffic and impacts on some streets in the local neighborhood to the north of the Project Site, although significant impacts would still remain on certain other streets (depending on the management plan adopted). For the purposes of the EIR, it is therefore concluded that significant impacts could remain, on one or more of the following streets:

- Carillon Street
- La Clede Avenue
- Larga Avenue

# Appendix A

# LADOT – Caltrans MOU Threshold Check

## Freeway Threshold Check

An MOU between LADOT and Caltrans (Agreement Between the City of Los Angeles and Caltrans District 7 on Freeway Impact Analysis Procedures, December 2015) sets forth criteria for when a freeway impact analysis should be conducted, including that if certain thresholds are exceeded then analysis of the freeway system is required.

The Agreement outlines the specific criteria and thresholds designed to identify if a Project is required to conduct the additional freeway analysis. Per the Agreement executed by LADOT and Caltrans, if a Project exceeds any of the following thresholds then the additional freeway analysis would be required:

- The Project's peak hour trips would result in a 1 percent or more increase to the freeway mainline capacity of a freeway segment operating at LOS E or F (based on an assumed capacity of 2,000 vehicles per hour per lane); or

- The Project's peak hour trips would result in a 2 percent or more increase to the freeway mainline capacity of a freeway segment operating at LOS D (based on an assumed capacity of 2,000 vehicles per hour per lane); or

- The Project's peak hour trips would result in a 1 percent or more increase to the capacity of a freeway off-ramp operating at LOS E or F (based on an assumed ramp capacity of 850 vehicles per hour per lane); or

- The Project's peak hour trips would result in a 2 percent or more increase to the capacity of a freeway off-ramp operating at LOS D (based on an assumed ramp capacity of 850 vehicles per hour per lane).

An evaluation threshold check was conducted for the following three (3) freeway mainline locations and four (4) freeway off-ramp locations closest to the Project:

Freeway Mainline Locations:

- I-5 Between Glendale Boulevard & Fletcher Drive
- I-5 at Dorris Place
- SR-2 North of Verdugo Road

Freeway Off-Ramp Locations:

- I-5 SB Off-Ramp at Fletcher Drive
- SR-2 SB Off-Ramp at Fletcher Drive

- SR-2 SB Off-Ramp at San Fernando Road
- SR-2 NB Off-Ramp at San Fernando Road

The evaluation tables are included in the following pages.

The number of Project vehicle trips expected to travel along these freeway mainline segments was estimated based on the Project trip generation and Project trip distribution. For the purpose of a conservative review, it was assumed that the mainline freeway is operating at LOS E or LOS F. The freeway mainline volume increase that would be created by Project vehicle trips was compared against the thresholds provided in the LADOT/Caltrans Agreement and the results showed that the increase would not exceed the thresholds along any of the freeway segments. Therefore, no additional freeway mainline segment impact analysis is required.

The number of Project vehicle trips expected to travel on these freeway off-ramps was estimated based on the Project trip generation and Project trip distribution. Traffic counts at ramp termini intersections were conducted in 2016. Ramp level of service was determined using the HCM 2010 Operations Method of Analysis. In the AM peak hour, the level of service at three of the ramps is LOS C or better, so the threshold check does not apply for those ramps. At the remaining ramp, the level of service is F but the threshold is not met. In the PM peak hour, the level of service at two of the ramps is LOS C or better, so the threshold check does not apply for those ramps. At the two remaining ramps, the levels of service are D and F and the threshold is not met at either location. Therefore, no additional freeway ramp impact analysis is required.

**Table E-1 Bow Tie Yard Lofts Project - Freeway Segment - Threshold Check - AM Peak Hour**

| No. | Location | DIR | No of Lanes | Capacity | Project Trips | Project Trip % | Threshold % | Exceed Threshold ? |
|---|---|---|---|---|---|---|---|---|
| 1 | I-5 Between Glendale Blvd. & Fletcher Dr. | NB | 4G | 8,000 | 15 | 0.2% | 1% | No |
| | | SB | 5G | 10,000 | 2 | 0.0% | 1% | No |
| 2 | I-5 at Dorris Pl. | NB | 5G | 10,000 | 10 | 0.1% | 1% | No |
| | | SB | 4G | 8,000 | 32 | 0.4% | 1% | No |
| 3 | SR-2 North of Verdugo Rd | NB | 5G | 10,000 | 14 | 0.1% | 1% | No |
| | | SB | 4G | 8,000 | 4 | 0.1% | 1% | No |

Note: The freeway segment analysis shown in the above table was conducted assuming the subject freeway segments were operating at LOS E or F. This methodology was chosen to represent the most conservative conditions.

**Table E-2 Bow Tie Yard Lofts Project - Freeway Segment - Threshold Check - PM Peak Hour**

| No. | Location | DIR | No of Lanes | Capacity | Project Trips | Project Trip % | Threshold % | Exceed Threshold ? |
|---|---|---|---|---|---|---|---|---|
| 1 | I-5 Between Glendale Blvd. & Fletcher Dr. | NB | 4G | 8,000 | 10 | 0.1% | 1% | No |
| | | SB | 5G | 10,000 | 7 | 0.1% | 1% | No |
| 2 | I-5 at Dorris Pl. | NB | 5G | 10,000 | 29 | 0.3% | 1% | No |
| | | SB | 4G | 8,000 | 21 | 0.3% | 1% | No |
| 3 | SR-2 North of Verdugo Rd | NB | 5G | 10,000 | 9 | 0.1% | 1% | No |
| | | SB | 4G | 8,000 | 13 | 0.2% | 1% | No |

Note: The freeway segment analysis shown in the above table was conducted assuming the subject freeway segments were operating at LOS E or F. This methodology was chosen to represent the most conservative conditions.

**Table E-3 Bow Tie Yard Lofts Project - Freeway Off Ramp - Threshold Analysis - AM & PM**

| No. | Location | Time Period | Capacity | Volume | Off-Ramp Delay | Off-Ramp LOS | Threshold Applicable | Project Trips | Trips as % of Capacity | Exceed Threshold ? |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I-5 SB Off-Ramp at Fletcher Dr[1] | AM | 850 | 195 | 213.0 | F | 1% | 2 | 0.2% | No |
| | | PM | 850 | 161 | 105.8 | F | 1% | 7 | 0.8% | No |
| 2 | SR-2 SB Off-Ramp at Fletcher Dr[1] | AM | 850 | 907 | 29.4 | C | N/A | 4 | - | - |
| | | PM | 850 | 732 | 19.9 | B | N/A | 13 | - | - |
| 3 | SR-2 SB Off-Ramp at San Fernando Rd[1] | AM | 850 | 523 | 30.5 | C | N/A | 0 | - | - |
| | | PM | 850 | 706 | 35.6 | D | 2% | 0 | 0.0% | No |
| 4 | SR-2 NB Off-Ramp at San Fernando Rd[1] | AM | 850 | 884 | 14.3 | B | N/A | 11 | - | - |
| | | PM | 850 | 661 | 20.8 | C | N/A | 32 | - | - |

**Foototes:**

1. Ramp traffic volumes from traffic counts conducted in 2016 for 2800 Casitas Avenue Traffic Study.

# Appendix B

# Traffic Counts

City Of Los Angeles
Department Of Transportation

# MANUAL TRAFFIC COUNT SUMMARY

STREET:
**North/South** Glendale Blvd

**East/West** Fletcher Dr

Day: Thursday Date: June 9, 2016 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 80 | 99 | 0 | 98 |
| **BIKES** | 3 | 20 | 26 | 36 |
| **BUSES** | 16 | 36 | 0 | 12 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 266 | 9.15 | 347 | 8.30 | 0 | 0.00 | 357 | 7.15 |
| *PM PK 15 MIN* | 328 | 15.00 | 307 | 15.15 | 0 | 0.00 | 268 | 17.00 |
| *AM PK HOUR* | 985 | 8.30 | 1308 | 8.00 | 0 | 0.00 | 1297 | 7.00 |
| *PM PK HOUR* | 1260 | 17.00 | 1191 | 15.00 | 0 | 0.00 | 1025 | 16.45 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 219 | 0 | 550 | 769 |
| *8-9* | 253 | 0 | 700 | 953 |
| *9-10* | 301 | 0 | 671 | 972 |
| *15-16* | 360 | 0 | 846 | 1206 |
| *16-17* | 341 | 0 | 851 | 1192 |
| *17-18* | 352 | 0 | 908 | 1260 |
| TOTAL | 1826 | 0 | 4526 | 6352 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 444 | 570 | 0 | 1014 |
| *8-9* | 543 | 765 | 0 | 1308 |
| *9-10* | 457 | 453 | 0 | 910 |
| *15-16* | 605 | 586 | 0 | 1191 |
| *16-17* | 488 | 673 | 0 | 1161 |
| *17-18* | 484 | 667 | 0 | 1151 |
| TOTAL | 3021 | 3714 | 0 | 6735 |

| **TOTAL** | **XING S/L** | | **XING N/L** | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 1783 | 0 | 0 | 3 | 0 |
| 2261 | 0 | 0 | 6 | 0 |
| 1882 | 0 | 0 | 5 | 0 |
| 2397 | 0 | 0 | 8 | 0 |
| 2353 | 0 | 0 | 9 | 0 |
| 2411 | 0 | 0 | 9 | 0 |
| 13087 | 0 | 0 | 40 | 0 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 0 | 0 | 0 | 0 |
| *8-9* | 0 | 0 | 0 | 0 |
| *9-10* | 0 | 0 | 0 | 0 |
| *15-16* | 0 | 0 | 0 | 0 |
| *16-17* | 0 | 0 | 0 | 0 |
| *17-18* | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 0 | 0 | 0 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 804 | 0 | 493 | 1297 |
| *8-9* | 689 | 0 | 579 | 1268 |
| *9-10* | 640 | 0 | 548 | 1188 |
| *15-16* | 426 | 0 | 430 | 856 |
| *16-17* | 486 | 0 | 438 | 924 |
| *17-18* | 523 | 0 | 496 | 1019 |
| TOTAL | 3568 | 0 | 2984 | 6552 |

| **TOTAL** | **XING W/L** | | **XING E/L** | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 1297 | 0 | 0 | 11 | 0 |
| 1268 | 0 | 0 | 12 | 0 |
| 1188 | 0 | 0 | 10 | 0 |
| 856 | 0 | 0 | 17 | 0 |
| 924 | 0 | 0 | 23 | 0 |
| 1019 | 0 | 0 | 22 | 0 |
| 6552 | 0 | 0 | 95 | 0 |

City Of Los Angeles
Department Of Transportation

# MANUAL TRAFFIC COUNT SUMMARY

STREET:
**North/South** Riverside Dr

**East/West** Fletcher Dr

Day: Thursday Date: June 9, 2016 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 89 | 124 | 115 | 120 |
| **BIKES** | 20 | 11 | 42 | 49 |
| **BUSES** | 40 | 12 | 18 | 29 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 204 | 9.45 | 318 | 8.15 | 359 | 8.00 | 427 | 7.30 |
| *PM PK 15 MIN* | 327 | 17.45 | 280 | 15.30 | 412 | 17.30 | 303 | 17.15 |
| *AM PK HOUR* | 674 | 9.00 | 1065 | 7.45 | 1348 | 7.45 | 1624 | 7.00 |
| *PM PK HOUR* | 1049 | 17.00 | 1077 | 17.00 | 1585 | 16.45 | 1192 | 16.30 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 144 | 261 | 166 | 571 |
| *8-9* | 147 | 289 | 155 | 591 |
| *9-10* | 180 | 323 | 171 | 674 |
| *15-16* | 156 | 329 | 233 | 718 |
| *16-17* | 139 | 365 | 265 | 769 |
| *17-18* | 155 | 493 | 401 | 1049 |
| TOTAL | 921 | 2060 | 1391 | 4372 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 132 | 688 | 39 | 859 |
| *8-9* | 178 | 843 | 38 | 1059 |
| *9-10* | 113 | 466 | 59 | 638 |
| *15-16* | 165 | 758 | 68 | 991 |
| *16-17* | 198 | 807 | 52 | 1057 |
| *17-18* | 194 | 815 | 68 | 1077 |
| TOTAL | 980 | 4377 | 324 | 5681 |

| TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 1430 | 7 | 0 | 1 | 0 |
| 1650 | 4 | 0 | 3 | 0 |
| 1312 | 15 | 1 | 5 | 0 |
| 1709 | 19 | 0 | 7 | 0 |
| 1826 | 11 | 0 | 2 | 1 |
| 2126 | 13 | 0 | 4 | 0 |
| 10053 | 69 | 1 | 22 | 1 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 22 | 821 | 171 | 1014 |
| *8-9* | 29 | 1051 | 228 | 1308 |
| *9-10* | 48 | 959 | 203 | 1210 |
| *15-16* | 48 | 1214 | 243 | 1505 |
| *16-17* | 34 | 1306 | 188 | 1528 |
| *17-18* | 42 | 1362 | 176 | 1580 |
| TOTAL | 223 | 6713 | 1209 | 8145 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 247 | 1278 | 99 | 1624 |
| *8-9* | 219 | 1192 | 144 | 1555 |
| *9-10* | 209 | 1045 | 123 | 1377 |
| *15-16* | 208 | 768 | 85 | 1061 |
| *16-17* | 222 | 793 | 80 | 1095 |
| *17-18* | 167 | 869 | 107 | 1143 |
| TOTAL | 1272 | 5945 | 638 | 7855 |

| TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 2638 | 7 | 0 | 4 | 0 |
| 2863 | 7 | 1 | 3 | 0 |
| 2587 | 11 | 0 | 7 | 0 |
| 2566 | 10 | 0 | 3 | 0 |
| 2623 | 9 | 0 | 3 | 0 |
| 2723 | 9 | 0 | 4 | 0 |
| 16000 | 53 | 1 | 24 | 0 |

City Of Los Angeles
Department Of Transportation

# MANUAL TRAFFIC COUNT SUMMARY

STREET:
**North/South** Ripple St

**East/West** Fletcher Dr

Day: Thursday Date: June 9, 2016 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 18 | 5 | 119 | 147 |
| **BIKES** | 8 | 12 | 46 | 65 |
| **BUSES** | 0 | 0 | 36 | 33 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 64 | 7.30 | 7 | 7.45 | 325 | 7.45 | 523 | 8.45 |
| *PM PK 15 MIN* | 75 | 17.45 | 10 | 17.30 | 454 | 17.30 | 365 | 15.15 |
| *AM PK HOUR* | 185 | 7.15 | 17 | 7.45 | 1215 | 7.30 | 1953 | 8.15 |
| *PM PK HOUR* | 212 | 17.00 | 29 | 17.00 | 1715 | 16.45 | 1279 | 16.30 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 104 | 1 | 72 | 177 |
| *8-9* | 69 | 5 | 66 | 140 |
| *9-10* | 61 | 4 | 65 | 130 |
| *15-16* | 86 | 0 | 119 | 205 |
| *16-17* | 74 | 1 | 108 | 183 |
| *17-18* | 77 | 0 | 135 | 212 |
| TOTAL | 471 | 11 | 565 | 1047 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 7 | 2 | 3 | 12 |
| *8-9* | 6 | 1 | 5 | 12 |
| *9-10* | 5 | 1 | 8 | 14 |
| *15-16* | 11 | 8 | 9 | 28 |
| *16-17* | 10 | 3 | 7 | 20 |
| *17-18* | 17 | 5 | 7 | 29 |
| TOTAL | 56 | 20 | 39 | 115 |

| TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 189 | 1 | 0 | 1 | 0 |
| 152 | 3 | 0 | 8 | 0 |
| 144 | 14 | 0 | 3 | 0 |
| 233 | 6 | 0 | 15 | 0 |
| 203 | 12 | 0 | 6 | 0 |
| 241 | 11 | 0 | 6 | 0 |
| 1162 | 47 | 0 | 39 | 0 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 5 | 952 | 26 | 983 |
| *8-9* | 6 | 1102 | 53 | 1161 |
| *9-10* | 10 | 939 | 45 | 994 |
| *15-16* | 2 | 1374 | 51 | 1427 |
| *16-17* | 7 | 1508 | 56 | 1571 |
| *17-18* | 0 | 1661 | 48 | 1709 |
| TOTAL | 30 | 7536 | 279 | 7845 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 161 | 1709 | 11 | 1881 |
| *8-9* | 187 | 1730 | 12 | 1929 |
| *9-10* | 114 | 1454 | 7 | 1575 |
| *15-16* | 123 | 1062 | 18 | 1203 |
| *16-17* | 114 | 1051 | 17 | 1182 |
| *17-18* | 114 | 1124 | 19 | 1257 |
| TOTAL | 813 | 8130 | 84 | 9027 |

| TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 2864 | 2 | 0 | 0 | 0 |
| 3090 | 3 | 0 | 0 | 0 |
| 2569 | 2 | 0 | 0 | 0 |
| 2630 | 20 | 0 | 0 | 0 |
| 2753 | 12 | 0 | 0 | 0 |
| 2966 | 11 | 0 | 0 | 0 |
| 16872 | 50 | 0 | 0 | 0 |

City Of Los Angeles
Department Of Transportation

# MANUAL TRAFFIC COUNT SUMMARY

STREET:
**North/South** SR-2 SB_WB Off Ramp

**East/West** Fletcher Dr

Day: Thursday Date: June 9, 2016 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 54 | 0 | 60 | 100 |
| **BIKES** | 0 | 0 | 0 | 0 |
| **BUSES** | 4 | 0 | 36 | 29 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 242 | 8.15 | 0 | 0.00 | 117 | 7.45 | 320 | 7.15 |
| *PM PK 15 MIN* | 216 | 17.30 | 0 | 0.00 | 138 | 16.45 | 180 | 16.30 |
| *AM PK HOUR* | 907 | 8.15 | 0 | 0.00 | 408 | 7.30 | 1168 | 7.15 |
| *PM PK HOUR* | 785 | 17.00 | 0 | 0.00 | 502 | 16.45 | 659 | 16.30 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 752 | 0 | 59 | 811 |
| *8-9* | 758 | 0 | 84 | 842 |
| *9-10* | 713 | 0 | 74 | 787 |
| *15-16* | 556 | 0 | 113 | 669 |
| *16-17* | 569 | 0 | 107 | 676 |
| *17-18* | 660 | 0 | 125 | 785 |
| TOTAL | 4008 | 0 | 562 | 4570 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 0 | 0 | 0 | 0 |
| *8-9* | 0 | 0 | 0 | 0 |
| *9-10* | 0 | 0 | 0 | 0 |
| *15-16* | 0 | 0 | 0 | 0 |
| *16-17* | 0 | 0 | 0 | 0 |
| *17-18* | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 0 | 0 | 0 |

| **TOTAL** | **XING S/L** | | **XING N/L** | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 811 | 0 | 0 | 0 | 0 |
| 842 | 0 | 0 | 0 | 0 |
| 787 | 0 | 0 | 0 | 0 |
| 669 | 0 | 0 | 0 | 0 |
| 676 | 0 | 0 | 0 | 0 |
| 785 | 0 | 0 | 0 | 0 |
| 4570 | 0 | 0 | 0 | 0 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 0 | 375 | 0 | 375 |
| *8-9* | 0 | 360 | 0 | 360 |
| *9-10* | 0 | 380 | 0 | 380 |
| *15-16* | 0 | 493 | 0 | 493 |
| *16-17* | 0 | 463 | 0 | 463 |
| *17-18* | 0 | 498 | 0 | 498 |
| TOTAL | 0 | 2569 | 0 | 2569 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 0 | 1139 | 0 | 1139 |
| *8-9* | 0 | 1168 | 0 | 1168 |
| *9-10* | 0 | 868 | 0 | 868 |
| *15-16* | 0 | 646 | 0 | 646 |
| *16-17* | 0 | 615 | 0 | 615 |
| *17-18* | 0 | 586 | 0 | 586 |
| TOTAL | 0 | 5022 | 0 | 5022 |

| **TOTAL** | **XING W/L** | | **XING E/L** | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 1514 | 0 | 0 | 0 | 0 |
| 1528 | 0 | 0 | 0 | 0 |
| 1248 | 0 | 0 | 0 | 0 |
| 1139 | 0 | 0 | 0 | 0 |
| 1078 | 0 | 0 | 0 | 0 |
| 1084 | 0 | 0 | 0 | 0 |
| 7591 | 0 | 0 | 0 | 0 |

City Of Los Angeles
Department Of Transportation

# MANUAL TRAFFIC COUNT SUMMARY

STREET:
**North/South** Larga Ave

**East/West** Fletcher Dr

Day: Thursday Date: June 9, 2016 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 7 | 24 | 60 | 95 |
| **BIKES** | 2 | 8 | 54 | 54 |
| **BUSES** | 0 | 0 | 36 | 29 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 9 | 8.00 | 73 | 8.15 | 133 | 7.45 | 312 | 7.15 |
| *PM PK 15 MIN* | 15 | 15.15 | 74 | 16.30 | 169 | 16.45 | 169 | 15.15 |
| *AM PK HOUR* | 32 | 7.30 | 267 | 7.45 | 490 | 8.15 | 1185 | 8.00 |
| *PM PK HOUR* | 43 | 15.00 | 244 | 16.30 | 627 | 16.45 | 593 | 15.00 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 14 | 4 | 3 | 21 |
| *8-9* | 23 | 3 | 3 | 29 |
| *9-10* | 21 | 2 | 2 | 25 |
| *15-16* | 31 | 4 | 8 | 43 |
| *16-17* | 25 | 5 | 3 | 33 |
| *17-18* | 25 | 2 | 6 | 33 |
| TOTAL | 139 | 20 | 25 | 184 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 107 | 2 | 99 | 208 |
| *8-9* | 122 | 3 | 121 | 246 |
| *9-10* | 71 | 4 | 92 | 167 |
| *15-16* | 86 | 2 | 84 | 172 |
| *16-17* | 126 | 5 | 74 | 205 |
| *17-18* | 140 | 2 | 93 | 235 |
| TOTAL | 652 | 18 | 563 | 1233 |

| TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 229 | 4 | 0 | 9 | 0 |
| 275 | 6 | 2 | 10 | 0 |
| 192 | 16 | 2 | 11 | 0 |
| 215 | 5 | 0 | 21 | 0 |
| 238 | 5 | 0 | 6 | 0 |
| 268 | 4 | 0 | 8 | 0 |
| 1417 | 40 | 4 | 65 | 0 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 54 | 354 | 15 | 423 |
| *8-9* | 75 | 367 | 14 | 456 |
| *9-10* | 73 | 365 | 12 | 450 |
| *15-16* | 100 | 483 | 18 | 601 |
| *16-17* | 107 | 452 | 10 | 569 |
| *17-18* | 133 | 475 | 15 | 623 |
| TOTAL | 542 | 2496 | 84 | 3122 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 0 | 1030 | 76 | 1106 |
| *8-9* | 3 | 1028 | 154 | 1185 |
| *9-10* | 2 | 748 | 77 | 827 |
| *15-16* | 4 | 529 | 60 | 593 |
| *16-17* | 3 | 512 | 43 | 558 |
| *17-18* | 0 | 460 | 53 | 513 |
| TOTAL | 12 | 4307 | 463 | 4782 |

| TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 1529 | 4 | 1 | 5 | 0 |
| 1641 | 8 | 0 | 5 | 0 |
| 1277 | 4 | 1 | 3 | 0 |
| 1194 | 3 | 0 | 1 | 0 |
| 1127 | 6 | 0 | 4 | 0 |
| 1136 | 4 | 0 | 3 | 0 |
| 7904 | 29 | 2 | 21 | 0 |

City Of Los Angeles
Department Of Transportation

# MANUAL TRAFFIC COUNT SUMMARY

STREET:
**North/South** La Clede Ave

**East/West** Fletcher Dr

Day: Thursday Date: June 9, 2016 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 9 | 13 | 63 | 107 |
| **BIKES** | 4 | 11 | 45 | 50 |
| **BUSES** | 0 | 0 | 37 | 29 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 9 | 7.30 | 63 | 7.45 | 159 | 9.00 | 377 | 8.45 |
| *PM PK 15 MIN* | 62 | 15.00 | 73 | 16.30 | 188 | 17.30 | 188 | 15.15 |
| *AM PK HOUR* | 29 | 7.15 | 199 | 7.30 | 570 | 8.15 | 1471 | 8.15 |
| *PM PK HOUR* | 101 | 15.00 | 250 | 16.30 | 696 | 17.00 | 605 | 15.00 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 9 | 2 | 17 | 28 |
| *8-9* | 10 | 0 | 18 | 28 |
| *9-10* | 6 | 1 | 15 | 22 |
| *15-16* | 15 | 5 | 81 | 101 |
| *16-17* | 6 | 3 | 49 | 58 |
| *17-18* | 8 | 2 | 34 | 44 |
| TOTAL | 54 | 13 | 214 | 281 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 139 | 1 | 22 | 162 |
| *8-9* | 136 | 1 | 21 | 158 |
| *9-10* | 85 | 2 | 32 | 119 |
| *15-16* | 147 | 1 | 33 | 181 |
| *16-17* | 177 | 3 | 33 | 213 |
| *17-18* | 209 | 3 | 26 | 238 |
| TOTAL | 893 | 11 | 167 | 1071 |

| TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 190 | 15 | 0 | 14 | 0 |
| 186 | 13 | 0 | 10 | 0 |
| 141 | 19 | 2 | 19 | 0 |
| 282 | 7 | 3 | 23 | 12 |
| 271 | 8 | 2 | 17 | 5 |
| 282 | 6 | 0 | 18 | 2 |
| 1352 | 68 | 7 | 101 | 19 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 10 | 433 | 4 | 447 |
| *8-9* | 21 | 498 | 5 | 524 |
| *9-10* | 23 | 422 | 4 | 449 |
| *15-16* | 14 | 539 | 17 | 570 |
| *16-17* | 22 | 570 | 7 | 599 |
| *17-18* | 22 | 669 | 5 | 696 |
| TOTAL | 112 | 3131 | 42 | 3285 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 18 | 1052 | 41 | 1111 |
| *8-9* | 16 | 1191 | 235 | 1442 |
| *9-10* | 15 | 815 | 107 | 937 |
| *15-16* | 23 | 535 | 47 | 605 |
| *16-17* | 16 | 465 | 24 | 505 |
| *17-18* | 11 | 488 | 43 | 542 |
| TOTAL | 99 | 4546 | 497 | 5142 |

| TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 1558 | 23 | 1 | 0 | 0 |
| 1966 | 11 | 0 | 0 | 0 |
| 1386 | 18 | 2 | 0 | 0 |
| 1175 | 16 | 3 | 1 | 0 |
| 1104 | 14 | 3 | 0 | 0 |
| 1238 | 19 | 1 | 0 | 0 |
| 8427 | 101 | 10 | 1 | 0 |

City Of Los Angeles
Department Of Transportation

# MANUAL TRAFFIC COUNT SUMMARY

STREET:
**North/South** San Fernando Rd

**East/West** Fletcher Dr

Day: Thursday Date: June 9, 2016 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 162 | 161 | 75 | 105 |
| **BIKES** | 21 | 13 | 49 | 48 |
| **BUSES** | 47 | 67 | 37 | 1 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 300 | 7.45 | 250 | 7.15 | 199 | 7.45 | 333 | 7.30 |
| *PM PK 15 MIN* | 338 | 16.15 | 329 | 16.45 | 233 | 16.45 | 205 | 15.15 |
| *AM PK HOUR* | 1042 | 9.00 | 918 | 7.00 | 677 | 7.30 | 1236 | 8.15 |
| *PM PK HOUR* | 1241 | 15.45 | 1274 | 16.45 | 853 | 16.45 | 605 | 15.00 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 89 | 861 | 53 | 1003 |
| *8-9* | 171 | 569 | 82 | 822 |
| *9-10* | 138 | 833 | 71 | 1042 |
| *15-16* | 100 | 966 | 94 | 1160 |
| *16-17* | 94 | 1072 | 61 | 1227 |
| *17-18* | 98 | 1012 | 52 | 1162 |
| TOTAL | 690 | 5313 | 413 | 6416 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 33 | 796 | 89 | 918 |
| *8-9* | 40 | 240 | 204 | 484 |
| *9-10* | 41 | 622 | 122 | 785 |
| *15-16* | 66 | 967 | 97 | 1130 |
| *16-17* | 61 | 1009 | 93 | 1163 |
| *17-18* | 68 | 1072 | 109 | 1249 |
| TOTAL | 309 | 4706 | 714 | 5729 |

| TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 1921 | 69 | 0 | 134 | 26 |
| 1306 | 41 | 0 | 98 | 5 |
| 1827 | 30 | 0 | 92 | 5 |
| 2290 | 41 | 0 | 99 | 16 |
| 2390 | 22 | 0 | 83 | 2 |
| 2411 | 17 | 0 | 71 | 18 |
| 12145 | 220 | 0 | 577 | 72 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 113 | 278 | 203 | 594 |
| *8-9* | 111 | 241 | 272 | 624 |
| *9-10* | 122 | 172 | 197 | 491 |
| *15-16* | 154 | 330 | 233 | 717 |
| *16-17* | 132 | 409 | 278 | 819 |
| *17-18* | 149 | 428 | 270 | 847 |
| TOTAL | 781 | 1858 | 1453 | 4092 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 201 | 923 | 96 | 1220 |
| *8-9* | 168 | 947 | 114 | 1229 |
| *9-10* | 140 | 615 | 126 | 881 |
| *15-16* | 175 | 334 | 96 | 605 |
| *16-17* | 133 | 258 | 89 | 480 |
| *17-18* | 153 | 283 | 102 | 538 |
| TOTAL | 970 | 3360 | 623 | 4953 |

| TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 1814 | 55 | 26 | 66 | 16 |
| 1853 | 91 | 1 | 54 | 0 |
| 1372 | 49 | 3 | 66 | 0 |
| 1322 | 52 | 7 | 59 | 2 |
| 1299 | 27 | 0 | 41 | 0 |
| 1385 | 30 | 0 | 32 | 2 |
| 9045 | 304 | 37 | 318 | 20 |

# City Of Los Angeles
# Department Of Transportation
# MANUAL TRAFFIC COUNT SUMMARY

STREET:

**North/South** South Glendale Avenue

**East/West** San Fernando Road

**Day:** Wednesday **Date:** November 9, 2016 **Weather:** CLEAR

**Hours:** 7-10AM 3-6PM **Staff:** CUI

**School Day:** YES **District:** Glendale I/S CODE 0

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 0 | 42 | 141 | 184 |
| **BIKES** | 4 | 15 | 13 | 14 |
| **BUSES** | 0 | 26 | 81 | 96 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 16 | 7.30 | 198 | 8.15 | 208 | 8.00 | 293 | 8.30 |
| *PM PK 15 MIN* | 6 | 3.30 | 158 | 4.30 | 254 | 5.00 | 327 | 5.30 |
| *AM PK HOUR* | 34 | 7.00 | 738 | 7.30 | 752 | 7.45 | 1120 | 8.15 |
| *PM PK HOUR* | 19 | 3.00 | 587 | 4.30 | 976 | 5.00 | 1243 | 4.15 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 16 | 11 | 7 | 34 |
| *8-9* | 2 | 7 | 4 | 13 |
| *9-10* | 6 | 7 | 4 | 17 |
| *3-4* | 9 | 8 | 2 | 19 |
| *4-5* | 4 | 8 | 1 | 13 |
| *5-6* | 10 | 1 | 0 | 11 |
| TOTAL | 47 | 42 | 18 | 107 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 570 | 0 | 140 | 710 |
| *8-9* | 520 | 0 | 160 | 680 |
| *9-10* | 380 | 5 | 101 | 486 |
| *3-4* | 381 | 10 | 85 | 476 |
| *4-5* | 445 | 7 | 111 | 563 |
| *5-6* | 408 | 3 | 110 | 521 |
| TOTAL | 2704 | 25 | 707 | 3436 |

| | TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|---|
| Hours | N-S | Ped | Sch | Ped | Sch |
| *7-8* | 744 | 25 | 27 | 19 | 6 |
| *8-9* | 693 | 35 | 6 | 30 | 1 |
| *9-10* | 503 | 0 | 0 | 14 | 3 |
| *3-4* | 495 | 0 | 0 | 23 | 0 |
| *4-5* | 576 | 0 | 0 | 14 | 4 |
| *5-6* | 532 | 0 | 0 | 17 | 1 |
| TOTAL | 3543 | 60 | 33 | 117 | 15 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 20 | 616 | 0 | 636 |
| *8-9* | 65 | 687 | 0 | 752 |
| *9-10* | 39 | 712 | 0 | 751 |
| *3-4* | 56 | 822 | 2 | 880 |
| *4-5* | 62 | 906 | 0 | 968 |
| *5-6* | 78 | 897 | 1 | 976 |
| TOTAL | 320 | 4640 | 3 | 4963 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 1 | 864 | 249 | 1114 |
| *8-9* | 1 | 812 | 295 | 1108 |
| *9-10* | 1 | 779 | 287 | 1067 |
| *3-4* | 3 | 757 | 285 | 1045 |
| *4-5* | 6 | 834 | 382 | 1222 |
| *5-6* | 3 | 828 | 388 | 1219 |
| TOTAL | 15 | 4874 | 1886 | 6775 |

| | TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|---|
| Hours | E-W | Ped | Sch | Ped | Sch |
| *7-8* | 1750 | 45 | 39 | 0 | 0 |
| *8-9* | 1860 | 36 | 8 | 0 | 0 |
| *9-10* | 1818 | 21 | 4 | 0 | 0 |
| *3-4* | 1925 | 35 | 22 | 0 | 0 |
| *4-5* | 2190 | 37 | 11 | 0 | 0 |
| *5-6* | 2195 | 31 | 2 | 0 | 0 |
| TOTAL | 11738 | 205 | 86 | 0 | 0 |

(Rev Oct 06)

City Of Los Angeles
Department Of Transportation

# MANUAL TRAFFIC COUNT SUMMARY

STREET:

**North/South** Estara Avenue

**East/West** Fletcher Drive

**Day:** Wednesday **Date:** November 9, 2016 **Weather:** CLEAR

**Hours:** 7-10AM 3-6PM **Staff:** CUI

**School Day:** YES **District:** Central I/S CODE 14570

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 9 | 15 | 39 | 44 |
| **BIKES** | 15 | 8 | 27 | 38 |
| **BUSES** | 8 | 6 | 22 | 10 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 73 | 8.30 | 78 | 7.30 | 132 | 7.30 | 224 | 8.45 |
| *PM PK 15 MIN* | 80 | 3.15 | 68 | 5.00 | 153 | 5.45 | 98 | 3.30 |
| *AM PK HOUR* | 283 | 7.45 | 259 | 7.00 | 455 | 7.15 | 782 | 7.00 |
| *PM PK HOUR* | 246 | 3.15 | 250 | 5.00 | 535 | 4.00 | 375 | 3.15 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 145 | 51 | 22 | 218 |
| *8-9* | 159 | 91 | 7 | 257 |
| *9-10* | 104 | 31 | 4 | 139 |
| *3-4* | 140 | 66 | 29 | 235 |
| *4-5* | 113 | 59 | 19 | 191 |
| *5-6* | 105 | 80 | 12 | 197 |
| TOTAL | 766 | 378 | 93 | 1237 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 95 | 91 | 73 | 259 |
| *8-9* | 64 | 54 | 50 | 168 |
| *9-10* | 37 | 30 | 50 | 117 |
| *3-4* | 97 | 76 | 48 | 221 |
| *4-5* | 78 | 69 | 43 | 190 |
| *5-6* | 99 | 100 | 51 | 250 |
| TOTAL | 470 | 420 | 315 | 1205 |

| TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 477 | 54 | 123 | 42 | 128 |
| 425 | 20 | 6 | 27 | 5 |
| 256 | 12 | 4 | 19 | 2 |
| 456 | 13 | 34 | 39 | 24 |
| 381 | 14 | 16 | 33 | 16 |
| 447 | 36 | 8 | 47 | 2 |
| 2442 | 149 | 191 | 207 | 177 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 61 | 227 | 130 | 418 |
| *8-9* | 34 | 173 | 71 | 278 |
| *9-10* | 25 | 142 | 33 | 200 |
| *3-4* | 44 | 346 | 114 | 504 |
| *4-5* | 44 | 375 | 116 | 535 |
| *5-6* | 44 | 388 | 101 | 533 |
| TOTAL | 252 | 1651 | 565 | 2468 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 22 | 726 | 34 | 782 |
| *8-9* | 13 | 640 | 77 | 730 |
| *9-10* | 3 | 583 | 26 | 612 |
| *3-4* | 11 | 314 | 38 | 363 |
| *4-5* | 17 | 250 | 29 | 296 |
| *5-6* | 5 | 321 | 33 | 359 |
| TOTAL | 71 | 2834 | 237 | 3142 |

| TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 1200 | 85 | 236 | 128 | 186 |
| 1008 | 38 | 9 | 31 | 7 |
| 812 | 19 | 4 | 12 | 0 |
| 867 | 29 | 300 | 16 | 27 |
| 831 | 30 | 74 | 12 | 9 |
| 892 | 60 | 16 | 17 | 7 |
| 5610 | 261 | 639 | 216 | 236 |

(Rev Oct 06)

City Of Los Angeles
Department Of Transportation

# MANUAL TRAFFIC COUNT SUMMARY

STREET:
**North/South** San Fernando Rd

**East/West** SR-2 SB WB Off-Ramp

Day: Thursday Date: June 9, 2016 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 197 | 193 | 0 | 105 |
| **BIKES** | 0 | 0 | 0 | 0 |
| **BUSES** | 48 | 55 | 0 | 5 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 401 | 7.45 | 345 | 7.30 | 0 | 0.00 | 180 | 9.45 |
| *PM PK 15 MIN* | 341 | 15.00 | 403 | 17.00 | 0 | 0.00 | 236 | 15.15 |
| *AM PK HOUR* | 1429 | 7.15 | 1269 | 7.00 | 0 | 0.00 | 633 | 9.00 |
| *PM PK HOUR* | 1317 | 15.45 | 1572 | 16.45 | 0 | 0.00 | 730 | 15.15 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 372 | 1000 | 0 | 1372 |
| *8-9* | 454 | 755 | 0 | 1209 |
| *9-10* | 334 | 808 | 0 | 1142 |
| *15-16* | 340 | 942 | 0 | 1282 |
| *16-17* | 290 | 1001 | 0 | 1291 |
| *17-18* | 268 | 954 | 0 | 1222 |
| TOTAL | 2058 | 5460 | 0 | 7518 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 0 | 845 | 424 | 1269 |
| *8-9* | 0 | 497 | 245 | 742 |
| *9-10* | 0 | 646 | 329 | 975 |
| *15-16* | 0 | 982 | 454 | 1436 |
| *16-17* | 0 | 1009 | 468 | 1477 |
| *17-18* | 0 | 1046 | 501 | 1547 |
| TOTAL | 0 | 5025 | 2421 | 7446 |

| TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 2641 | 0 | 0 | 0 | 0 |
| 1951 | 0 | 0 | 0 | 0 |
| 2117 | 0 | 0 | 0 | 0 |
| 2718 | 0 | 0 | 0 | 0 |
| 2768 | 0 | 0 | 0 | 0 |
| 2769 | 0 | 0 | 0 | 0 |
| 14964 | 0 | 0 | 0 | 0 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 0 | 0 | 0 | 0 |
| *8-9* | 0 | 0 | 0 | 0 |
| *9-10* | 0 | 0 | 0 | 0 |
| *15-16* | 0 | 0 | 0 | 0 |
| *16-17* | 0 | 0 | 0 | 0 |
| *17-18* | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 0 | 0 | 0 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 265 | 14 | 244 | 523 |
| *8-9* | 269 | 13 | 236 | 518 |
| *9-10* | 312 | 7 | 314 | 633 |
| *15-16* | 394 | 11 | 324 | 729 |
| *16-17* | 409 | 2 | 295 | 706 |
| *17-18* | 310 | 3 | 308 | 621 |
| TOTAL | 1959 | 50 | 1721 | 3730 |

| TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 523 | 0 | 0 | 0 | 0 |
| 518 | 0 | 0 | 0 | 0 |
| 633 | 0 | 0 | 0 | 0 |
| 729 | 0 | 0 | 0 | 0 |
| 706 | 0 | 0 | 0 | 0 |
| 621 | 0 | 0 | 0 | 0 |
| 3730 | 0 | 0 | 0 | 0 |

# City Of Los Angeles
## Department Of Transportation
# MANUAL TRAFFIC COUNT SUMMARY

STREET:

**North/South** Glendale Boulevard

**East/West** Riverside Drive

**Day:** Wednesday **Date:** November 9, 2016 **Weather:** CLEAR

**Hours:** 7-10AM 3-6PM **Staff:** CUI

**School Day:** YES **District:** Hollywood I/S CODE 14984

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 69 | 58 | 150 | 74 |
| **BIKES** | 11 | 8 | 7 | 14 |
| **BUSES** | 45 | 26 | 23 | 6 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 152 | 8.00 | 153 | 7.45 | 369 | 7.30 | 223 | 7.00 |
| *PM PK 15 MIN* | 174 | 5.30 | 145 | 5.15 | 308 | 4.00 | 252 | 5.45 |
| *AM PK HOUR* | 489 | 7.45 | 576 | 7.30 | 1402 | 7.15 | 797 | 7.00 |
| *PM PK HOUR* | 672 | 5.00 | 503 | 5.00 | 1172 | 4.00 | 901 | 5.00 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 149 | 78 | 99 | 326 |
| *8-9* | 239 | 131 | 116 | 486 |
| *9-10* | 167 | 119 | 78 | 364 |
| *3-4* | 241 | 174 | 194 | 609 |
| *4-5* | 247 | 217 | 169 | 633 |
| *5-6* | 307 | 202 | 163 | 672 |
| TOTAL | 1350 | 921 | 819 | 3090 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 206 | 211 | 91 | 508 |
| *8-9* | 205 | 224 | 96 | 525 |
| *9-10* | 120 | 119 | 78 | 317 |
| *3-4* | 165 | 173 | 77 | 415 |
| *4-5* | 157 | 223 | 88 | 468 |
| *5-6* | 150 | 208 | 145 | 503 |
| TOTAL | 1003 | 1158 | 575 | 2736 |

| TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|
| N-S | Ped | Sch | Ped | Sch |
| 834 | 5 | 2 | 0 | 0 |
| 1011 | 6 | 1 | 4 | 5 |
| 681 | 1 | 0 | 3 | 0 |
| 1024 | 4 | 3 | 1 | 0 |
| 1101 | 6 | 1 | 0 | 0 |
| 1175 | 6 | 0 | 1 | 0 |
| 5826 | 28 | 7 | 9 | 5 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 52 | 837 | 486 | 1375 |
| *8-9* | 60 | 639 | 527 | 1226 |
| *9-10* | 102 | 455 | 346 | 903 |
| *3-4* | 110 | 641 | 267 | 1018 |
| *4-5* | 137 | 718 | 317 | 1172 |
| *5-6* | 107 | 530 | 326 | 963 |
| TOTAL | 568 | 3820 | 2269 | 6657 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 115 | 561 | 121 | 797 |
| *8-9* | 132 | 515 | 111 | 758 |
| *9-10* | 87 | 370 | 87 | 544 |
| *3-4* | 60 | 364 | 74 | 498 |
| *4-5* | 96 | 417 | 101 | 614 |
| *5-6* | 112 | 627 | 162 | 901 |
| TOTAL | 602 | 2854 | 656 | 4112 |

| TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|
| E-W | Ped | Sch | Ped | Sch |
| 2172 | 3 | 1 | 3 | 2 |
| 1984 | 12 | 3 | 0 | 0 |
| 1447 | 2 | 1 | 1 | 0 |
| 1516 | 1 | 0 | 3 | 1 |
| 1786 | 1 | 0 | 0 | 0 |
| 1864 | 0 | 0 | 2 | 0 |
| 10769 | 19 | 5 | 9 | 3 |

(Rev Oct 06)

# City Of Los Angeles
## Department Of Transportation
# MANUAL TRAFFIC COUNT SUMMARY

STREET:

**North/South** Gilroy Street

**East/West** Riverside Drive

**Day:** Wednesday **Date:** November 9, 2016 **Weather:** CLEAR

**Hours:** 7-10AM 3-6PM **Staff:** CUI

**School Day:** YES **District:** Hollywood I/S CODE 0

| | N/B | S/B | E/B | W/B |
|---|---|---|---|---|
| **DUAL-WHEELED** | 0 | 32 | 151 | 122 |
| **BIKES** | 0 | 4 | 13 | 12 |
| **BUSES** | 0 | 2 | 52 | 53 |

| | N/B | TIME | S/B | TIME | E/B | TIME | W/B | TIME |
|---|---|---|---|---|---|---|---|---|
| *AM PK 15 MIN* | 0 | 7.00 | 56 | 8.00 | 361 | 8.00 | 296 | 7.00 |
| *PM PK 15 MIN* | 0 | 3.00 | 25 | 3.15 | 315 | 3.15 | 318 | 5.45 |
| *AM PK HOUR* | 0 | 7.00 | 167 | 7.15 | 1365 | 7.15 | 1090 | 7.00 |
| *PM PK HOUR* | 0 | 3.00 | 94 | 3.15 | 1190 | 3.15 | 1153 | 5.00 |

**NORTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 0 | 0 | 0 | 0 |
| *8-9* | 0 | 0 | 0 | 0 |
| *9-10* | 0 | 0 | 0 | 0 |
| *3-4* | 0 | 0 | 0 | 0 |
| *4-5* | 0 | 0 | 0 | 0 |
| *5-6* | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 0 | 0 | 0 |

**SOUTHBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 115 | 0 | 19 | 134 |
| *8-9* | 123 | 0 | 29 | 152 |
| *9-10* | 40 | 0 | 19 | 59 |
| *3-4* | 62 | 0 | 30 | 92 |
| *4-5* | 53 | 0 | 24 | 77 |
| *5-6* | 39 | 0 | 34 | 73 |
| TOTAL | 432 | 0 | 155 | 587 |

| | TOTAL | XING S/L | | XING N/L | |
|---|---|---|---|---|---|
| Hours | N-S | Ped | Sch | Ped | Sch |
| *7-8* | 134 | 0 | 0 | 2 | 3 |
| *8-9* | 152 | 0 | 0 | 2 | 1 |
| *9-10* | 59 | 0 | 0 | 1 | 2 |
| *3-4* | 92 | 0 | 0 | 0 | 0 |
| *4-5* | 77 | 0 | 0 | 5 | 0 |
| *5-6* | 73 | 0 | 0 | 0 | 2 |
| TOTAL | 587 | 0 | 0 | 10 | 8 |

**EASTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 42 | 1277 | 0 | 1319 |
| *8-9* | 46 | 1125 | 0 | 1171 |
| *9-10* | 29 | 850 | 0 | 879 |
| *3-4* | 70 | 1072 | 0 | 1142 |
| *4-5* | 76 | 1039 | 0 | 1115 |
| *5-6* | 90 | 850 | 0 | 940 |
| TOTAL | 353 | 6213 | 0 | 6566 |

**WESTBOUND Approach**

| Hours | Lt | Th | Rt | Total |
|---|---|---|---|---|
| *7-8* | 0 | 1019 | 71 | 1090 |
| *8-9* | 0 | 941 | 87 | 1028 |
| *9-10* | 0 | 771 | 52 | 823 |
| *3-4* | 0 | 667 | 44 | 711 |
| *4-5* | 0 | 819 | 45 | 864 |
| *5-6* | 0 | 1088 | 65 | 1153 |
| TOTAL | 0 | 5305 | 364 | 5669 |

| | TOTAL | XING W/L | | XING E/L | |
|---|---|---|---|---|---|
| Hours | E-W | Ped | Sch | Ped | Sch |
| *7-8* | 2409 | 0 | 0 | 3 | 4 |
| *8-9* | 2199 | 0 | 0 | 8 | 3 |
| *9-10* | 1702 | 0 | 0 | 2 | 0 |
| *3-4* | 1853 | 0 | 0 | 1 | 1 |
| *4-5* | 1,979 | 0 | 0 | 6 | 1 |
| *5-6* | 2093 | 1 | 0 | 1 | 2 |
| TOTAL | 12235 | 1 | 0 | 21 | 11 |

(Rev Oct 06)

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

# VOLUME

## Larga Ave Bet. Fletcher Dr & Carillon St

**Day:** Tuesday
**Date:** 8/23/2016

**City:** Los Angeles
**Project #:** CA16_5533_001

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 300 | 300 | 0 | 0 | 600 |

| AM Period | NB | | SB | | EB | WB | TOTAL | | PM Period | NB | | SB | | EB | WB | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 0 | | 0 | | 0 | 0 | | | 12:00 | 4 | | 5 | | 0 | 0 | 9 | |
| 00:15 | 0 | | 0 | | 0 | 0 | | | 12:15 | 3 | | 2 | | 0 | 0 | 5 | |
| 00:30 | 0 | | 0 | | 0 | 0 | | | 12:30 | 3 | | 3 | | 0 | 0 | 6 | |
| 00:45 | 0 | | 1 | 1 | 0 | 0 | 1 | 1 | 12:45 | 5 | 15 | 4 | 14 | 0 | 0 | 9 | 29 |
| 01:00 | 0 | | 0 | | 0 | 0 | | | 13:00 | 5 | | 7 | | 0 | 0 | 12 | |
| 01:15 | 0 | | 1 | | 0 | 0 | 1 | | 13:15 | 5 | | 4 | | 0 | 0 | 9 | |
| 01:30 | 0 | | 0 | | 0 | 0 | | | 13:30 | 2 | | 5 | | 0 | 0 | 7 | |
| 01:45 | 0 | | 0 | 1 | 0 | 0 | | 1 | 13:45 | 5 | 17 | 5 | 21 | 0 | 0 | 10 | 38 |
| 02:00 | 0 | | 0 | | 0 | 0 | | | 14:00 | 5 | | 3 | | 0 | 0 | 8 | |
| 02:15 | 0 | | 0 | | 0 | 0 | | | 14:15 | 9 | | 6 | | 0 | 0 | 15 | |
| 02:30 | 0 | | 0 | | 0 | 0 | | | 14:30 | 6 | | 6 | | 0 | 0 | 12 | |
| 02:45 | 0 | | 0 | | 0 | 0 | | | 14:45 | 7 | 27 | 5 | 20 | 0 | 0 | 12 | 47 |
| 03:00 | 0 | | 2 | | 0 | 0 | 2 | | 15:00 | 12 | | 11 | | 0 | 0 | 23 | |
| 03:15 | 0 | | 0 | | 0 | 0 | | | 15:15 | 6 | | 7 | | 0 | 0 | 13 | |
| 03:30 | 0 | | 0 | | 0 | 0 | | | 15:30 | 3 | | 2 | | 0 | 0 | 5 | |
| 03:45 | 0 | | 0 | 2 | 0 | 0 | | 2 | 15:45 | 4 | 25 | 3 | 23 | 0 | 0 | 7 | 48 |
| 04:00 | 1 | | 0 | | 0 | 0 | 1 | | 16:00 | 7 | | 4 | | 0 | 0 | 11 | |
| 04:15 | 0 | | 0 | | 0 | 0 | | | 16:15 | 4 | | 0 | | 0 | 0 | 4 | |
| 04:30 | 0 | | 0 | | 0 | 0 | | | 16:30 | 5 | | 6 | | 0 | 0 | 11 | |
| 04:45 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 3 | 16:45 | 9 | 25 | 3 | 13 | 0 | 0 | 12 | 38 |
| 05:00 | 2 | | 0 | | 0 | 0 | 2 | | 17:00 | 4 | | 1 | | 0 | 0 | 5 | |
| 05:15 | 0 | | 0 | | 0 | 0 | | | 17:15 | 4 | | 7 | | 0 | 0 | 11 | |
| 05:30 | 0 | | 3 | | 0 | 0 | 3 | | 17:30 | 3 | | 3 | | 0 | 0 | 6 | |
| 05:45 | 0 | 2 | 1 | 4 | 0 | 0 | 1 | 6 | 17:45 | 5 | 16 | 6 | 17 | 0 | 0 | 11 | 33 |
| 06:00 | 2 | | 10 | | 0 | 0 | 12 | | 18:00 | 6 | | 5 | | 0 | 0 | 11 | |
| 06:15 | 1 | | 7 | | 0 | 0 | 8 | | 18:15 | 5 | | 4 | | 0 | 0 | 9 | |
| 06:30 | 2 | | 6 | | 0 | 0 | 8 | | 18:30 | 7 | | 5 | | 0 | 0 | 12 | |
| 06:45 | 6 | 11 | 5 | 28 | 0 | 0 | 11 | 39 | 18:45 | 2 | 20 | 5 | 19 | 0 | 0 | 7 | 39 |
| 07:00 | 4 | | 4 | | 0 | 0 | 8 | | 19:00 | 6 | | 3 | | 0 | 0 | 9 | |
| 07:15 | 6 | | 4 | | 0 | 0 | 10 | | 19:15 | 4 | | 2 | | 0 | 0 | 6 | |
| 07:30 | 3 | | 5 | | 0 | 0 | 8 | | 19:30 | 2 | | 2 | | 0 | 0 | 4 | |
| 07:45 | 4 | 17 | 4 | 17 | 0 | 0 | 8 | 34 | 19:45 | 1 | 13 | 5 | 12 | 0 | 0 | 6 | 25 |
| 08:00 | 3 | | 4 | | 0 | 0 | 7 | | 20:00 | 3 | | 3 | | 0 | 0 | 6 | |
| 08:15 | 4 | | 8 | | 0 | 0 | 12 | | 20:15 | 1 | | 4 | | 0 | 0 | 5 | |
| 08:30 | 2 | | 9 | | 0 | 0 | 11 | | 20:30 | 4 | | 0 | | 0 | 0 | 4 | |
| 08:45 | 5 | 14 | 12 | 33 | 0 | 0 | 17 | 47 | 20:45 | 0 | 8 | 2 | 9 | 0 | 0 | 2 | 17 |
| 09:00 | 3 | | 11 | | 0 | 0 | 14 | | 21:00 | 2 | | 2 | | 0 | 0 | 4 | |
| 09:15 | 2 | | 6 | | 0 | 0 | 8 | | 21:15 | 2 | | 0 | | 0 | 0 | 2 | |
| 09:30 | 4 | | 1 | | 0 | 0 | 5 | | 21:30 | 3 | | 1 | | 0 | 0 | 4 | |
| 09:45 | 5 | 14 | 1 | 19 | 0 | 0 | 6 | 33 | 21:45 | 4 | 11 | 4 | 7 | 0 | 0 | 8 | 18 |
| 10:00 | 6 | | 2 | | 0 | 0 | 8 | | 22:00 | 7 | | 2 | | 0 | 0 | 9 | |
| 10:15 | 2 | | 5 | | 0 | 0 | 7 | | 22:15 | 8 | | 2 | | 0 | 0 | 10 | |
| 10:30 | 7 | | 5 | | 0 | 0 | 12 | | 22:30 | 5 | | 0 | | 0 | 0 | 5 | |
| 10:45 | 2 | 17 | 3 | 15 | 0 | 0 | 5 | 32 | 22:45 | 2 | 22 | 0 | 4 | 0 | 0 | 2 | 26 |
| 11:00 | 5 | | 8 | | 0 | 0 | 13 | | 23:00 | 2 | | 0 | | 0 | 0 | 2 | |
| 11:15 | 5 | | 7 | | 0 | 0 | 12 | | 23:15 | 3 | | 0 | | 0 | 0 | 3 | |
| 11:30 | 3 | | 2 | | 0 | 0 | 5 | | 23:30 | 1 | | 0 | | 0 | 0 | 1 | |
| 11:45 | 5 | 18 | 2 | 19 | 0 | 0 | 7 | 37 | 23:45 | 0 | 6 | 1 | 1 | 0 | 0 | 1 | 7 |
| TOTALS | | 95 | | 140 | | | | 235 | TOTALS | | 205 | | 160 | | | | 365 |
| SPLIT % | | 40.4% | | 59.6% | | | | 39.2% | SPLIT % | | 56.2% | | 43.8% | | | | 60.8% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 300 | 300 | 0 | 0 | 600 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AM Peak Hour | 09:45 | 08:15 | | | 08:15 | PM Peak Hour | 14:15 | 14:30 | | | 14:15 |
| AM Pk Volume | 20 | 40 | | | 54 | PM Pk Volume | 34 | 29 | | | 62 |
| Pk Hr Factor | 0.714 | 0.833 | | | 0.794 | Pk Hr Factor | 0.583 | 0.523 | | | 0.674 |
| 7 - 9 Volume | 31 | 50 | 0 | 0 | 81 | 4 - 6 Volume | 41 | 30 | 0 | 0 | 71 |
| 7 - 9 Peak Hour | 07:00 | 08:00 | | | 08:00 | 4 - 6 Peak Hour | 16:00 | 16:30 | | | 16:30 |
| 7 - 9 Pk Volume | 17 | 33 | 0 | 0 | 47 | 4 - 6 Pk Volume | 25 | 17 | 0 | 0 | 39 |
| Pk Hr Factor | 0.708 | 0.688 | 0.000 | 0.000 | 0.691 | Pk Hr Factor | 0.694 | 0.607 | 0.000 | 0.000 | 0.813 |

Prepared by NDS/ATD

# VOLUME

La Clede Ave Bet. Fletcher Dr & Carillon St

**Day:** Tuesday
**Date:** 8/23/2016

**City:** Los Angeles
**Project #:** CA16_5533_004

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 360 | 574 | 0 | 0 | 934 |

| AM Period | NB | | SB | | EB | WB | TOTAL | | PM Period | NB | | SB | | EB | WB | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 0 | | 1 | | 0 | 0 | 1 | | 12:00 | 4 | | 10 | | 0 | 0 | 14 | |
| 00:15 | 2 | | 2 | | 0 | 0 | 4 | | 12:15 | 5 | | 4 | | 0 | 0 | 9 | |
| 00:30 | 1 | | 0 | | 0 | 0 | 1 | | 12:30 | 5 | | 3 | | 0 | 0 | 8 | |
| 00:45 | 0 | 3 | 1 | 4 | 0 | 0 | 1 | 7 | 12:45 | 9 | 23 | 11 | 28 | 0 | 0 | 20 | 51 |
| 01:00 | 1 | | 1 | | 0 | 0 | 2 | | 13:00 | 10 | | 10 | | 0 | 0 | 20 | |
| 01:15 | 1 | | 0 | | 0 | 0 | 1 | | 13:15 | 6 | | 8 | | 0 | 0 | 14 | |
| 01:30 | 1 | | 3 | | 0 | 0 | 4 | | 13:30 | 6 | | 7 | | 0 | 0 | 13 | |
| 01:45 | 1 | 4 | 0 | 4 | 0 | 0 | 1 | 8 | 13:45 | 3 | 25 | 10 | 35 | 0 | 0 | 13 | 60 |
| 02:00 | 0 | | 0 | | 0 | 0 | | | 14:00 | 5 | | 9 | | 0 | 0 | 14 | |
| 02:15 | 0 | | 3 | | 0 | 0 | 3 | | 14:15 | 2 | | 5 | | 0 | 0 | 7 | |
| 02:30 | 0 | | 2 | | 0 | 0 | 2 | | 14:30 | 9 | | 11 | | 0 | 0 | 20 | |
| 02:45 | 1 | 1 | 0 | 5 | 0 | 0 | 1 | 6 | 14:45 | 10 | 26 | 7 | 32 | 0 | 0 | 17 | 58 |
| 03:00 | 1 | | 1 | | 0 | 0 | 2 | | 15:00 | 11 | | 52 | | 0 | 0 | 63 | |
| 03:15 | 0 | | 3 | | 0 | 0 | 3 | | 15:15 | 5 | | 8 | | 0 | 0 | 13 | |
| 03:30 | 0 | | 0 | | 0 | 0 | | | 15:30 | 2 | | 15 | | 0 | 0 | 17 | |
| 03:45 | 0 | 1 | 0 | 4 | 0 | 0 | | 5 | 15:45 | 6 | 24 | 7 | 82 | 0 | 0 | 13 | 106 |
| 04:00 | 2 | | 1 | | 0 | 0 | 3 | | 16:00 | 5 | | 16 | | 0 | 0 | 21 | |
| 04:15 | 0 | | 4 | | 0 | 0 | 4 | | 16:15 | 5 | | 12 | | 0 | 0 | 17 | |
| 04:30 | 0 | | 0 | | 0 | 0 | | | 16:30 | 2 | | 14 | | 0 | 0 | 16 | |
| 04:45 | 0 | 2 | 1 | 6 | 0 | 0 | 1 | 8 | 16:45 | 5 | 17 | 7 | 49 | 0 | 0 | 12 | 66 |
| 05:00 | 3 | | 4 | | 0 | 0 | 7 | | 17:00 | 5 | | 8 | | 0 | 0 | 13 | |
| 05:15 | 3 | | 1 | | 0 | 0 | 4 | | 17:15 | 3 | | 10 | | 0 | 0 | 13 | |
| 05:30 | 4 | | 1 | | 0 | 0 | 5 | | 17:30 | 6 | | 9 | | 0 | 0 | 15 | |
| 05:45 | 5 | 15 | 4 | 10 | 0 | 0 | 9 | 25 | 17:45 | 3 | 17 | 3 | 30 | 0 | 0 | 6 | 47 |
| 06:00 | 11 | | 6 | | 0 | 0 | 17 | | 18:00 | 5 | | 5 | | 0 | 0 | 10 | |
| 06:15 | 12 | | 10 | | 0 | 0 | 22 | | 18:15 | 6 | | 5 | | 0 | 0 | 11 | |
| 06:30 | 2 | | 4 | | 0 | 0 | 6 | | 18:30 | 3 | | 10 | | 0 | 0 | 13 | |
| 06:45 | 5 | 30 | 4 | 24 | 0 | 0 | 9 | 54 | 18:45 | 10 | 24 | 9 | 29 | 0 | 0 | 19 | 53 |
| 07:00 | 3 | | 1 | | 0 | 0 | 4 | | 19:00 | 5 | | 9 | | 0 | 0 | 14 | |
| 07:15 | 5 | | 2 | | 0 | 0 | 7 | | 19:15 | 6 | | 12 | | 0 | 0 | 18 | |
| 07:30 | 4 | | 9 | | 0 | 0 | 13 | | 19:30 | 6 | | 12 | | 0 | 0 | 18 | |
| 07:45 | 4 | 16 | 2 | 14 | 0 | 0 | 6 | 30 | 19:45 | 2 | 19 | 4 | 37 | 0 | 0 | 6 | 56 |
| 08:00 | 6 | | 5 | | 0 | 0 | 11 | | 20:00 | 2 | | 4 | | 0 | 0 | 6 | |
| 08:15 | 5 | | 3 | | 0 | 0 | 8 | | 20:15 | 4 | | 7 | | 0 | 0 | 11 | |
| 08:30 | 4 | | 4 | | 0 | 0 | 8 | | 20:30 | 1 | | 5 | | 0 | 0 | 6 | |
| 08:45 | 9 | 24 | 5 | 17 | 0 | 0 | 14 | 41 | 20:45 | 2 | 9 | 4 | 20 | 0 | 0 | 6 | 29 |
| 09:00 | 8 | | 2 | | 0 | 0 | 10 | | 21:00 | 6 | | 1 | | 0 | 0 | 7 | |
| 09:15 | 8 | | 7 | | 0 | 0 | 15 | | 21:15 | 1 | | 3 | | 0 | 0 | 4 | |
| 09:30 | 1 | | 5 | | 0 | 0 | 6 | | 21:30 | 2 | | 2 | | 0 | 0 | 4 | |
| 09:45 | 8 | 25 | 6 | 20 | 0 | 0 | 14 | 45 | 21:45 | 3 | 12 | 11 | 17 | 0 | 0 | 14 | 29 |
| 10:00 | 1 | | 8 | | 0 | 0 | 9 | | 22:00 | 4 | | 12 | | 0 | 0 | 16 | |
| 10:15 | 3 | | 5 | | 0 | 0 | 8 | | 22:15 | 2 | | 7 | | 0 | 0 | 9 | |
| 10:30 | 5 | | 4 | | 0 | 0 | 9 | | 22:30 | 3 | | 4 | | 0 | 0 | 7 | |
| 10:45 | 3 | 12 | 6 | 23 | 0 | 0 | 9 | 35 | 22:45 | 2 | 11 | 5 | 28 | 0 | 0 | 7 | 39 |
| 11:00 | 1 | | 5 | | 0 | 0 | 6 | | 23:00 | 4 | | 2 | | 0 | 0 | 6 | |
| 11:15 | 1 | | 7 | | 0 | 0 | 8 | | 23:15 | 1 | | 27 | | 0 | 0 | 28 | |
| 11:30 | 3 | | 6 | | 0 | 0 | 9 | | 23:30 | 1 | | 0 | | 0 | 0 | 1 | |
| 11:45 | 6 | 11 | 7 | 25 | 0 | 0 | 13 | 36 | 23:45 | 3 | 9 | 2 | 31 | 0 | 0 | 5 | 40 |
| TOTALS | | 144 | | 156 | | | | 300 | TOTALS | | 216 | | 418 | | | | 634 |
| SPLIT % | | 48.0% | | 52.0% | | | | 32.1% | SPLIT % | | 34.1% | | 65.9% | | | | 67.9% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 360 | 574 | 0 | 0 | 934 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AM Peak Hour | 05:30 | 11:15 | | | 05:45 | PM Peak Hour | 14:30 | 14:45 | | | 14:30 |
| AM Pk Volume | 32 | 30 | | | 54 | PM Pk Volume | 35 | 82 | | | 113 |
| Pk Hr Factor | 0.667 | 0.750 | | | 0.614 | Pk Hr Factor | 0.545 | 0.719 | | | 0.448 |
| 7 - 9 Volume | 40 | 31 | 0 | 0 | 71 | 4 - 6 Volume | 34 | 79 | 0 | 0 | 113 |
| 7 - 9 Peak Hour | 08:00 | 07:30 | | | 08:00 | 4 - 6 Peak Hour | 16:45 | 16:00 | | | 16:00 |
| 7 - 9 Pk Volume | 24 | 19 | 0 | 0 | 41 | 4 - 6 Pk Volume | 19 | 49 | 0 | 0 | 66 |
| Pk Hr Factor | 0.667 | 0.528 | 0.000 | 0.000 | 0.732 | Pk Hr Factor | 0.792 | 0.766 | 0.000 | 0.000 | 0.786 |

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

# VOLUME

## Carillon St Bet. La Clede Ave & Casitas Ave

**Day:** Tuesday
**Date:** 8/23/2016

**City:** Los Angeles
**Project #:** CA16_5533_006

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 447 | 653 | 1,100 |

| AM Period | NB | | SB | | EB | | WB | | TOTAL | | PM Period | NB | | SB | | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 0 | | 0 | | 1 | | 0 | | 1 | | 12:00 | 0 | | 0 | | 3 | | 13 | | 16 | |
| 00:15 | 0 | | 0 | | 1 | | 2 | | 3 | | 12:15 | 0 | | 0 | | 4 | | 3 | | 7 | |
| 00:30 | 0 | | 0 | | 0 | | 0 | | | | 12:30 | 0 | | 0 | | 7 | | 7 | | 14 | |
| 00:45 | 0 | | 0 | | 0 | 2 | 1 | 3 | 1 | 5 | 12:45 | 0 | | 0 | | 7 | 21 | 10 | 33 | 17 | 54 |
| 01:00 | 0 | | 0 | | 1 | | 0 | | 1 | | 13:00 | 0 | | 0 | | 11 | | 11 | | 22 | |
| 01:15 | 0 | | 0 | | 0 | | 0 | | | | 13:15 | 0 | | 0 | | 6 | | 5 | | 11 | |
| 01:30 | 0 | | 0 | | 0 | | 1 | | 1 | | 13:30 | 0 | | 0 | | 6 | | 10 | | 16 | |
| 01:45 | 0 | | 0 | | 0 | 1 | 1 | 2 | 1 | 3 | 13:45 | 0 | | 0 | | 7 | 30 | 11 | 37 | 18 | 67 |
| 02:00 | 0 | | 0 | | 0 | | 0 | | | | 14:00 | 0 | | 0 | | 4 | | 14 | | 18 | |
| 02:15 | 0 | | 0 | | 0 | | 3 | | 3 | | 14:15 | 0 | | 0 | | 9 | | 8 | | 17 | |
| 02:30 | 0 | | 0 | | 0 | | 2 | | 2 | | 14:30 | 0 | | 0 | | 9 | | 9 | | 18 | |
| 02:45 | 0 | | 0 | | 1 | 1 | 0 | 5 | 1 | 6 | 14:45 | 0 | | 0 | | 11 | 33 | 7 | 38 | 18 | 71 |
| 03:00 | 0 | | 0 | | 1 | | 1 | | 2 | | 15:00 | 0 | | 0 | | 19 | | 64 | | 83 | |
| 03:15 | 0 | | 0 | | 1 | | 3 | | 4 | | 15:15 | 0 | | 0 | | 8 | | 12 | | 20 | |
| 03:30 | 0 | | 0 | | 0 | | 0 | | | | 15:30 | 0 | | 0 | | 4 | | 16 | | 20 | |
| 03:45 | 0 | | 0 | | 0 | 2 | 0 | 4 | | 6 | 15:45 | 0 | | 0 | | 8 | 39 | 10 | 102 | 18 | 141 |
| 04:00 | 0 | | 0 | | 0 | | 1 | | 1 | | 16:00 | 0 | | 0 | | 8 | | 22 | | 30 | |
| 04:15 | 0 | | 0 | | 0 | | 4 | | 4 | | 16:15 | 0 | | 0 | | 4 | | 15 | | 19 | |
| 04:30 | 0 | | 0 | | 0 | | 0 | | | | 16:30 | 0 | | 0 | | 4 | | 14 | | 18 | |
| 04:45 | 0 | | 0 | | 0 | | 3 | 8 | 3 | 8 | 16:45 | 0 | | 0 | | 3 | 19 | 9 | 60 | 12 | 79 |
| 05:00 | 0 | | 0 | | 2 | | 5 | | 7 | | 17:00 | 0 | | 0 | | 4 | | 7 | | 11 | |
| 05:15 | 0 | | 0 | | 3 | | 1 | | 4 | | 17:15 | 0 | | 0 | | 5 | | 9 | | 14 | |
| 05:30 | 0 | | 0 | | 6 | | 1 | | 7 | | 17:30 | 0 | | 0 | | 4 | | 9 | | 13 | |
| 05:45 | 0 | | 0 | | 6 | 17 | 3 | 10 | 9 | 27 | 17:45 | 0 | | 0 | | 5 | 18 | 7 | 32 | 12 | 50 |
| 06:00 | 0 | | 0 | | 19 | | 6 | | 25 | | 18:00 | 0 | | 0 | | 6 | | 11 | | 17 | |
| 06:15 | 0 | | 0 | | 17 | | 9 | | 26 | | 18:15 | 0 | | 0 | | 4 | | 7 | | 11 | |
| 06:30 | 0 | | 0 | | 9 | | 5 | | 14 | | 18:30 | 0 | | 0 | | 4 | | 12 | | 16 | |
| 06:45 | 0 | | 0 | | 6 | 51 | 3 | 23 | 9 | 74 | 18:45 | 0 | | 0 | | 7 | 21 | 7 | 37 | 14 | 58 |
| 07:00 | 0 | | 0 | | 5 | | 3 | | 8 | | 19:00 | 0 | | 0 | | 4 | | 8 | | 12 | |
| 07:15 | 0 | | 0 | | 7 | | 2 | | 9 | | 19:15 | 0 | | 0 | | 3 | | 6 | | 9 | |
| 07:30 | 0 | | 0 | | 8 | | 8 | | 16 | | 19:30 | 0 | | 0 | | 3 | | 8 | | 11 | |
| 07:45 | 0 | | 0 | | 3 | 23 | 3 | 16 | 6 | 39 | 19:45 | 0 | | 0 | | 2 | 12 | 4 | 26 | 6 | 38 |
| 08:00 | 0 | | 0 | | 8 | | 4 | | 12 | | 20:00 | 0 | | 0 | | 2 | | 5 | | 7 | |
| 08:15 | 0 | | 0 | | 8 | | 4 | | 12 | | 20:15 | 0 | | 0 | | 2 | | 5 | | 7 | |
| 08:30 | 0 | | 0 | | 12 | | 2 | | 14 | | 20:30 | 0 | | 0 | | 0 | | 9 | | 9 | |
| 08:45 | 0 | | 0 | | 16 | 44 | 4 | 14 | 20 | 58 | 20:45 | 0 | | 0 | | 1 | 5 | 4 | 23 | 5 | 28 |
| 09:00 | 0 | | 0 | | 15 | | 0 | | 15 | | 21:00 | 0 | | 0 | | 4 | | 2 | | 6 | |
| 09:15 | 0 | | 0 | | 16 | | 3 | | 19 | | 21:15 | 0 | | 0 | | 1 | | 3 | | 4 | |
| 09:30 | 0 | | 0 | | 3 | | 4 | | 7 | | 21:30 | 0 | | 0 | | 2 | | 3 | | 5 | |
| 09:45 | 0 | | 0 | | 5 | 39 | 9 | 16 | 14 | 55 | 21:45 | 0 | | 0 | | 4 | 11 | 15 | 23 | 19 | 34 |
| 10:00 | 0 | | 0 | | 2 | | 8 | | 10 | | 22:00 | 0 | | 0 | | 4 | | 16 | | 20 | |
| 10:15 | 0 | | 0 | | 6 | | 10 | | 16 | | 22:15 | 0 | | 0 | | 3 | | 14 | | 17 | |
| 10:30 | 0 | | 0 | | 5 | | 8 | | 13 | | 22:30 | 0 | | 0 | | 2 | | 9 | | 11 | |
| 10:45 | 0 | | 0 | | 5 | 18 | 6 | 32 | 11 | 50 | 22:45 | 0 | | 0 | | 3 | 12 | 8 | 47 | 11 | 59 |
| 11:00 | 0 | | 0 | | 5 | | 5 | | 10 | | 23:00 | 0 | | 0 | | 5 | | 2 | | 7 | |
| 11:15 | 0 | | 0 | | 4 | | 11 | | 15 | | 23:15 | 0 | | 0 | | 1 | | 27 | | 28 | |
| 11:30 | 0 | | 0 | | 3 | | 8 | | 11 | | 23:30 | 0 | | 0 | | 1 | | 0 | | 1 | |
| 11:45 | 0 | | 0 | | 7 | 19 | 8 | 32 | 15 | 51 | 23:45 | 0 | | 0 | | 2 | 9 | 1 | 30 | 3 | 39 |
| TOTALS | | | | | | 217 | | 165 | | 382 | TOTALS | | | | | | 230 | | 488 | | 718 |
| SPLIT % | | | | | | 56.8% | | 43.2% | | 34.7% | SPLIT % | | | | | | 32.0% | | 68.0% | | 65.3% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 447 | 653 | 1,100 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM Peak Hour | | | 08:30 | 11:15 | 05:45 | PM Peak Hour | | | 14:15 | 15:00 | 14:45 |
| AM Pk Volume | | | 59 | 40 | 74 | PM Pk Volume | | | 42 | 102 | 141 |
| Pk Hr Factor | | | 0.922 | 0.769 | 0.712 | Pk Hr Factor | | | 0.553 | 0.716 | 0.425 |
| 7 - 9 Volume | 0 | 0 | 67 | 30 | 97 | 4 - 6 Volume | 0 | 0 | 37 | 92 | 129 |
| 7 - 9 Peak Hour | | | 08:00 | 07:30 | 08:00 | 4 - 6 Peak Hour | | | 16:00 | 16:00 | 16:00 |
| 7 - 9 Pk Volume | 0 | 0 | 44 | 19 | 58 | 4 - 6 Pk Volume | 0 | 0 | 19 | 60 | 79 |
| Pk Hr Factor | 0.000 | 0.000 | 0.688 | 0.594 | 0.725 | Pk Hr Factor | 0.000 | 0.000 | 0.594 | 0.682 | 0.658 |

# Appendix C

# Intersections LOS CMA Sheets

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | Glendale Boulevard | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | Existing Condition | Existing Plus Project | Future Condition W/O Project | Future Condition W/ Project | Future W/ Project W/ Mitigation |
|---|---|---|---|---|---|
| No. of Phases | 4 | 4 | 4 | 4 | 4 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | 0 | 0 | 0 | 0 | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 2 SB-- 3 | NB-- 2 SB-- 3 | NB-- 2 SB-- 3 | NB-- 2 SB-- 3 | NB-- 2 SB-- 3 |
| | EB-- 0 WB-- 3 | EB-- 0 WB-- 3 | EB-- 0 WB-- 3 | EB-- 0 WB-- 3 | EB-- 0 WB-- 3 |
| ATSAC-1 or ATSAC+ATCS-2? | 2 | 2 | 2 | 2 | 2 |
| Override Capacity | 0 | 0 | 0 | 0 | 0 |

| | Movement | Existing Condition Volume | No. of Lanes | Lane Volume | Existing Plus Project Project Traffic | Total Volume | Lane Volume | Future Condition W/O Project Added Volume | Total Volume | No. of Lanes | Lane Volume | Future Condition W/ Project Added Volume | Total Volume | No. of Lanes | Lane Volume | Future W/ Project W/ Mitigation Added Volume | Total Volume | No. of Lanes | Lane Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 21 | 1 | **21** | 0 | 21 | **21** | 0 | 23 | 1 | **23** | 0 | 23 | 1 | **23** | | 23 | 1 | **23** |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 21 | 1 | 21 | 0 | 21 | 21 | 0 | 23 | 1 | 23 | 0 | 23 | 1 | 23 | | 23 | 1 | 23 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 543 | 1 | **282** | 7 | 550 | **285** | 6 | 588 | 1 | **305** | 7 | 595 | 1 | **308** | | 595 | 1 | **308** |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 20 | 0 | 282 | 0 | 20 | 285 | 0 | 21 | 0 | 305 | 0 | 21 | 0 | 308 | | 21 | 0 | 308 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 765 | 2 | 168 | 0 | 765 | 168 | 28 | 848 | 2 | 168 | 0 | 848 | 2 | 168 | | 848 | 2 | 168 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 253 | 1 | **253** | 0 | 253 | **253** | 27 | 298 | 1 | **298** | 0 | 298 | 1 | **298** | | 298 | 1 | **298** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 700 | 1 | 357 | 4 | 704 | 359 | 14 | 764 | 1 | 390 | 4 | 768 | 1 | 392 | | 768 | 1 | 392 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 14 | 0 | 14 | 0 | 14 | 14 | 0 | 15 | 0 | 15 | 0 | 15 | 0 | 15 | | 15 | 0 | 15 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 689 | 2 | **345** | 12 | 701 | **351** | 16 | 755 | 2 | **378** | 12 | 767 | 2 | **384** | | 767 | 2 | **384** |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 579 | 1 | 297 | 23 | 602 | 317 | 7 | 628 | 1 | 323 | 23 | 651 | 1 | 343 | | 651 | 1 | 343 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |

| | Existing Condition | Existing Plus Project | Future Condition W/O Project | Future Condition W/ Project | Future W/ Project W/ Mitigation |
|---|---|---|---|---|---|
| CRITICAL VOLUMES North-South: | 303 | 306 | 328 | 331 | 331 |
| CRITICAL VOLUMES East-West: | 598 | 604 | 676 | 682 | 682 |
| CRITICAL VOLUMES SUM: | 901 | 910 | 1004 | 1013 | 1013 |
| VOLUME/CAPACITY (V/C) RATIO: | 0.655 | 0.662 | 0.730 | 0.737 | 0.737 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | 0.555 | 0.562 | 0.630 | 0.637 | 0.637 |
| LEVEL OF SERVICE (LOS): | A | A | B | B | B |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.007 | Δ*v/c* after mitigation: | 0.007 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | Riverside Dr. | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | 4 | | | 4 | | | 4 | | | 4 | | | 4 | | | | 4 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 |
| | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | 2 | | | 2 | | | 2 | | | 2 | | | 2 | | | | 2 |
| Override Capacity | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 155 | 1 | **155** | 0 | 155 | **155** | 4 | 170 | 1 | **170** | 0 | 170 | 1 | **170** | | 170 | 1 | **170** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 308 | 1 | 239 | 0 | 308 | 239 | 1 | 331 | 1 | 256 | 0 | 331 | 1 | 256 | | 331 | 1 | 256 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 169 | 0 | 169 | 0 | 169 | 169 | 0 | 181 | 0 | 181 | 0 | 181 | 0 | 181 | | 181 | 0 | 181 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 174 | 1 | 174 | 2 | 176 | 176 | 17 | 204 | 1 | 204 | 2 | 206 | 1 | 206 | | 206 | 1 | 206 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 837 | 1 | **441** | 0 | 837 | **441** | 9 | 906 | 1 | **481** | 0 | 906 | 1 | **481** | | 906 | 1 | **481** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 45 | 0 | 45 | 0 | 45 | 45 | 8 | 56 | 0 | 56 | 0 | 56 | 0 | 56 | | 56 | 0 | 56 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 36 | 1 | 36 | 0 | 36 | 36 | 1 | 40 | 1 | 40 | 0 | 40 | 1 | 40 | | 40 | 1 | 40 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1032 | 1 | **623** | 11 | 1043 | **629** | 12 | 1118 | 1 | **677** | 11 | 1129 | 1 | **682** | | 1129 | 1 | **682** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 214 | 0 | 214 | 0 | 214 | 214 | 6 | 235 | 0 | 235 | 0 | 235 | 0 | 235 | | 235 | 0 | 235 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 197 | 1 | **197** | 0 | 197 | **197** | 1 | 212 | 1 | **212** | 0 | 212 | 1 | **212** | | 212 | 1 | **212** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1219 | 1 | 690 | 35 | 1254 | 707 | 11 | 1318 | 1 | 747 | 35 | 1353 | 1 | 764 | | 1353 | 1 | 764 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 160 | 0 | 160 | 0 | 160 | 160 | 3 | 175 | 0 | 175 | 0 | 175 | 0 | 175 | | 175 | 0 | 175 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | | *North-South:* | 596 | | *North-South:* | 596 | | *North-South:* | 651 | | | *North-South:* | 651 | | | *North-South:* | 651 |
| | | | *East-West:* | 820 | | *East-West:* | 826 | | *East-West:* | 889 | | | *East-West:* | 894 | | | *East-West:* | 894 |
| | | | *SUM:* | 1416 | | *SUM:* | 1422 | | *SUM:* | 1540 | | | *SUM:* | 1545 | | | *SUM:* | 1545 |
| VOLUME/CAPACITY *(V/C)* RATIO: | | | | 1.030 | | | 1.034 | | | 1.120 | | | | 1.124 | | | | 1.124 |
| *V/C* LESS ATSAC/ATCS ADJUSTMENT: | | | | **0.930** | | | **0.934** | | | **1.020** | | | | **1.024** | | | | **1.024** |
| LEVEL OF SERVICE (LOS): | | | | **E** | | | **E** | | | **F** | | | | **F** | | | | **F** |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.004 | Δ*v/c* after mitigation: | 0.004 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | Ripple Street | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 92 | 0 | 92 | 0 | 92 | 92 | 0 | 99 | 0 | 99 | 0 | 99 | 0 | 99 | | 99 | 0 | 99 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 2 | 0 | 182 | 0 | 2 | 182 | 0 | 2 | 0 | 195 | 0 | 2 | 0 | 195 | | 2 | 0 | 195 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 88 | 0 | 0 | 0 | 88 | 0 | 0 | 94 | 0 | 0 | 0 | 94 | 0 | 0 | | 94 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 9 | 0 | 9 | 0 | 9 | 9 | 0 | 10 | 0 | 10 | 0 | 10 | 0 | 10 | | 10 | 0 | 10 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 2 | 0 | 15 | 0 | 2 | 15 | 0 | 2 | 0 | 16 | 0 | 2 | 0 | 16 | | 2 | 0 | 16 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | | 4 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 5 | 0 | 5 | 0 | 5 | 5 | 0 | 5 | 0 | 5 | 0 | 5 | 0 | 5 | | 5 | 0 | 5 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 1169 | 0 | 620 | 16 | 1185 | 628 | 22 | 1275 | 0 | 676 | 16 | 1291 | 0 | 684 | | 1291 | 0 | 684 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 41 | 0 | 620 | 0 | 41 | 628 | 3 | 47 | 0 | 676 | 0 | 47 | 0 | 684 | | 47 | 0 | 684 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 202 | 1 | 202 | 0 | 202 | 202 | 0 | 217 | 1 | 217 | 0 | 217 | 1 | 217 | | 217 | 1 | 217 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1661 | 1 | 837 | 50 | 1711 | 862 | 14 | 1795 | 1 | 905 | 50 | 1845 | 1 | 930 | | 1845 | 1 | 930 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 13 | 0 | 13 | 0 | 13 | 13 | 0 | 14 | 0 | 14 | 0 | 14 | 0 | 14 | | 14 | 0 | 14 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 191 | North-South: | | 191 | North-South: | | | 205 | North-South: | | | 205 | North-South: | | | 205 |
| | | East-West: | | 842 | East-West: | | 867 | East-West: | | | 910 | East-West: | | | 935 | East-West: | | | 935 |
| | | SUM: | | 1033 | SUM: | | 1058 | SUM: | | | 1115 | SUM: | | | 1140 | SUM: | | | 1140 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.689 | | | 0.705 | | | | 0.743 | | | | 0.760 | | | | 0.760 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.589 | | | 0.605 | | | | 0.643 | | | | 0.660 | | | | 0.660 |
| LEVEL OF SERVICE (LOS): | | | | A | | | B | | | | B | | | | B | | | | B |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.017 | Δ*v/c* after mitigation: | 0.017 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | SR-2 SB-WB Off-Ramp | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 815 | 1 | 454 | 0 | 815 | 456 | 0 | 874 | 1 | 487 | 0 | 874 | 1 | 489 | | 874 | 1 | 489 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 92 | 0 | 454 | 4 | 96 | 456 | 0 | 99 | 0 | 487 | 4 | 103 | 0 | 489 | | 103 | 0 | 489 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| SOUTHBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 394 | 2 | 197 | 16 | 410 | 205 | 22 | 444 | 2 | 222 | 16 | 460 | 2 | 230 | | 460 | 2 | 230 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1147 | 2 | 574 | 50 | 1197 | 599 | 14 | 1244 | 2 | 622 | 50 | 1294 | 2 | 647 | | 1294 | 2 | 647 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 454 | North-South: | | 456 | North-South: | | | 487 | North-South: | | | 489 | North-South: | | | 489 |
| | | East-West: | | 574 | East-West: | | 599 | East-West: | | | 622 | East-West: | | | 647 | East-West: | | | 647 |
| | | SUM: | | 1028 | SUM: | | 1055 | SUM: | | | 1109 | SUM: | | | 1136 | SUM: | | | 1136 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.685 | | | 0.703 | | | | 0.739 | | | | 0.757 | | | | 0.757 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.585 | | | 0.603 | | | | 0.639 | | | | 0.657 | | | | 0.657 |
| LEVEL OF SERVICE (LOS): | | | | A | | | B | | | | B | | | | B | | | | B |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.018 | Δ*v/c* after mitigation: | 0.018 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

**2800 Casitas - AM Peak Hour**

| I/S #: | North-South Street: | Larga Avenue | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 19 | 0 | 19 | 50 | 69 | 69 | 0 | 20 | 0 | 20 | 50 | 70 | 0 | 70 | | 70 | 0 | 70 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 5 | 0 | 27 | 0 | 5 | 77 | 0 | 5 | 0 | 28 | 0 | 5 | 0 | 78 | | 5 | 0 | 78 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | | 3 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 118 | 0 | 118 | 0 | 118 | 118 | 0 | 127 | 0 | 127 | 0 | 127 | 0 | 127 | | 127 | 0 | 127 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 4 | 0 | 233 | 0 | 4 | 233 | 0 | 4 | 0 | 250 | 0 | 4 | 0 | 250 | | 4 | 0 | 250 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 111 | 0 | 0 | 0 | 111 | 0 | 0 | 119 | 0 | 0 | 0 | 119 | 0 | 0 | | 119 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 75 | 0 | 75 | 0 | 75 | 75 | 0 | 80 | 0 | 80 | 0 | 80 | 0 | 80 | | 80 | 0 | 80 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 398 | 0 | 415 | 0 | 398 | 435 | 22 | 449 | 0 | 467 | 0 | 449 | 0 | 484 | | 449 | 0 | 484 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 17 | 0 | 0 | 20 | 37 | 0 | 0 | 18 | 0 | 0 | 20 | 38 | 0 | 484 | | 38 | 0 | 484 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 3 | 0 | 3 | 0 | 3 | 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 | 3 | | 3 | 0 | 3 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 1016 | 0 | 585 | 0 | 1016 | 585 | 14 | 1103 | 0 | 634 | 0 | 1103 | 0 | 634 | | 1103 | 0 | 634 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 148 | 0 | 585 | 0 | 148 | 585 | 0 | 159 | 0 | 634 | 0 | 159 | 0 | 634 | | 159 | 0 | 634 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 252 | North-South: | | 302 | North-South: | | | 270 | North-South: | | | 320 | North-South: | | | 320 |
| | | East-West: | | 660 | East-West: | | 660 | East-West: | | | 714 | East-West: | | | 714 | East-West: | | | 714 |
| | | SUM: | | 912 | SUM: | | 962 | SUM: | | | 984 | SUM: | | | 1034 | SUM: | | | 1034 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.608 | | | 0.641 | | | | 0.656 | | | | 0.689 | | | | 0.689 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.508 | | | 0.541 | | | | 0.556 | | | | 0.589 | | | | 0.589 |
| LEVEL OF SERVICE (LOS): | | | | A | | | A | | | | A | | | | A | | | | A |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.033 | Δ*v/c* after mitigation: | 0.033 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | La Clede Avenue | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 |

| | MOVEMENT | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 8 | 0 | 8 | 0 | 8 | 8 | 0 | 9 | 0 | 9 | 0 | 9 | 0 | 9 | | 9 | 0 | 9 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 26 | 0 | 0 | 127 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 129 | | 0 | 0 | 129 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 18 | 0 | 0 | 101 | 119 | 0 | 0 | 19 | 0 | 0 | 101 | 120 | 0 | 0 | | 120 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 138 | 0 | 138 | 0 | 138 | 138 | 0 | 148 | 0 | 148 | 0 | 148 | 0 | 148 | | 148 | 0 | 148 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 2 | 0 | 159 | 0 | 2 | 159 | 0 | 2 | 0 | 170 | 0 | 2 | 0 | 170 | | 2 | 0 | 170 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 19 | 0 | 0 | 0 | 19 | 0 | 0 | 20 | 0 | 0 | 0 | 20 | 0 | 0 | | 20 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 30 | 0 | 30 | 0 | 30 | 30 | 0 | 32 | 0 | 32 | 0 | 32 | 0 | 32 | | 32 | 0 | 32 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 579 | 0 | 382 | 0 | 579 | 382 | 22 | 643 | 0 | 420 | 0 | 643 | 0 | 420 | | 643 | 0 | 420 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 4 | 0 | 382 | 0 | 4 | 382 | 0 | 4 | 0 | 420 | 0 | 4 | 0 | 420 | | 4 | 0 | 420 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 18 | 0 | 18 | 28 | 46 | 46 | 0 | 19 | 0 | 19 | 28 | 47 | 0 | 47 | | 47 | 0 | 47 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 1180 | 0 | 748 | 0 | 1180 | 776 | 14 | 1279 | 0 | 828 | 0 | 1279 | 0 | 884 | | 1279 | 0 | 884 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 280 | 0 | 748 | 0 | 280 | 776 | 0 | 300 | 0 | 828 | 0 | 300 | 0 | 884 | | 300 | 0 | 884 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 167 | North-South: | | 265 | North-South: | | | 179 | North-South: | | | 277 | North-South: | | | 277 |
| | | East-West: | | 778 | East-West: | | 806 | East-West: | | | 860 | East-West: | | | 916 | East-West: | | | 916 |
| | | SUM: | | 945 | SUM: | | 1071 | SUM: | | | 1039 | SUM: | | | 1193 | SUM: | | | 1193 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.630 | | | 0.714 | | | | 0.693 | | | | 0.795 | | | | 0.795 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.530 | | | 0.614 | | | | 0.593 | | | | 0.695 | | | | 0.695 |
| LEVEL OF SERVICE (LOS): | | | | A | | | B | | | | A | | | | B | | | | B |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.102 | Δ*v/c* after mitigation: | 0.102 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | San Fernando Rd. | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 7 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | 3 | | | | 3 | | | | 3 | | | | 3 | | | | 3 | | | | 3 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- 0 |
| | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 |
| Override Capacity | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 |

| | MOVEMENT | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 89 | 1 | **89** | 16 | 105 | **105** | 8 | 103 | 1 | **103** | 16 | 119 | 1 | **119** | | 119 | 1 | **119** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 861 | 1 | 457 | 0 | 861 | 457 | 44 | 967 | 1 | 513 | 0 | 967 | 1 | 513 | | 967 | 1 | 513 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 53 | 0 | 53 | 0 | 53 | 53 | 2 | 59 | 0 | 59 | 0 | 59 | 0 | 59 | | 59 | 0 | 59 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 33 | 1 | 33 | 0 | 33 | 33 | 0 | 35 | 1 | 35 | 0 | 35 | 1 | 35 | | 35 | 1 | 35 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 796 | 1 | **443** | 0 | 796 | **446** | 41 | 894 | 1 | **496** | 0 | 894 | 1 | **499** | | 894 | 1 | **499** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 89 | 0 | 89 | 6 | 95 | 95 | 2 | 97 | 0 | 97 | 6 | 103 | 0 | 103 | | 103 | 0 | 103 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 113 | 1 | **113** | 20 | 133 | **133** | 11 | 132 | 1 | **132** | 20 | 152 | 1 | **152** | | 152 | 1 | **152** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 278 | 1 | 278 | 25 | 303 | 303 | 7 | 305 | 1 | 305 | 25 | 330 | 1 | 330 | | 330 | 1 | 330 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 203 | 1 | 159 | 57 | 260 | 208 | 5 | 223 | 1 | 172 | 57 | 280 | 1 | 221 | | 280 | 1 | 221 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 201 | 1 | 201 | 0 | 201 | 201 | 2 | 217 | 1 | 217 | 0 | 217 | 1 | 217 | | 217 | 1 | 217 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 923 | 1 | **510** | 6 | 929 | **513** | 5 | 995 | 1 | **550** | 6 | 1001 | 1 | **553** | | 1001 | 1 | **553** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 96 | 0 | 96 | 0 | 96 | 96 | 2 | 105 | 0 | 105 | 0 | 105 | 0 | 105 | | 105 | 0 | 105 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | *North-South:* | 532 | *North-South:* | 551 | | | *North-South:* | 599 | | | *North-South:* | 618 | | | *North-South:* | 618 | | |
| | | *East-West:* | 623 | *East-West:* | 646 | | | *East-West:* | 682 | | | *East-West:* | 705 | | | *East-West:* | 705 | | |
| | | *SUM:* | 1155 | *SUM:* | 1197 | | | *SUM:* | 1281 | | | *SUM:* | 1323 | | | *SUM:* | 1323 | | |
| VOLUME/CAPACITY *(V/C)* RATIO: | | | 0.811 | | | | 0.840 | | | | 0.899 | | | | 0.928 | | | | 0.928 |
| *V/C* LESS ATSAC/ATCS ADJUSTMENT: | | | **0.711** | | | | **0.740** | | | | **0.799** | | | | **0.828** | | | | **0.828** |
| LEVEL OF SERVICE (LOS): | | | **C** | | | | **C** | | | | **C** | | | | **D** | | | | **D** |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.029 | Δ*v/c* after mitigation: | 0.029 |
| Significant impacted? | YES | Fully mitigated? | NO |

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | Estara Avenue | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 154 | 0 | **154** | 0 | 154 | **154** | 0 | 165 | 0 | **165** | 0 | 165 | 0 | **165** | | 165 | 0 | **165** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 68 | 0 | 247 | 0 | 68 | 247 | 0 | 73 | 0 | 265 | 0 | 73 | 0 | 265 | | 73 | 0 | 265 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 25 | 0 | 0 | 0 | 25 | 0 | 0 | 27 | 0 | 0 | 0 | 27 | 0 | 0 | | 27 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 104 | 0 | 104 | 0 | 104 | 104 | 0 | 112 | 0 | 112 | 0 | 112 | 0 | 112 | | 112 | 0 | 112 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 85 | 0 | **256** | 0 | 85 | **256** | 0 | 91 | 0 | **275** | 0 | 91 | 0 | **275** | | 91 | 0 | **275** |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 67 | 0 | 0 | 0 | 67 | 0 | 0 | 72 | 0 | 0 | 0 | 72 | 0 | 0 | | 72 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 62 | 1 | **62** | 0 | 62 | **62** | 0 | 66 | 1 | **66** | 0 | 66 | 1 | **66** | | 66 | 1 | **66** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 247 | 0 | 393 | 25 | 272 | 418 | 9 | 274 | 0 | 431 | 25 | 299 | 0 | 456 | | 299 | 0 | 456 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 146 | 0 | 0 | 0 | 146 | 0 | 0 | 157 | 0 | 0 | 0 | 157 | 0 | 0 | | 157 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 24 | 1 | 24 | 0 | 24 | 24 | 0 | 26 | 1 | 26 | 0 | 26 | 1 | 26 | | 26 | 1 | 26 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 701 | 1 | **701** | 6 | 707 | **707** | 9 | 761 | 1 | **761** | 6 | 767 | 1 | **767** | | 767 | 1 | **767** |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 55 | 1 | 55 | 0 | 55 | 55 | 0 | 59 | 1 | 59 | 0 | 59 | 1 | 59 | | 59 | 1 | 59 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | *North-South:* | | 410 | *North-South:* | | 410 | *North-South:* | | | 440 | *North-South:* | | | 440 | *North-South:* | | | 440 |
| | | *East-West:* | | 763 | *East-West:* | | 769 | *East-West:* | | | 827 | *East-West:* | | | 833 | *East-West:* | | | 833 |
| | | *SUM:* | | 1173 | *SUM:* | | 1179 | *SUM:* | | | 1267 | *SUM:* | | | 1273 | *SUM:* | | | 1273 |
| VOLUME/CAPACITY *(V/C)* RATIO: | | | | 0.782 | | | 0.786 | | | | 0.845 | | | | 0.849 | | | | 0.849 |
| *V/C* LESS ATSAC/ATCS ADJUSTMENT: | | | | **0.682** | | | **0.686** | | | | **0.745** | | | | **0.749** | | | | **0.749** |
| LEVEL OF SERVICE (LOS): | | | | **B** | | | **B** | | | | **C** | | | | **C** | | | | **C** |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.004 | Δ*v/c* after mitigation: | 0.004 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | San Fernando Rd. | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | East-West Street: | SR-2 SB Ramps | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 3 | | | | 3 | | | | 3 | | | | 3 | | | | 3 | | | |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | | | |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | | | |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 372 | 1 | **372** | 0 | 372 | **372** | 66 | 465 | 1 | **465** | 0 | 465 | 1 | **465** | | 465 | 1 | **465** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1000 | 2 | 500 | 16 | 1016 | 508 | 51 | 1123 | 2 | 562 | 16 | 1139 | 2 | 570 | | 1139 | 2 | 570 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 845 | 2 | 423 | 22 | 867 | 434 | 44 | 950 | 2 | **475** | 22 | 972 | 2 | 486 | | 972 | 2 | 486 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 424 | 1 | **424** | 35 | 459 | **459** | 5 | 460 | 1 | 460 | 35 | 495 | 1 | **495** | | 495 | 1 | **495** |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | **0** | 0 | 0 | **0** | 0 | 0 | 0 | **0** | 0 | 0 | 0 | **0** | | 0 | 0 | **0** |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 265 | 1 | **170** | 0 | 265 | **170** | 23 | 307 | 1 | **191** | 0 | 307 | 1 | **191** | | 307 | 1 | **191** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 14 | 0 | 0 | 0 | 14 | 0 | 0 | 15 | 0 | 0 | 0 | 15 | 0 | 0 | | 15 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 244 | 1 | 170 | 0 | 244 | 170 | 4 | 266 | 1 | 191 | 0 | 266 | 1 | 191 | | 266 | 1 | 191 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| CRITICAL VOLUMES | | North-South: | | 796 | North-South: | | 831 | North-South: | | | 940 | North-South: | | | 960 | North-South: | | | 960 |
| | | East-West: | | 170 | East-West: | | 170 | East-West: | | | 191 | East-West: | | | 191 | East-West: | | | 191 |
| | | SUM: | | 966 | SUM: | | 1001 | SUM: | | | 1131 | SUM: | | | 1151 | SUM: | | | 1151 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.678 | | | 0.702 | | | | 0.794 | | | | 0.808 | | | | 0.808 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.578 | | | 0.602 | | | | 0.694 | | | | 0.708 | | | | 0.708 |
| LEVEL OF SERVICE (LOS): | | | | A | | | B | | | | B | | | | C | | | | C |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.014 | Δ*v/c* after mitigation: | 0.014 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | Glendale Blvd | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | East-West Street: | Riverside Dr. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | Existing Condition | Existing Plus Project | Future Condition W/O Project | Future Condition W/ Project | Future W/ Project W/ Mitigation |
|---|---|---|---|---|---|
| No. of Phases | 2 | 2 | 2 | 2 | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | 0 | 0 | 0 | 0 | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 |
| | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 |
| ATSAC-1 or ATSAC+ATCS-2? | 2 | 2 | 2 | 2 | 2 |
| Override Capacity | 0 | 0 | 0 | 0 | 0 |

| | MOVEMENT | Existing Condition Volume | No. of Lanes | Lane Volume | Existing Plus Project Project Traffic | Total Volume | Lane Volume | Future Condition W/O Project Added Volume | Total Volume | No. of Lanes | Lane Volume | Future Condition W/ Project Added Volume | Total Volume | No. of Lanes | Lane Volume | Future W/ Project W/ Mitigation Added Volume | Total Volume | No. of Lanes | Lane Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHBOUND | Left | 194 | 0 | **194** | 5 | 199 | **199** | 10 | 218 | 0 | **218** | 5 | 223 | 0 | **223** | | 223 | 0 | **223** |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 103 | 0 | 235 | 0 | 103 | 235 | 42 | 152 | 0 | 294 | 0 | 152 | 0 | 294 | | 152 | 0 | 294 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 132 | 0 | 0 | 0 | 132 | 0 | 0 | 142 | 0 | 0 | 0 | 142 | 0 | 0 | | 142 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 230 | 0 | 230 | 0 | 230 | 230 | 2 | 249 | 0 | 249 | 0 | 249 | 0 | 249 | | 249 | 0 | 249 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 230 | 0 | **283** | 0 | 230 | **283** | 46 | 293 | 0 | **328** | 0 | 293 | 0 | **328** | | 293 | 0 | **328** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 105 | 0 | 283 | 0 | 105 | 283 | 0 | 113 | 0 | 328 | 0 | 113 | 0 | 328 | | 113 | 0 | 328 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 43 | 1 | 43 | 0 | 43 | 43 | 10 | 56 | 1 | 56 | 0 | 56 | 1 | 56 | | 56 | 1 | 56 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 832 | 2 | 416 | 2 | 834 | 417 | 4 | 896 | 2 | 448 | 2 | 898 | 2 | 449 | | 898 | 2 | 449 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 527 | 1 | **430** | 1 | 528 | **429** | 12 | 577 | 1 | **468** | 1 | 578 | 1 | **467** | | 578 | 1 | **467** |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 115 | 1 | **115** | 0 | 115 | **115** | 0 | 123 | 1 | **123** | 0 | 123 | 1 | **123** | | 123 | 1 | **123** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 522 | 2 | 261 | 0 | 522 | 261 | 7 | 567 | 2 | 284 | 0 | 567 | 2 | 284 | | 567 | 2 | 284 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 116 | 1 | 116 | 0 | 116 | 116 | 8 | 132 | 1 | 132 | 0 | 132 | 1 | 132 | | 132 | 1 | 132 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 477 | North-South: | | 482 | North-South: | | | 546 | North-South: | | | 551 | North-South: | | | 551 |
| | | East-West: | | 545 | East-West: | | 544 | East-West: | | | 591 | East-West: | | | 590 | East-West: | | | 590 |
| | | SUM: | | 1022 | SUM: | | 1026 | SUM: | | | 1137 | SUM: | | | 1141 | SUM: | | | 1141 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.681 | | | 0.684 | | | | 0.758 | | | | 0.761 | | | | 0.761 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.581 | | | 0.584 | | | | 0.658 | | | | 0.661 | | | | 0.661 |
| LEVEL OF SERVICE (LOS): | | | | A | | | A | | | | B | | | | B | | | | B |

### PROJECT IMPACT

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.003 | Δ*v/c* after mitigation: | 0.003 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - AM Peak Hour

| I/S #: | North-South Street: | Riverside Dr. | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 | East-West Street: | Gilroy St. | Projection Year: | 2023 | Peak Hour: | AM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 958 | 1 | 519 | 0 | 958 | 519 | 5 | 1032 | 1 | 559 | 0 | 1032 | 1 | 559 | | 1032 | 1 | 559 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 80 | 0 | 80 | 0 | 80 | 80 | 0 | 86 | 0 | 86 | 0 | 86 | 0 | 86 | | 86 | 0 | 86 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 40 | 1 | 40 | 0 | 40 | 40 | 0 | 43 | 1 | 43 | 0 | 43 | 1 | 43 | | 43 | 1 | 43 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1325 | 2 | 663 | 0 | 1325 | 663 | 17 | 1438 | 2 | 719 | 0 | 1438 | 2 | 719 | | 1438 | 2 | 719 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 146 | 0 | 146 | 0 | 146 | 146 | 0 | 157 | 0 | 157 | 0 | 157 | 0 | 157 | | 157 | 0 | 157 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 21 | 0 | 167 | 0 | 21 | 167 | 0 | 23 | 0 | 180 | 0 | 23 | 0 | 180 | | 23 | 0 | 180 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| CRITICAL VOLUMES | | North-South: | | 663 | North-South: | | 663 | North-South: | | | 719 | North-South: | | | 719 | North-South: | | | 719 |
| | | East-West: | | 167 | East-West: | | 167 | East-West: | | | 180 | East-West: | | | 180 | East-West: | | | 180 |
| | | SUM: | | 830 | SUM: | | 830 | SUM: | | | 899 | SUM: | | | 899 | SUM: | | | 899 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.553 | | | 0.553 | | | | 0.599 | | | | 0.599 | | | | 0.599 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.453 | | | 0.453 | | | | 0.499 | | | | 0.499 | | | | 0.499 |
| LEVEL OF SERVICE (LOS): | | | | A | | | A | | | | A | | | | A | | | | A |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.000 | Δ*v/c* after mitigation: | 0.000 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | Glendale Boulevard | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | |
| No. of Phases | | | 4 | | | 4 | | | | 4 | | | | 4 | | | | 4 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | 0 | | | 0 | | | | 0 | | | | 0 | | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 2 | SB-- | 3 | NB-- 2 | SB-- | 3 | NB-- 2 | SB-- | | 3 | NB-- 2 | SB-- | | 3 | NB-- 2 | SB-- | | 3 |
| | EB-- 0 | WB-- | 3 | EB-- 0 | WB-- | 3 | EB-- 0 | WB-- | | 3 | EB-- 0 | WB-- | | 3 | EB-- 0 | WB-- | | 3 |
| ATSAC-1 or ATSAC+ATCS-2? | | | 2 | | | 2 | | | | 2 | | | | 2 | | | | 2 |
| Override Capacity | | | 0 | | | 0 | | | | 0 | | | | 0 | | | | 0 |

| MOVEMENT | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 45 | 1 | 45 | 0 | 45 | 45 | 0 | 48 | 1 | 48 | 0 | 48 | 1 | 48 | | 48 | 1 | 48 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 42 | 1 | 42 | 0 | 42 | 42 | 0 | 45 | 1 | 45 | 0 | 45 | 1 | 45 | | 45 | 1 | 45 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 484 | 1 | 245 | 21 | 505 | 256 | 7 | 526 | 1 | 266 | 21 | 547 | 1 | 277 | | 547 | 1 | 277 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 6 | 0 | 245 | 0 | 6 | 256 | 0 | 6 | 0 | 266 | 0 | 6 | 0 | 277 | | 6 | 0 | 277 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 667 | 2 | 15 | 0 | 667 | 15 | 36 | 751 | 2 | 1 | 0 | 751 | 2 | 1 | | 751 | 2 | 1 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 352 | 1 | 352 | 0 | 352 | 352 | 35 | 412 | 1 | 412 | 0 | 412 | 1 | 412 | | 412 | 1 | 412 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 908 | 1 | 456 | 11 | 919 | 462 | 22 | 995 | 1 | 500 | 11 | 1006 | 1 | 505 | | 1006 | 1 | 505 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 4 | 0 | 4 | 0 | 4 | 4 | 0 | 4 | 0 | 4 | 0 | 4 | 0 | 4 | | 4 | 0 | 4 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 523 | 2 | 262 | 8 | 531 | 266 | 19 | 580 | 2 | 290 | 8 | 588 | 2 | 294 | | 588 | 2 | 294 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 496 | 1 | 251 | 15 | 511 | 255 | 6 | 538 | 1 | 272 | 15 | 553 | 1 | 276 | | 553 | 1 | 276 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 290 | North-South: | | 301 | North-South: | | | 314 | North-South: | | | 325 | North-South: | | | 325 |
| | | East-West: | | 614 | East-West: | | 618 | East-West: | | | 702 | East-West: | | | 706 | East-West: | | | 706 |
| | | SUM: | | 904 | SUM: | | 919 | SUM: | | | 1016 | SUM: | | | 1031 | SUM: | | | 1031 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.657 | | | 0.668 | | | | 0.739 | | | | 0.750 | | | | 0.750 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.557 | | | 0.568 | | | | 0.639 | | | | 0.650 | | | | 0.650 |
| LEVEL OF SERVICE (LOS): | | | | A | | | A | | | | B | | | | B | | | | B |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in v/c due to project: | 0.011 | Δv/c after mitigation: | 0.011 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | Riverside Dr. | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 4 | | | | 4 | | | | 4 | | | | 4 | | | | 4 | | | 4 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 1 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 155 | 1 | 155 | 0 | 155 | 155 | 6 | 172 | 1 | 172 | 0 | 172 | 1 | 172 | | 172 | 1 | 172 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 493 | 1 | **447** | 0 | 493 | **447** | 9 | 538 | 1 | **484** | 0 | 538 | 1 | **484** | | 538 | 1 | **484** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 401 | 0 | 401 | 0 | 401 | 401 | 0 | 430 | 0 | 430 | 0 | 430 | 0 | 430 | | 430 | 0 | 430 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 194 | 1 | **194** | 7 | 201 | **201** | 7 | 215 | 1 | **215** | 7 | 222 | 1 | **222** | | 222 | 1 | **222** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 815 | 1 | 442 | 0 | 815 | 442 | 4 | 878 | 1 | 477 | 0 | 878 | 1 | 477 | | 878 | 1 | 477 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 68 | 0 | 68 | 0 | 68 | 68 | 3 | 76 | 0 | 76 | 0 | 76 | 0 | 76 | | 76 | 0 | 76 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 42 | 1 | 42 | 0 | 42 | 42 | 7 | 52 | 1 | 52 | 0 | 52 | 1 | 52 | | 52 | 1 | 52 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1362 | 1 | **769** | 32 | 1394 | **785** | 16 | 1476 | 1 | **836** | 32 | 1508 | 1 | **852** | | 1508 | 1 | **852** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 176 | 0 | 176 | 0 | 176 | 176 | 6 | 195 | 0 | 195 | 0 | 195 | 0 | 195 | | 195 | 0 | 195 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 167 | 1 | **167** | 0 | 167 | **167** | 4 | 183 | 1 | **183** | 0 | 183 | 1 | **183** | | 183 | 1 | **183** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 869 | 1 | 488 | 23 | 892 | 500 | 15 | 947 | 1 | 539 | 23 | 970 | 1 | 551 | | 970 | 1 | 551 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 107 | 0 | 107 | 0 | 107 | 107 | 16 | 131 | 0 | 131 | 0 | 131 | 0 | 131 | | 131 | 0 | 131 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | | *North-South:* | 641 | | *North-South:* | 648 | | | *North-South:* | 699 | | | *North-South:* | 706 | | | *North-South:* | 706 |
| | | | *East-West:* | 936 | | *East-West:* | 952 | | | *East-West:* | 1019 | | | *East-West:* | 1035 | | | *East-West:* | 1035 |
| | | | *SUM:* | 1577 | | *SUM:* | 1600 | | | *SUM:* | 1718 | | | *SUM:* | 1741 | | | *SUM:* | 1741 |
| VOLUME/CAPACITY *(V/C)* RATIO: | | | | 1.147 | | | 1.164 | | | | 1.249 | | | | 1.266 | | | | 1.266 |
| *V/C* LESS ATSAC/ATCS ADJUSTMENT: | | | | **1.047** | | | **1.064** | | | | **1.149** | | | | **1.166** | | | | **1.166** |
| LEVEL OF SERVICE (LOS): | | | | **F** | | | **F** | | | | **F** | | | | **F** | | | | **F** |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.017 | Δ*v/c* after mitigation: | 0.017 |
| Significant impacted? | YES | Fully mitigated? | NO |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | Ripple Street | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 73 | 0 | 73 | 0 | 73 | 73 | 0 | 78 | 0 | 78 | 0 | 78 | 0 | 78 | | 78 | 0 | 78 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 195 | 0 | 0 | 195 | 0 | 0 | 0 | 209 | 0 | 0 | 0 | 209 | | 0 | 0 | 209 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 122 | 0 | 0 | 0 | 122 | 0 | 0 | 131 | 0 | 0 | 0 | 131 | 0 | 0 | | 131 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 17 | 0 | 17 | 0 | 17 | 17 | 0 | 18 | 0 | 18 | 0 | 18 | 0 | 18 | | 18 | 0 | 18 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 5 | 0 | 28 | 0 | 5 | 28 | 0 | 5 | 0 | 29 | 0 | 5 | 0 | 29 | | 5 | 0 | 29 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 6 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 0 | | 6 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 2 | 0 | 2 | 0 | 2 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | | 2 | 0 | 2 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 1661 | 0 | 863 | 46 | 1707 | 886 | 19 | 1800 | 0 | 938 | 46 | 1846 | 0 | 961 | | 1846 | 0 | 961 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 52 | 0 | 863 | 0 | 52 | 886 | 7 | 63 | 0 | 938 | 0 | 63 | 0 | 961 | | 63 | 0 | 961 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 122 | 1 | 122 | 0 | 122 | 122 | 0 | 131 | 1 | 131 | 0 | 131 | 1 | 131 | | 131 | 1 | 131 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1115 | 1 | 569 | 33 | 1148 | 585 | 28 | 1223 | 1 | 624 | 33 | 1256 | 1 | 640 | | 1256 | 1 | 640 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 22 | 0 | 22 | 0 | 22 | 22 | 0 | 24 | 0 | 24 | 0 | 24 | 0 | 24 | | 24 | 0 | 24 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 212 | North-South: | | 212 | North-South: | | | 227 | North-South: | | | 227 | | North-South: | | 227 |
| | | East-West: | | 985 | East-West: | | 1008 | East-West: | | | 1069 | East-West: | | | 1092 | | East-West: | | 1092 |
| | | SUM: | | 1197 | SUM: | | 1220 | SUM: | | | 1296 | SUM: | | | 1319 | | SUM: | | 1319 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.798 | | | 0.813 | | | | 0.864 | | | | 0.879 | | | | 0.879 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.698 | | | 0.713 | | | | 0.764 | | | | 0.779 | | | | 0.779 |
| LEVEL OF SERVICE (LOS): | | | | B | | | C | | | | C | | | | C | | | | C |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.015 | Δ*v/c* after mitigation: | 0.015 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | SR-2 SB-WB Off-Ramp | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |

| | MOVEMENT | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 615 | 1 | 366 | 0 | 615 | 373 | 0 | 659 | 1 | 392 | 0 | 659 | 1 | 399 | | 659 | 1 | 399 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 117 | 0 | 366 | 13 | 130 | 373 | 0 | 125 | 0 | 392 | 13 | 138 | 0 | 399 | | 138 | 0 | 399 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| SOUTHBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 493 | 2 | 247 | 46 | 539 | 270 | 19 | 548 | 2 | 274 | 46 | 594 | 2 | 297 | | 594 | 2 | 297 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 659 | 2 | 330 | 33 | 692 | 346 | 28 | 735 | 2 | 368 | 33 | 768 | 2 | 384 | | 768 | 2 | 384 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 366 | North-South: | | 373 | North-South: | | | 392 | North-South: | | | 399 | North-South: | | | 399 |
| | | East-West: | | 330 | East-West: | | 346 | East-West: | | | 368 | East-West: | | | 384 | East-West: | | | 384 |
| | | SUM: | | 696 | SUM: | | 719 | SUM: | | | 760 | SUM: | | | 783 | SUM: | | | 783 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.464 | | | 0.479 | | | | 0.507 | | | | 0.522 | | | | 0.522 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.364 | | | 0.379 | | | | 0.407 | | | | 0.422 | | | | 0.422 |
| LEVEL OF SERVICE (LOS): | | | | A | | | A | | | | A | | | | A | | | | A |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.015 | Δ*v/c* after mitigation: | 0.015 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | Larga Avenue | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | Existing Condition | Existing Plus Project | Future Condition W/O Project | Future Condition W/ Project | Future W/ Project W/ Mitigation |
|---|---|---|---|---|---|
| No. of Phases | 2 | 2 | 2 | 2 | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | 0 | 0 | 0 | 0 | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 |
| | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 |
| ATSAC-1 or ATSAC+ATCS-2? | 2 | 2 | 2 | 2 | 2 |
| Override Capacity | 0 | 0 | 0 | 0 | 0 |

| | MOVEMENT | Existing Condition Volume | No. of Lanes | Lane Volume | Existing Plus Project Project Traffic | Total Volume | Lane Volume | Future Condition W/O Project Added Volume | Total Volume | No. of Lanes | Lane Volume | Future Condition W/ Project Added Volume | Total Volume | No. of Lanes | Lane Volume | Future W/ Project W/ Mitigation Added Volume | Total Volume | No. of Lanes | Lane Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHBOUND | Left | 24 | 0 | **24** | 33 | 57 | **57** | 0 | 26 | 0 | **26** | 33 | 59 | 0 | **59** | | 59 | 0 | **59** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 6 | 0 | 35 | 0 | 6 | 68 | 0 | 6 | 0 | 37 | 0 | 6 | 0 | 70 | | 6 | 0 | 70 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | | 5 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 142 | 0 | 142 | 0 | 142 | 142 | 0 | 152 | 0 | 152 | 0 | 152 | 0 | 152 | | 152 | 0 | 152 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 5 | 0 | **244** | 0 | 5 | **244** | 0 | 5 | 0 | **261** | 0 | 5 | 0 | **261** | | 5 | 0 | **261** |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 97 | 0 | 0 | 0 | 97 | 0 | 0 | 104 | 0 | 0 | 0 | 104 | 0 | 0 | | 104 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 131 | 0 | **131** | 0 | 131 | **131** | 0 | 140 | 0 | 140 | 0 | 140 | 0 | 140 | | 140 | 0 | 140 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 464 | 0 | 370 | 0 | 464 | 399 | 19 | 516 | 0 | **530** | 0 | 516 | 0 | **575** | | 516 | 0 | **575** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 13 | 0 | 370 | 59 | 72 | 399 | 0 | 14 | 0 | 0 | 59 | 73 | 0 | 575 | | 73 | 0 | 575 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 1 | 0 | **1** | 0 | 1 | **1** | 0 | 1 | 0 | **1** | 0 | 1 | 0 | **1** | | 1 | 0 | **1** |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 537 | 0 | **296** | 0 | 537 | **296** | 28 | 604 | 0 | 332 | 0 | 604 | 0 | 332 | | 604 | 0 | 332 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 53 | 0 | 296 | 0 | 53 | 296 | 0 | 57 | 0 | 332 | 0 | 57 | 0 | 332 | | 57 | 0 | 332 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | *North-South:* | | 268 | *North-South:* | | 301 | *North-South:* | | | 287 | *North-South:* | | | 320 | *North-South:* | | | 320 |
| | | *East-West:* | | 427 | *East-West:* | | 427 | *East-West:* | | | 531 | *East-West:* | | | 576 | *East-West:* | | | 576 |
| | | *SUM:* | | 695 | *SUM:* | | 728 | *SUM:* | | | 818 | *SUM:* | | | 896 | *SUM:* | | | 896 |
| VOLUME/CAPACITY *(V/C)* RATIO: | | | | 0.463 | | | 0.485 | | | | 0.545 | | | | 0.597 | | | | 0.597 |
| *V/C* LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.363 | | | 0.385 | | | | 0.445 | | | | 0.497 | | | | 0.497 |
| LEVEL OF SERVICE (LOS): | | | | A | | | A | | | | A | | | | A | | | | A |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.052 | Δ*v/c* after mitigation: | 0.052 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | La Clede Avenue | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | FUTURE CONDITION W/ PROJECT | | | FUTURE W/ PROJECT W/ MITIGATION | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | 2 | | | 2 | | | 2 | | | 2 | | | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 0 SB-- | | 0 | NB-- 0 SB-- | | 0 | NB-- 0 SB-- | | 0 | NB-- 0 SB-- | | 0 | NB-- 0 SB-- | | 0 |
| | EB-- 0 WB-- | | 0 | EB-- 0 WB-- | | 0 | EB-- 0 WB-- | | 0 | EB-- 0 WB-- | | 0 | EB-- 0 WB-- | | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | 2 | | | 2 | | | 2 | | | 2 | | | 2 |
| Override Capacity | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 |

| MOVEMENT | | EXISTING CONDITION Volume | No. of Lanes | Lane Volume | EXISTING PLUS PROJECT Project Traffic | Total Volume | Lane Volume | FUTURE CONDITION W/O PROJECT Added Volume | Total Volume | No. of Lanes | Lane Volume | FUTURE CONDITION W/ PROJECT Added Volume | Total Volume | No. of Lanes | Lane Volume | FUTURE W/ PROJECT W/ MITIGATION Added Volume | Total Volume | No. of Lanes | Lane Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHBOUND | Left | 8 | 0 | 8 | 0 | 8 | 8 | 0 | 9 | 0 | 9 | 0 | 9 | 0 | 9 | | 9 | 0 | 9 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 2 | 0 | 44 | 0 | 2 | 110 | 0 | 2 | 0 | 47 | 0 | 2 | 0 | 113 | | 2 | 0 | 113 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 34 | 0 | 0 | 66 | 100 | 0 | 0 | 36 | 0 | 0 | 66 | 102 | 0 | 0 | | 102 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 209 | 0 | 209 | 0 | 209 | 209 | 0 | 224 | 0 | 224 | 0 | 224 | 0 | 224 | | 224 | 0 | 224 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 6 | 0 | 241 | 0 | 6 | 241 | 0 | 6 | 0 | 258 | 0 | 6 | 0 | 258 | | 6 | 0 | 258 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 26 | 0 | 0 | 0 | 26 | 0 | 0 | 28 | 0 | 0 | 0 | 28 | 0 | 0 | | 28 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 22 | 0 | 22 | 0 | 22 | 22 | 0 | 24 | 0 | 24 | 0 | 24 | 0 | 24 | | 24 | 0 | 24 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 698 | 0 | 374 | 0 | 698 | 374 | 19 | 767 | 0 | 434 | 0 | 767 | 0 | 434 | | 767 | 0 | 434 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 5 | 0 | 374 | 0 | 5 | 374 | 0 | 5 | 0 | 434 | 0 | 5 | 0 | 434 | | 5 | 0 | 434 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 13 | 0 | 13 | 81 | 94 | 94 | 0 | 14 | 0 | 14 | 81 | 95 | 0 | 95 | | 95 | 0 | 95 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 510 | 0 | 303 | 0 | 510 | 465 | 28 | 575 | 0 | 339 | 0 | 575 | 0 | 501 | | 575 | 0 | 501 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 43 | 0 | 303 | 0 | 43 | 465 | 0 | 46 | 0 | 339 | 0 | 46 | 0 | 501 | | 46 | 0 | 501 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 253 | North-South: | | 319 | North-South: | | | 271 | North-South: | | | 337 | North-South: | | | 337 |
| | | East-West: | | 387 | East-West: | | 487 | East-West: | | | 448 | East-West: | | | 529 | East-West: | | | 529 |
| | | SUM: | | 640 | SUM: | | 806 | SUM: | | | 719 | SUM: | | | 866 | SUM: | | | 866 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.427 | | | 0.537 | | | | 0.479 | | | | 0.577 | | | | 0.577 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.327 | | | 0.437 | | | | 0.379 | | | | 0.477 | | | | 0.477 |
| LEVEL OF SERVICE (LOS): | | | | A | | | A | | | | A | | | | A | | | | A |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.098 | Δ*v/c* after mitigation: | 0.098 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | San Fernando Rd. | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 7 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | |
| No. of Phases | | | 3 | | | 3 | | | | 3 | | | | 3 | | | | 3 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | 0 | | | 0 | | | | 0 | | | | 0 | | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | | 0 | NB-- 0 | SB-- | | 0 | NB-- 0 | SB-- | | 0 |
| | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | | 0 | EB-- 0 | WB-- | | 0 | EB-- 0 | WB-- | | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | 2 | | | 2 | | | | 2 | | | | 2 | | | | 2 |
| Override Capacity | | | 0 | | | 0 | | | | 0 | | | | 0 | | | | 0 |

| MOVEMENT | | EXISTING CONDITION Volume | No. of Lanes | Lane Volume | EXISTING PLUS PROJECT Project Traffic | Total Volume | Lane Volume | FUTURE CONDITION W/O PROJECT Added Volume | Total Volume | No. of Lanes | Lane Volume | FUTURE CONDITION W/ PROJECT Added Volume | Total Volume | No. of Lanes | Lane Volume | FUTURE W/ PROJECT W/ MITIGATION Added Volume | Total Volume | No. of Lanes | Lane Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHBOUND | Left | 92 | 1 | **92** | 46 | 138 | **138** | 10 | 109 | 1 | **109** | 46 | 155 | 1 | **155** | | 155 | 1 | **155** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1009 | 1 | 531 | 0 | 1009 | 531 | 41 | 1123 | 1 | 590 | 0 | 1123 | 1 | 590 | | 1123 | 1 | 590 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 52 | 0 | 52 | 0 | 52 | 52 | 0 | 56 | 0 | 56 | 0 | 56 | 0 | 56 | | 56 | 0 | 56 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 68 | 1 | 68 | 0 | 68 | 68 | 2 | 75 | 1 | 75 | 0 | 75 | 1 | 75 | | 75 | 1 | 75 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1104 | 1 | **603** | 0 | 1104 | **612** | 51 | 1235 | 1 | **677** | 0 | 1235 | 1 | **686** | | 1235 | 1 | **686** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 102 | 0 | 102 | 18 | 120 | 120 | 10 | 119 | 0 | 119 | 18 | 137 | 0 | 137 | | 137 | 0 | 137 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 135 | 1 | 135 | 13 | 148 | 148 | 6 | 151 | 1 | 151 | 13 | 164 | 1 | 164 | | 164 | 1 | 164 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 451 | 1 | **451** | 16 | 467 | **467** | 6 | 490 | 1 | **490** | 16 | 506 | 1 | **506** | | 506 | 1 | **506** |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 267 | 1 | 221 | 37 | 304 | 235 | 8 | 294 | 1 | 240 | 37 | 331 | 1 | 254 | | 331 | 1 | 254 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 150 | 1 | **150** | 0 | 150 | **150** | 1 | 162 | 1 | **162** | 0 | 162 | 1 | **162** | | 162 | 1 | **162** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 271 | 1 | 184 | 17 | 288 | 192 | 8 | 299 | 1 | 201 | 17 | 316 | 1 | 210 | | 316 | 1 | 210 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 96 | 0 | 96 | 0 | 96 | 96 | 0 | 103 | 0 | 103 | 0 | 103 | 0 | 103 | | 103 | 0 | 103 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | *North-South:* | | 695 | *North-South:* | | 750 | *North-South:* | | | 786 | *North-South:* | | | 841 | *North-South:* | | | 841 |
| | | *East-West:* | | 601 | *East-West:* | | 617 | *East-West:* | | | 652 | *East-West:* | | | 668 | *East-West:* | | | 668 |
| | | *SUM:* | | 1296 | *SUM:* | | 1367 | *SUM:* | | | 1438 | *SUM:* | | | 1509 | *SUM:* | | | 1509 |
| VOLUME/CAPACITY *(V/C)* RATIO: | | | | 0.909 | | | 0.959 | | | | 1.009 | | | | 1.059 | | | | 1.059 |
| *V/C* LESS ATSAC/ATCS ADJUSTMENT: | | | | **0.809** | | | **0.859** | | | | **0.909** | | | | **0.959** | | | | **0.959** |
| LEVEL OF SERVICE (LOS): | | | | **D** | | | **D** | | | | **E** | | | | **E** | | | | **E** |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.050 | Δ*v/c* after mitigation: | 0.050 |
| Significant impacted? | YES | Fully mitigated? | NO |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | Estara Avenue | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | East-West Street: | Fletcher Dr. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 | NB-- | 0 | SB-- | 0 |
| | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 | EB-- | 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 146 | 0 | **146** | 0 | 146 | **146** | 0 | 157 | 0 | **157** | 0 | 157 | 0 | **157** | | 157 | 0 | **157** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 71 | 0 | 246 | 0 | 71 | 246 | 0 | 76 | 0 | 264 | 0 | 76 | 0 | 264 | | 76 | 0 | 264 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 29 | 0 | 0 | 0 | 29 | 0 | 0 | 31 | 0 | 0 | 0 | 31 | 0 | 0 | | 31 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 98 | 0 | 98 | 0 | 98 | 98 | 0 | 105 | 0 | 105 | 0 | 105 | 0 | 105 | | 105 | 0 | 105 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 78 | 0 | **227** | 0 | 78 | **227** | 0 | 84 | 0 | **244** | 0 | 84 | 0 | **244** | | 84 | 0 | **244** |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 51 | 0 | 0 | 0 | 51 | 0 | 0 | 55 | 0 | 0 | 0 | 55 | 0 | 0 | | 55 | 0 | 0 |
| | Left-Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 47 | 1 | 47 | 0 | 47 | 47 | 0 | 50 | 1 | 50 | 0 | 50 | 1 | 50 | | 50 | 1 | 50 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 346 | 0 | **462** | 16 | 362 | **478** | 8 | 379 | 0 | **503** | 16 | 395 | 0 | **519** | | 395 | 0 | **519** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 116 | 0 | 0 | 0 | 116 | 0 | 0 | 124 | 0 | 0 | 0 | 124 | 0 | 0 | | 124 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 15 | 1 | **15** | 0 | 15 | **15** | 0 | 16 | 1 | **16** | 0 | 16 | 1 | **16** | | 16 | 1 | **16** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 318 | 1 | 318 | 17 | 335 | 335 | 9 | 350 | 1 | 350 | 17 | 367 | 1 | 367 | | 367 | 1 | 367 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 42 | 1 | 42 | 0 | 42 | 42 | 0 | 45 | 1 | 45 | 0 | 45 | 1 | 45 | | 45 | 1 | 45 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | North-South: | | 373 | North-South: | | 373 | North-South: | | | 401 | North-South: | | | 401 | North-South: | | | 401 |
| | | East-West: | | 477 | East-West: | | 493 | East-West: | | | 519 | East-West: | | | 535 | East-West: | | | 535 |
| | | SUM: | | 850 | SUM: | | 866 | SUM: | | | 920 | SUM: | | | 936 | SUM: | | | 936 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.567 | | | 0.577 | | | | 0.613 | | | | 0.624 | | | | 0.624 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.467 | | | 0.477 | | | | 0.513 | | | | 0.524 | | | | 0.524 |
| LEVEL OF SERVICE (LOS): | | | | A | | | A | | | | A | | | | A | | | | A |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.011 | Δ*v/c* after mitigation: | 0.011 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | San Fernando Rd. | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | East-West Street: | SR-2 SB Ramps | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | 3 | | | | 3 | | | | 3 | | | | 3 | | | | 3 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 | NB-- 0 | SB-- | 0 |
| | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 | EB-- 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | 2 | | | 2 | | | 2 | | | 2 | | | 2 | | | 2 |
| Override Capacity | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 290 | 1 | 290 | 0 | 290 | 290 | 26 | 337 | 1 | 337 | 0 | 337 | 1 | 337 | | 337 | 1 | 337 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1001 | 2 | 501 | 46 | 1047 | 524 | 36 | 1109 | 2 | 555 | 46 | 1155 | 2 | 578 | | 1155 | 2 | 578 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1009 | 2 | 505 | 14 | 1023 | 512 | 56 | 1138 | 2 | 569 | 14 | 1152 | 2 | 576 | | 1152 | 2 | 576 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 468 | 1 | 468 | 23 | 491 | 491 | 3 | 505 | 1 | 505 | 23 | 528 | 1 | 528 | | 528 | 1 | 528 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 409 | 1 | 235 | 0 | 409 | 235 | 21 | 460 | 1 | 264 | 0 | 460 | 1 | 264 | | 460 | 1 | 264 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | | 2 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 295 | 1 | 235 | 0 | 295 | 235 | 16 | 332 | 1 | 264 | 0 | 332 | 1 | 264 | | 332 | 1 | 264 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| CRITICAL VOLUMES | | North-South: | | 795 | North-South: | | 802 | North-South: | | | 906 | North-South: | | | 913 | North-South: | | | 913 |
| | | East-West: | | 235 | East-West: | | 235 | East-West: | | | 264 | East-West: | | | 264 | East-West: | | | 264 |
| | | SUM: | | 1030 | SUM: | | 1037 | SUM: | | | 1170 | SUM: | | | 1177 | SUM: | | | 1177 |
| VOLUME/CAPACITY (V/C) RATIO: | | | | 0.723 | | | 0.728 | | | | 0.821 | | | | 0.826 | | | | 0.826 |
| V/C LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.623 | | | 0.628 | | | | 0.721 | | | | 0.726 | | | | 0.726 |
| LEVEL OF SERVICE (LOS): | | | | B | | | B | | | | C | | | | C | | | | C |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.005 | Δ*v/c* after mitigation: | 0.005 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | Glendale Blvd | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | East-West Street: | Riverside Dr. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Phases | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 0 | SB-- | | 0 | NB-- 0 | SB-- | | 0 | NB-- 0 | SB-- | | 0 | NB-- 0 | SB-- | | 0 | NB-- 0 | SB-- | 0 |
| | EB-- 0 | WB-- | | 0 | EB-- 0 | WB-- | | 0 | EB-- 0 | WB-- | | 0 | EB-- 0 | WB-- | | 0 | EB-- 0 | WB-- | 0 |
| ATSAC-1 or ATSAC+ATCS-2? | | | | 2 | | | | 2 | | | | 2 | | | | 2 | | | 2 |
| Override Capacity | | | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |

| MOVEMENT | | EXISTING CONDITION | | | EXISTING PLUS PROJECT | | | FUTURE CONDITION W/O PROJECT | | | | FUTURE CONDITION W/ PROJECT | | | | FUTURE W/ PROJECT W/ MITIGATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume | No. of Lanes | Lane Volume | Project Traffic | Total Volume | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume | Added Volume | Total Volume | No. of Lanes | Lane Volume |
| NORTHBOUND | Left | 289 | 0 | **289** | 3 | 292 | **292** | 15 | 325 | 0 | **325** | 3 | 328 | 0 | **328** | | 328 | 0 | **328** |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 205 | 0 | 375 | 0 | 205 | 375 | 51 | 271 | 0 | 453 | 0 | 271 | 0 | 453 | | 271 | 0 | 453 |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 170 | 0 | 0 | 0 | 170 | 0 | 0 | 182 | 0 | 0 | 0 | 182 | 0 | 0 | | 182 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 166 | 0 | 166 | 0 | 166 | 166 | 11 | 189 | 0 | 189 | 0 | 189 | 0 | 189 | | 189 | 0 | 189 |
| | Left-Through | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Through | 201 | 0 | **318** | 0 | 201 | **318** | 53 | 268 | 0 | **395** | 0 | 268 | 0 | **395** | | 268 | 0 | **395** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 117 | 0 | 0 | 0 | 117 | 0 | 19 | 144 | 0 | 395 | 0 | 144 | 0 | 395 | | 144 | 0 | 395 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 120 | 1 | 120 | 0 | 120 | 120 | 2 | 131 | 1 | **131** | 0 | 131 | 1 | 131 | | 131 | 1 | 131 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 605 | 2 | **303** | 7 | 612 | **306** | 4 | 653 | 2 | 327 | 7 | 660 | 2 | **330** | | 660 | 2 | **330** |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 332 | 1 | 188 | 4 | 336 | 190 | 8 | 364 | 1 | 202 | 4 | 368 | 1 | 204 | | 368 | 1 | 204 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 112 | 1 | **112** | 0 | 112 | **112** | 0 | 120 | 1 | 120 | 0 | 120 | 1 | **120** | | 120 | 1 | **120** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 587 | 2 | 294 | 0 | 587 | 294 | 7 | 636 | 2 | **318** | 0 | 636 | 2 | 318 | | 636 | 2 | 318 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 140 | 1 | 57 | 0 | 140 | 57 | 3 | 153 | 1 | 153 | 0 | 153 | 1 | 153 | | 153 | 1 | 153 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| CRITICAL VOLUMES | | | *North-South:* | 607 | | *North-South:* | 610 | | | *North-South:* | 720 | | | *North-South:* | 723 | | | *North-South:* | 723 |
| | | | *East-West:* | 415 | | *East-West:* | 418 | | | *East-West:* | 449 | | | *East-West:* | 450 | | | *East-West:* | 450 |
| | | | *SUM:* | 1022 | | *SUM:* | 1028 | | | *SUM:* | 1169 | | | *SUM:* | 1173 | | | *SUM:* | 1173 |
| VOLUME/CAPACITY *(V/C)* RATIO: | | | | 0.681 | | | 0.685 | | | | 0.779 | | | | 0.782 | | | | 0.782 |
| *V/C* LESS ATSAC/ATCS ADJUSTMENT: | | | | **0.581** | | | **0.585** | | | | **0.679** | | | | **0.682** | | | | **0.682** |
| LEVEL OF SERVICE (LOS): | | | | **A** | | | **A** | | | | **B** | | | | **B** | | | | **B** |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.003 | Δ*v/c* after mitigation: | 0.003 |
| Significant impacted? | NO | Fully mitigated? | N/A |

# Level of Service Worksheet

## 2800 Casitas - PM Peak Hour

| I/S #: | North-South Street: | Riverside Dr. | Year of Count: | 2016 | Ambient Growth: (%): | 1 | Conducted by: | Iain Conway | Date: | 4/18/2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 | East-West Street: | Gilroy St. | Projection Year: | 2023 | Peak Hour: | PM | Reviewed by: | | Project: | 2800 Casitas |

| | Existing Condition | Existing Plus Project | Future Condition W/O Project | Future Condition W/ Project | Future W/ Project W/ Mitigation |
|---|---|---|---|---|---|
| No. of Phases | 2 | 2 | 2 | 2 | 2 |
| Opposed Ø'ing: N/S-1, E/W-2 or Both-3? | 0 | 0 | 0 | 0 | 0 |
| Right Turns: FREE-1, NRTOR-2 or OLA-3? | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 | NB-- 0 SB-- 0 |
| | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 | EB-- 0 WB-- 0 |
| ATSAC-1 or ATSAC+ATCS-2? | 2 | 2 | 2 | 2 | 2 |
| Override Capacity | 0 | 0 | 0 | 0 | 0 |

| MOVEMENT | | Existing Condition Volume | No. of Lanes | Lane Volume | Existing Plus Project Project Traffic | Total Volume | Lane Volume | Future Condition W/O Project Added Volume | Total Volume | No. of Lanes | Lane Volume | Future Condition W/ Project Added Volume | Total Volume | No. of Lanes | Lane Volume | Future W/ Project W/ Mitigation Added Volume | Total Volume | No. of Lanes | Lane Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHBOUND | Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 1034 | 1 | **546** | 0 | 1034 | **546** | 15 | 1124 | 1 | **593** | 0 | 1124 | 1 | **593** | | 1124 | 1 | **593** |
| | Through-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| | Right | 57 | 0 | 57 | 0 | 57 | 57 | 0 | 61 | 0 | 61 | 0 | 61 | 0 | 61 | | 61 | 0 | 61 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| SOUTHBOUND | Left | 86 | 1 | **86** | 0 | 86 | **86** | 0 | 92 | 1 | **92** | 0 | 92 | 1 | **92** | | 92 | 1 | **92** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 970 | 2 | 485 | 0 | 970 | 485 | 13 | 1053 | 2 | 527 | 0 | 1053 | 2 | 527 | | 1053 | 2 | 527 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| EASTBOUND | Left | 0 | 0 | **0** | 0 | 0 | **0** | 0 | 0 | 0 | **0** | 0 | 0 | 0 | **0** | | 0 | 0 | **0** |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| WESTBOUND | Left | 51 | 0 | 51 | 0 | 51 | 51 | 0 | 55 | 0 | 55 | 0 | 55 | 0 | 55 | | 55 | 0 | 55 |
| | Left-Through | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Through | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Right | 30 | 0 | **81** | 0 | 30 | **81** | 0 | 32 | 0 | **87** | 0 | 32 | 0 | **87** | | 32 | 0 | **87** |
| | Left-Through-Right | | 0 | | | | | | | 0 | | | | 0 | | | | 0 | |
| | Left-Right | | 1 | | | | | | | 1 | | | | 1 | | | | 1 | |
| CRITICAL VOLUMES | | *North-South:* | | 632 | *North-South:* | | 632 | *North-South:* | | | 685 | *North-South:* | | | 685 | *North-South:* | | | 685 |
| | | *East-West:* | | 81 | *East-West:* | | 81 | *East-West:* | | | 87 | *East-West:* | | | 87 | *East-West:* | | | 87 |
| | | *SUM:* | | 713 | *SUM:* | | 713 | *SUM:* | | | 772 | *SUM:* | | | 772 | *SUM:* | | | 772 |
| VOLUME/CAPACITY *(V/C)* RATIO: | | | | 0.475 | | | 0.475 | | | | 0.515 | | | | 0.515 | | | | 0.515 |
| *V/C* LESS ATSAC/ATCS ADJUSTMENT: | | | | 0.375 | | | 0.375 | | | | 0.415 | | | | 0.415 | | | | 0.415 |
| LEVEL OF SERVICE (LOS): | | | | A | | | A | | | | A | | | | A | | | | A |

**PROJECT IMPACT**

| | | | |
|---|---|---|---|
| Change in *v/c* due to project: | 0.000 | Δ*v/c* after mitigation: | 0.000 |
| Significant impacted? | NO | Fully mitigated? | N/A |

2800 Casitas
Existing - AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 San Fernando Rd & South Glendale Ave

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.668 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 46 | Level Of Service: | B |

| Street Name: | San Fernando Rd | | | | | | South Glendale Ave | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 0 0 | 1! 0 | 0 | 1 1 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.51 | 0.49 | 1.00 | 2.00 | 0.00 | 0.37 | 0.41 | 0.22 | 2.00 | 0.00 | 1.00 |
| Final Sat.: | 1600 | 2417 | 783 | 1600 | 3200 | 0 | 593 | 652 | 356 | 3200 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.35 | 0.35 | 0.03 | 0.21 | 0.00 | 0.02 | 0.02 | 0.02 | 0.17 | 0.00 | 0.11 |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |

2800 Casitas
Existing - PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 San Fernando Rd & South Glendale Ave

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.679 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 48 | Level Of Service: | B |

| Street Name: | San Fernando Rd | | | | | | South Glendale Ave | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 0 0 | 1! | 0 0 | 1 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.38 | 0.62 | 1.00 | 2.00 | 0.00 | 0.38 | 0.54 | 0.08 | 1.97 | 0.03 | 1.00 |
| Final Sat.: | 1600 | 2205 | 995 | 1600 | 3200 | 0 | 615 | 862 | 123 | 3158 | 42 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.39 | 0.39 | 0.04 | 0.28 | 0.00 | 0.01 | 0.01 | 0.01 | 0.14 | 0.14 | 0.07 |
| Crit Moves: | | **** | | **** | | | | | **** | **** | | |

2800 Casitas
FWOP - AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 San Fernando Rd & South Glendale Ave

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.736 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 55 | Level Of Service: | C |

| Street Name: | San Fernando Rd | | | | | | South Glendale Ave | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 0 0 | 1! 0 | 0 | 1 1 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| Growth Adj: | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Initial Bse: | 0 | 896 | 290 | 51 | 733 | 0 | 11 | 12 | 6 | 599 | 0 | 190 |
| Added Vol: | 0 | 51 | 6 | 16 | 42 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 947 | 296 | 67 | 775 | 0 | 11 | 12 | 6 | 601 | 0 | 193 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 947 | 296 | 67 | 775 | 0 | 11 | 12 | 6 | 601 | 0 | 193 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 947 | 296 | 67 | 775 | 0 | 11 | 12 | 6 | 601 | 0 | 193 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 947 | 296 | 67 | 775 | 0 | 11 | 12 | 6 | 601 | 0 | 193 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.52 | 0.48 | 1.00 | 2.00 | 0.00 | 0.37 | 0.41 | 0.22 | 2.00 | 0.00 | 1.00 |
| Final Sat.: | 1600 | 2438 | 762 | 1600 | 3200 | 0 | 593 | 652 | 356 | 3200 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.39 | 0.39 | 0.04 | 0.24 | 0.00 | 0.02 | 0.02 | 0.02 | 0.19 | 0.00 | 0.12 |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |

2800 Casitas
FWOP - PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 San Fernando Rd & South Glendale Ave

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.742 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 56 | Level Of Service: | C |

| Street Name: | San Fernando Rd | | | | | | South Glendale Ave | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 0 0 | 1! 0 | 0 | 1 1 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| Growth Adj: | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Initial Bse: | 5 | 913 | 412 | 74 | 967 | 0 | 5 | 7 | 1 | 477 | 6 | 120 |
| Added Vol: | 0 | 44 | 4 | 9 | 57 | 0 | 0 | 0 | 0 | 6 | 0 | 16 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 5 | 957 | 416 | 83 | 1024 | 0 | 5 | 7 | 1 | 483 | 6 | 136 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 5 | 957 | 416 | 83 | 1024 | 0 | 5 | 7 | 1 | 483 | 6 | 136 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 957 | 416 | 83 | 1024 | 0 | 5 | 7 | 1 | 483 | 6 | 136 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 5 | 957 | 416 | 83 | 1024 | 0 | 5 | 7 | 1 | 483 | 6 | 136 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.39 | 0.61 | 1.00 | 2.00 | 0.00 | 0.38 | 0.54 | 0.08 | 1.97 | 0.03 | 1.00 |
| Final Sat.: | 1600 | 2230 | 970 | 1600 | 3200 | 0 | 615 | 862 | 123 | 3158 | 42 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.43 | 0.43 | 0.05 | 0.32 | 0.00 | 0.01 | 0.01 | 0.01 | 0.15 | 0.15 | 0.08 |
| Crit Moves: | | **** | | **** | | | | | **** | **** | | |

2800 Casitas
FWP - AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 San Fernando Rd & South Glendale Ave

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.743 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 56 | Level Of Service: | C |

| Street Name: | San Fernando Rd | | | | | | South Glendale Ave | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 0 0 | 1! 0 | 0 | 1 1 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| Growth Adj: | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Initial Bse: | 0 | 896 | 290 | 51 | 733 | 0 | 11 | 12 | 6 | 599 | 0 | 190 |
| Added Vol: | 0 | 66 | 11 | 16 | 47 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 962 | 301 | 67 | 780 | 0 | 11 | 12 | 6 | 602 | 0 | 193 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 962 | 301 | 67 | 780 | 0 | 11 | 12 | 6 | 602 | 0 | 193 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 962 | 301 | 67 | 780 | 0 | 11 | 12 | 6 | 602 | 0 | 193 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 962 | 301 | 67 | 780 | 0 | 11 | 12 | 6 | 602 | 0 | 193 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.52 | 0.48 | 1.00 | 2.00 | 0.00 | 0.37 | 0.41 | 0.22 | 2.00 | 0.00 | 1.00 |
| Final Sat.: | 1600 | 2437 | 763 | 1600 | 3200 | 0 | 593 | 652 | 356 | 3200 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.39 | 0.39 | 0.04 | 0.24 | 0.00 | 0.02 | 0.02 | 0.02 | 0.19 | 0.00 | 0.12 |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |

2800 Casitas
FWP - PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 San Fernando Rd & South Glendale Ave

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.747 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 57 | Level Of Service: | C |

| Street Name: | San Fernando Rd | | | | | | South Glendale Ave | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 0 0 | 1! 0 | 0 | 1 1 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| Growth Adj: | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Initial Bse: | 5 | 913 | 412 | 74 | 967 | 0 | 5 | 7 | 1 | 477 | 6 | 120 |
| Added Vol: | 0 | 54 | 6 | 9 | 71 | 0 | 0 | 0 | 0 | 10 | 0 | 16 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 5 | 967 | 418 | 83 | 1038 | 0 | 5 | 7 | 1 | 487 | 6 | 136 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 5 | 967 | 418 | 83 | 1038 | 0 | 5 | 7 | 1 | 487 | 6 | 136 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 967 | 418 | 83 | 1038 | 0 | 5 | 7 | 1 | 487 | 6 | 136 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 5 | 967 | 418 | 83 | 1038 | 0 | 5 | 7 | 1 | 487 | 6 | 136 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.40 | 0.60 | 1.00 | 2.00 | 0.00 | 0.38 | 0.54 | 0.08 | 1.97 | 0.03 | 1.00 |
| Final Sat.: | 1600 | 2234 | 966 | 1600 | 3200 | 0 | 615 | 862 | 123 | 3158 | 42 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.43 | 0.43 | 0.05 | 0.32 | 0.00 | 0.01 | 0.01 | 0.01 | 0.15 | 0.15 | 0.08 |
| Crit Moves: | | **** | | **** | | | | | **** | | **** | |

2800 Casitas
EWP - AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 San Fernando Rd & South Glendale Ave

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.675 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 47 | Level Of Service: | B |

| Street Name: | San Fernando Rd | | | | | | South Glendale Ave | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 0 0 | 1! 0 | 0 | 1 1 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 837 | 271 | 48 | 685 | 0 | 10 | 11 | 6 | 560 | 0 | 178 |
| Added Vol: | 0 | 15 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 852 | 276 | 48 | 690 | 0 | 10 | 11 | 6 | 561 | 0 | 178 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 852 | 276 | 48 | 690 | 0 | 10 | 11 | 6 | 561 | 0 | 178 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 852 | 276 | 48 | 690 | 0 | 10 | 11 | 6 | 561 | 0 | 178 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 852 | 276 | 48 | 690 | 0 | 10 | 11 | 6 | 561 | 0 | 178 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.51 | 0.49 | 1.00 | 2.00 | 0.00 | 0.37 | 0.41 | 0.22 | 2.00 | 0.00 | 1.00 |
| Final Sat.: | 1600 | 2417 | 783 | 1600 | 3200 | 0 | 593 | 652 | 356 | 3200 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.35 | 0.35 | 0.03 | 0.22 | 0.00 | 0.02 | 0.02 | 0.02 | 0.18 | 0.00 | 0.11 |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |

2800 Casitas
EWP - PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 San Fernando Rd & South Glendale Ave

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.685 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 48 | Level Of Service: | B |

| Street Name: | San Fernando Rd | | | | | | South Glendale Ave | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Split Phase | | | Split Phase | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 0 0 | 1! | 0 0 | 1 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 5 | 853 | 385 | 69 | 904 | 0 | 5 | 7 | 1 | 446 | 6 | 112 |
| Added Vol: | 0 | 10 | 3 | 0 | 14 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 5 | 863 | 388 | 69 | 918 | 0 | 5 | 7 | 1 | 450 | 6 | 112 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 5 | 863 | 388 | 69 | 918 | 0 | 5 | 7 | 1 | 450 | 6 | 112 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 863 | 388 | 69 | 918 | 0 | 5 | 7 | 1 | 450 | 6 | 112 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 5 | 863 | 388 | 69 | 918 | 0 | 5 | 7 | 1 | 450 | 6 | 112 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.38 | 0.62 | 1.00 | 2.00 | 0.00 | 0.38 | 0.54 | 0.08 | 1.97 | 0.03 | 1.00 |
| Final Sat.: | 1600 | 2208 | 992 | 1600 | 3200 | 0 | 615 | 862 | 123 | 3158 | 42 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.39 | 0.39 | 0.04 | 0.29 | 0.00 | 0.01 | 0.01 | 0.01 | 0.14 | 0.14 | 0.07 |
| Crit Moves: | | **** | | **** | | | | | **** | | **** | |