City of Jurupa Valley General Plan Traffic Study

LSA

City of Jurupa Valley General Plan Traffic Study

Prepared for:

City of Jurupa Valley

8930 Limonite Avenue | Jurupa Valley, California 92509
(951) 332-6464

Prepared by:

LSA Associates, Inc.

1500 Iowa Avenue, Suite 200 | Riverside, California 92507
(951) 781-9310

November 4, 2016

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CHAPTER 1 – INTRODUCTION

The City of Jurupa Valley (City) is located in Riverside County and is generally bounded by Interstate 15 (I-15) to the west, Philadelphia Street/El Rivino Road to the north, and the Santa Ana River to the east and south. Figure 1.1 illustrates the regional location of the City of Jurupa Valley.

The ability to move people and goods throughout Jurupa Valley and beyond is important to residents and businesses. Local roadways are the most important element for mobility in Jurupa Valley, but transit, the trail system, and bicycle facilities provide opportunities for alternative modes of travel that could relieve pressure on roadways. Furthermore, alternative modes, such as bicycles and pedestrians, have valuable secondary benefits that enhance the overall setting of Jurupa Valley. These benefits include traffic calming, walkability, health gains, air quality improvement and community cohesion. The Circulation Element governs the long-term mobility system of the City. The goals and policies in the Circulation Element are closely correlated with the Land Use Element and are intended to provide the best possible balance between the City's future growth and land use development, roadway size, traffic service levels, bicycle and pedestrian amenities, transit opportunities and community character.

This Traffic Study will aid in determining existing circulation deficiencies within the City of Jurupa Valley and act as a benchmark for future improvements to the City's circulation network. The Traffic Study includes a level of service analysis at study area intersections and roadway segments, and a summary of existing transit service, truck routes, and bicycle and pedestrian facilities and trails within the City of Jurupa Valley.

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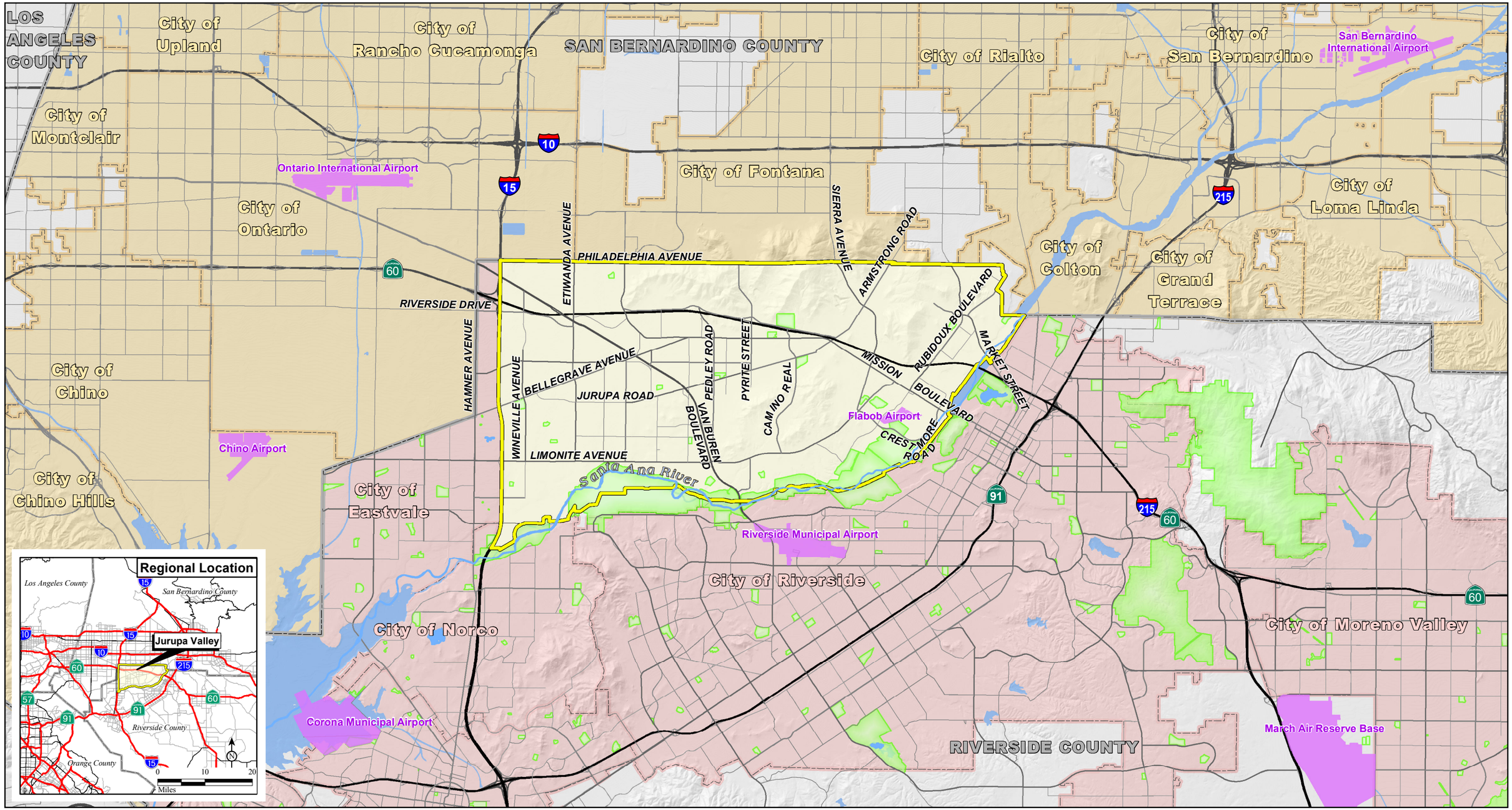

LSA

- City of Jurupa Valley
- San Bernardino County Cities
- Riverside County Cities
- County Boundary
- Parks
- Airports

SOURCE: Riverside County 7/2015

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Jurupa Valley General Plan
Traffic Study

Figure 1.1
Regional Location

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CHAPTER 2 – EXISTING TRANSPORTATION SYSTEM

The transportation system in the City of Jurupa Valley includes motorized and non-motorized travel modes. This circulation system is considered multi-modal, which provides alternatives to the automobile such as bicycle facilities, pedestrian facilities, rail, trails, and transit. These systems, along with streets and highways, all provide for the movement of people and goods throughout the City and region. How these systems complement one another and interact with each other represents the complete transportation system.

This chapter presents the existing setting for vehicles, as well as bicycle, transit, and pedestrian facilities in the City of Jurupa Valley.

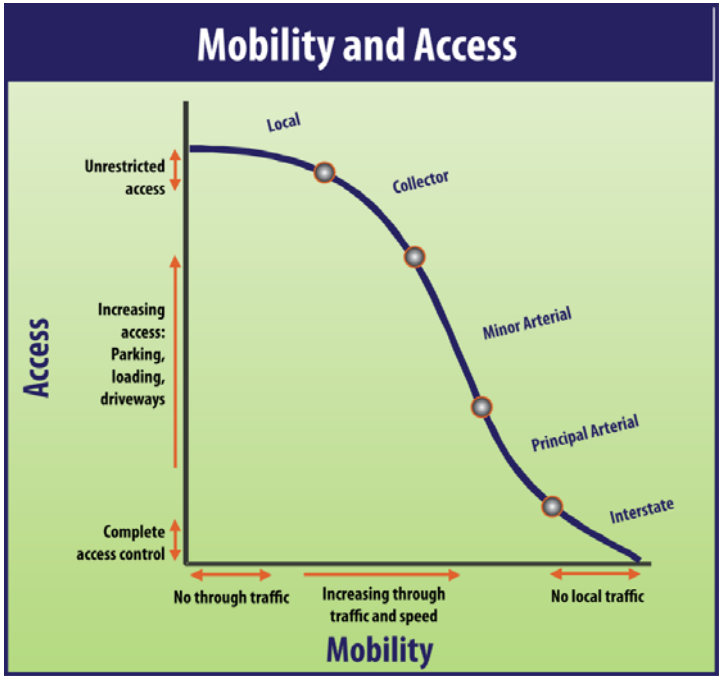
CHAPTER CONTENTS

Street Network

A well laid-out and well-designed roadway network is essential for safe and efficient surface transportation. Such a network can cut down travel times, reduce accidents on certain facilities, assist in emergency operations, and help in allocating roadway funding. These facilities also serve as the primary thoroughfares for freight and goods movement that supply the local and regional economies.

The functionality of a street is related to traffic mobility and land access. Higher level facilities, such as freeways and expressways, have lower access, which allows for higher speeds and capacities. Conversely, lower level facilities, such as local streets and minor arterials, allow for greater access, but have reduced mobility due to lower speeds and capacities. The relationship can be seen in Figure 2.1.

FIGURE 2.1: RELATIONSHIP BETWEEN MOBILITY AND ACCESS ON ROADWAYS



Source: Federal Highway Administration

Functional Classification

Functional classification groups roadways into classes according to the type of service they are intended to provide. The eight basic roadway classifications are briefly described below:

Freeway

A highway upon which the abutter's rights of access are controlled and that provides separated grades at intersecting streets. The minimum right-of-way width and number of lanes is determined by the California Department of Transportation (Caltrans). Figure 2.2 illustrates the existing functional classification of roadways. Roadway cross-sections are illustrated in Figure 2.3.

Expressway

An Expressway is a multimodal roadway corridor for through traffic. Access from abutting property is restricted. Intersections with other streets or roadways are limited to approximately one-half mile intervals. The minimum right-of-way is 184 feet to 220 feet. The number of lanes is 6 or 8 and additional right-of-way may be needed at intersections. Figure 2.3, Exhibit 1 illustrates the cross-section for an Expressway. Segments of Van Buren Boulevard are currently designated as an Expressway.

Urban Arterial

An Urban Arterial is a roadway primarily for through traffic where access from other streets or roadways is limited to approximately one-quarter mile intervals. The minimum right-of-way is 152 feet. The number of lanes is 6 or 8 and additional right-of-way may be needed at intersections. Figure 2.3, Exhibit 2 illustrates the cross-section for an Urban Arterial roadway. Segments of Limonite Avenue are currently designated as an Urban Arterial roadway.

Arterial

An Arterial is a divided roadway primarily for through traffic to which access from abutting property is kept at a minimum. Intersections with other streets or roadways are limited to approximately one-quarter mile intervals. The minimum right-of-way is 128 feet. The number of lanes is 4 or 6 and additional right-of-way may be needed at intersections. Figure 2.3, Exhibit 3 shows the cross-section for an Arterial roadway. Segments of Etiwanda Avenue are currently designated as an Arterial roadway.

Major

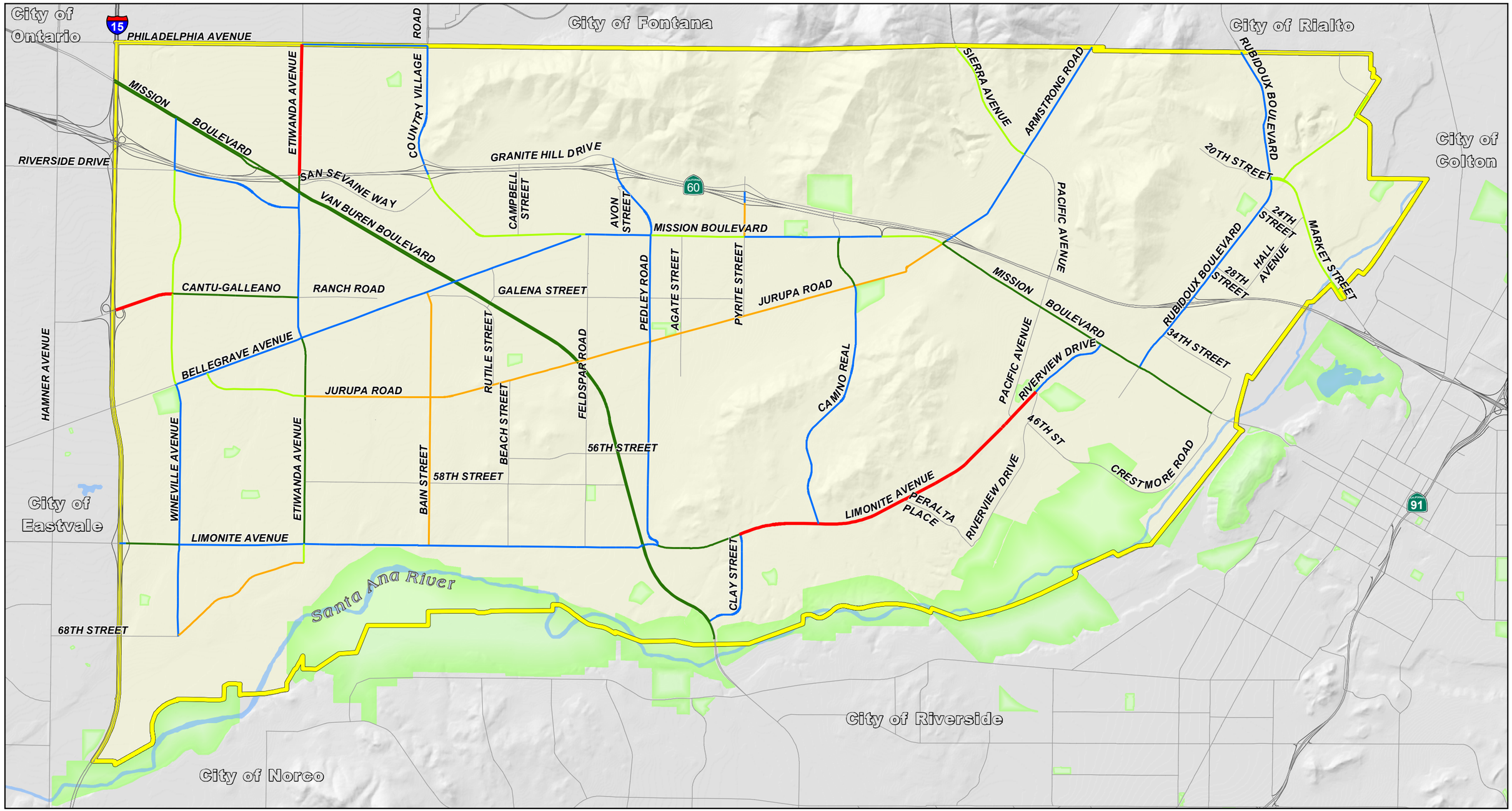
A Major roadway serves property zoned for major industrial and commercial uses or serves through traffic. Intersections with other streets or roadways may be limited to approximately 660-foot intervals. The minimum right-of-way is 118 feet. The number of lanes is 4 and additional right-of-way may be needed at intersections. Figure 2.3, Exhibit 4 illustrates the cross-section for a Major roadway. Segments on Pedley Road are currently designated as a Major roadway.

Secondary

A Secondary roadway serves through traffic along longer routes between major traffic-generating areas or serves property zoned for multiple residential, secondary industrial, or commercial uses. Intersections with other streets and roadways may be limited to 330-foot intervals. The minimum right-of-way is 100 feet. The number of lanes is 4 with no turn lanes and additional right-of-way may be needed at intersections. Figure 2.3, Exhibit 5 shows the cross-section for a Secondary roadway. Segments on Pacific Avenue are currently designated as a secondary roadway.

Collector Street

Collector streets are intended to serve intensive residential land uses, multiple-family dwellings, or to convey traffic through an area to roads of equal or similar classification or higher. A Collector street may also serve as a cul-de-sac in industrial or commercial use areas but shall not exceed 660 feet in length when so used. The minimum right-of-way is 74 feet and the number of lanes is 2. Figure 2.3, Exhibit 6 shows the cross-section for a Collector roadway. Segments on 58th Street are currently designated as a Collector roadway.



LSA

City of Jurupa Valley
Parks
Urban Arterial (152' ROW)
Arterial (128' ROW)
Major (118" ROW)
Secondary (100' ROW)
Collector (74' ROW)

SOURCE: Riverside County 7/2015

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Jurupa Valley General Plan
Traffic Study

Figure 2.2
Existing Functional Classification of Roadways

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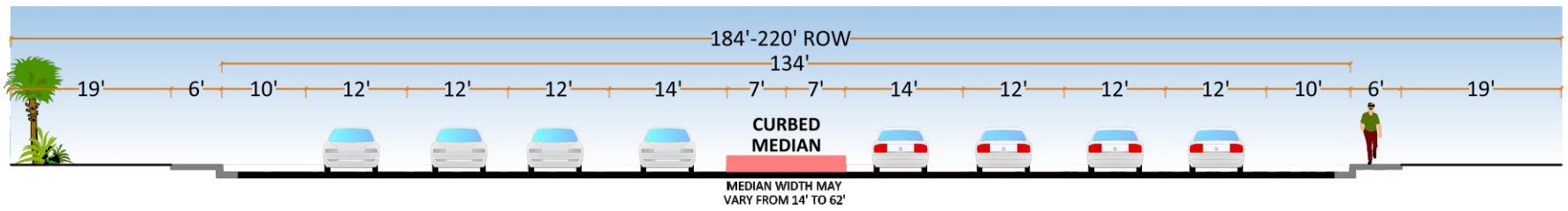

EXHIBIT 1: EXPRESSWAY- 6 TO 8 LANES

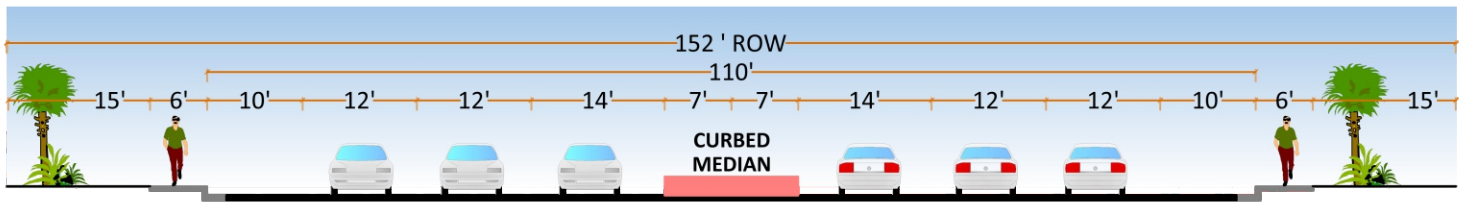

EXHIBIT 2: URBAN ARTERIAL

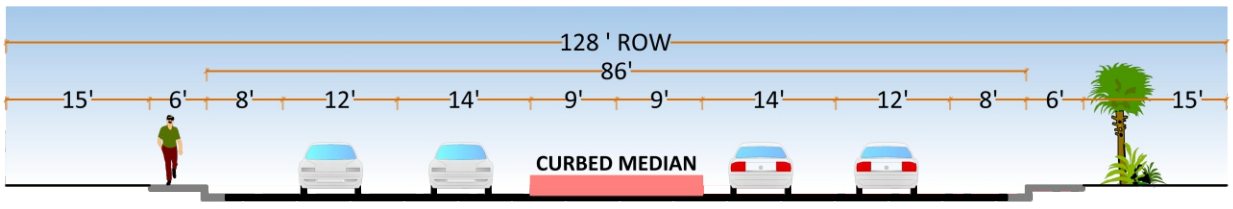

EXHIBIT 3: ARTERIAL

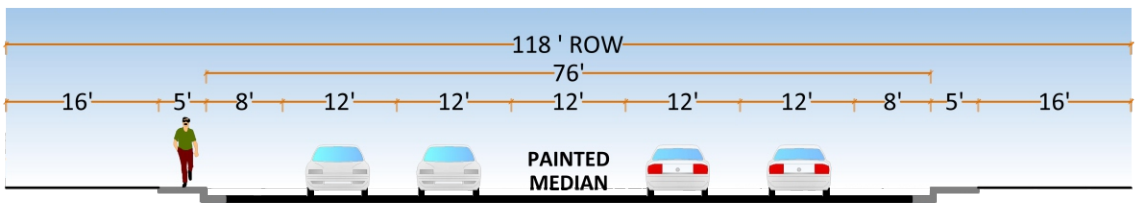

EXHIBIT 4: MAJOR - 4 LANES

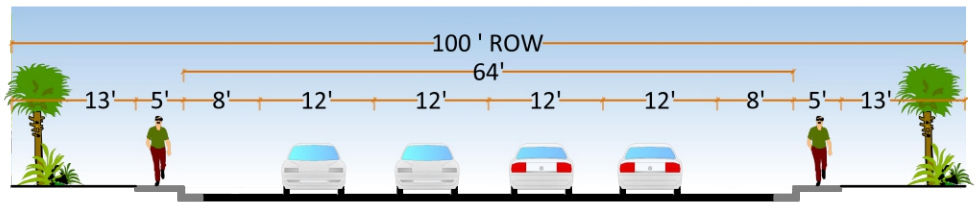

EXHIBIT 5: SECONDARY

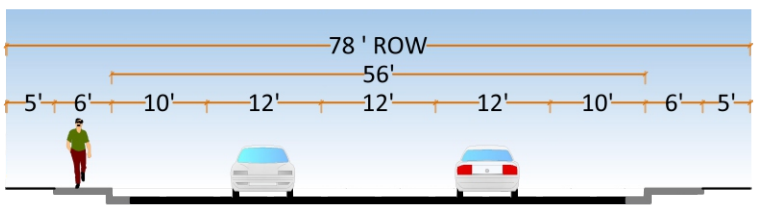

EXHIBIT 6: INDUSTRIAL COLLECTOR

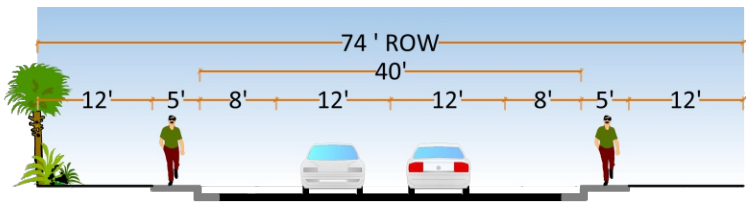

EXHIBIT 7: COLLECTOR

LSA

SOURCE: County of Riverside General Plan, Circulation Element, 2003

Jurupa Valley 2016 General Plan
Traffic Study
Figure 2.3
Roadway Cross Sections

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Industrial Collector

An Industrial Collector is a circulatory street with a continuous left-turn lane with at least one end connecting to a road of equal or greater classification. The minimum right-of-way is 78 feet and the number of lanes is 2. Figure 2.3, Exhibit 7 shows the cross-section for an Industrial Collector roadway.

Study Area Intersections

The study area includes all roadway segments and intersections that would be necessary to analyze the impacts of the City's future Land Use plan and was defined through collaboration between LSA and City staff. As Figure 2.4 shows, the study area includes the following intersections:

Intersections

1. Interstate 15 (I-15) Southbound Ramps/Cantu-Galleano Ranch Road;
2. I-15 Northbound Ramps/Cantu-Galleano Ranch Road;
3. I-15 Southbound Ramps/Limonite Avenue;
4. I-15 Northbound Ramps/Limonite Avenue;
5. Wineville Road/E. Mission Boulevard;
6. Wineville Road/Riverside Drive;
7. Wineville Avenue/Wineville Road/Cantu-Galleano Ranch Road;
8. Wineville Avenue/Bellegrave Avenue;
9. Wineville Avenue/Limonite Avenue;
10. Wineville Avenue/68th Street;
11. E. Mission Boulevard/State Route 60 (SR-60) Westbound On-Ramp;
12. E. Mission Boulevard/SR-60 Eastbound Off-Ramp;
13. Etiwanda Avenue/Philadelphia Avenue;
14. Etiwanda Avenue/SR-60 Westbound Off-Ramp;
15. Etiwanda Avenue/SR-60 Eastbound On-Ramp;
16. Etiwanda Avenue/Van Buren Boulevard;
17. Etiwanda Avenue/Riverside Drive;
18. Etiwanda Avenue/Cantu-Galleano Ranch Road;
19. Etiwanda Avenue/Bellegrave Avenue;
20. Etiwanda Avenue/Jurupa Road;
21. Etiwanda Avenue/Limonite Avenue;
22. Country Village Road/Philadelphia Avenue;
23. Country Village Road/SR-60 Westbound Ramps;
24. Mission Boulevard/SR-60 Eastbound Ramps;
25. Bain Street/Bellegrave Avenue;
26. Van Buren Boulevard/Bellegrave Avenue;
27. Van Buren Boulveard/Van Buren-Bellegrave Connector;
28. Bain Street/Jurupa Road;
29. Bain Street/Limonite Avenue;
30. Pedley Road/SR-60 Westbound Ramps;
31. Pedley Road/SR-60 Eastbound Ramps;
32. Bellegrave Avenue/Mission Boulevard;
33. Pedley Road/Mission Boulevard;
34. Van Buren Boulevard/Jurupa Road;
35. Van Buren Boulevard/Van Buren-Jurupa Connector;
36. Pedley Road/Jurupa Road;
37. Collins Street/Limonite Avenue;
38. Van Buren Boulevard/Limonite Avenue;
39. Pedley Road-Morton Avenue/Limonite Avenue;
40. Pyrite Street/SR-60 Westbound Ramps;
41. Pyrite Street/SR-60 Eastbound Ramps;
42. Pyrite Street/Mission Boulevard;
43. Clay Street/Limonite Avenue;
44. Van Buren Boulevard/Clay Street;
45. Camino Real/Mission Boulevard;
46. Camino Real/Jurupa Road;
47. Camino Real/Limonite Avenue;
48. Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard;
49. Valley Way/Jurupa Road;
50. Armstrong Road/Sierra Avenue;
51. Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive;
52. Valley Way/SR-60 Westbound On Ramp;
53. Valley Way/Mission Boulevard;
54. Pacific Avenue/Mission Boulevard;
55. Pacific Avenue/Limonite Avenue;

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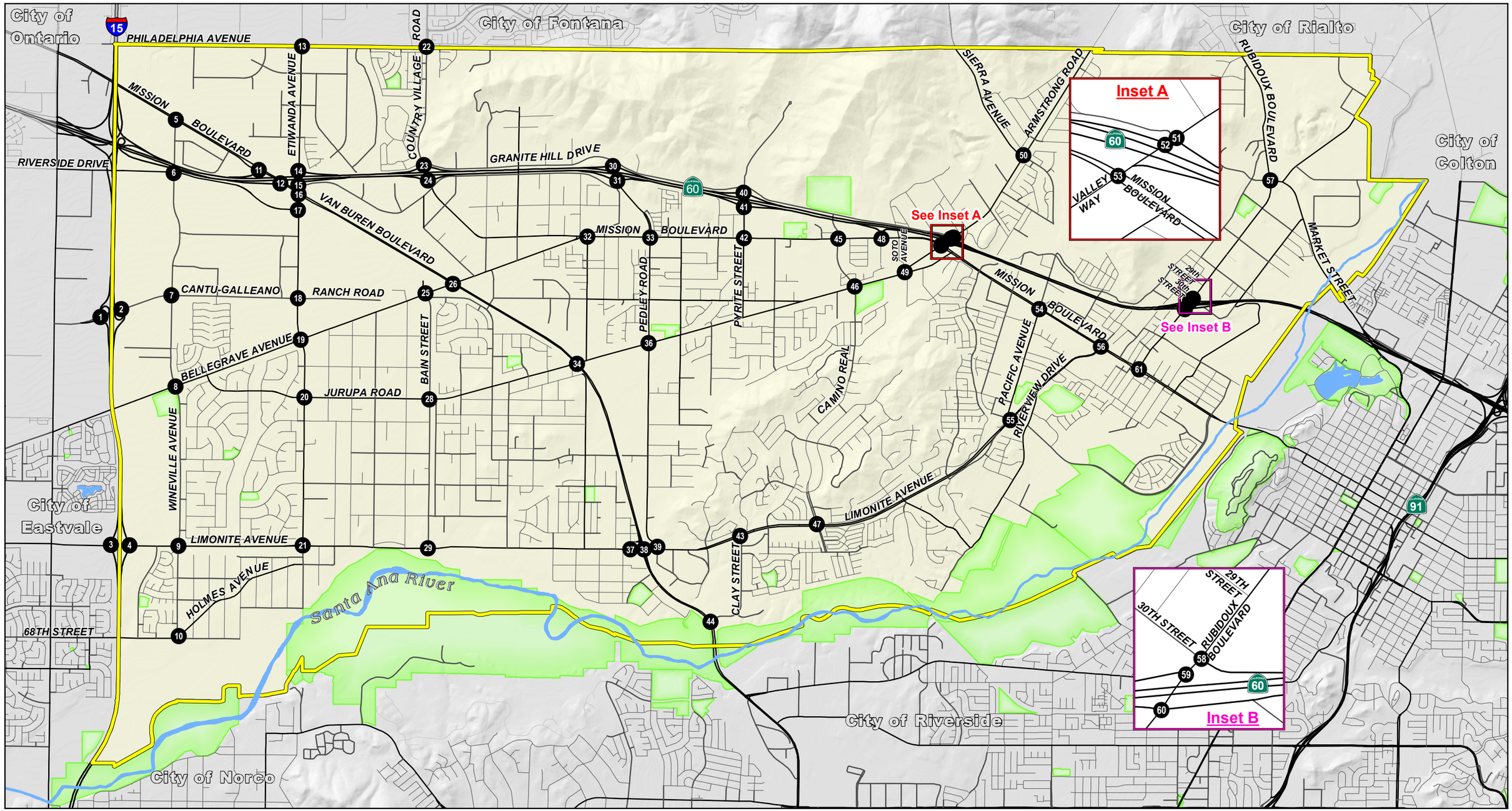

LSA

City of Jurupa Valley
Parks
Study Area Intersections
Existing Intersection

SOURCE: Riverside County 7/2015

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Jurupa Valley General Plan
Traffic Study

Figure 2.4
Study Area Intersections

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56. Riverview Drive/Mission Boulevard;
57. Rubidoux Boulevard/Market Street;
58. Rubidoux Boulevard/SR-60 Westbound Off-Ramp-30th Street;
59. Rubidoux Boulevard/SR-60 Westbound On-Ramp;
60. Rubidoux Boulevard/SR-60 Eastbound Ramps; and
61. Rubidoux Boulevard/Mission Boulevard.

Study Area Roadways

The major roadways within the City of Jurupa Valley are described below:

Wineville Avenue is oriented in a north-south direction and from Mission Boulevard to Riverside Drive is a four-lane Major, from Riverside Drive to Cantu-Galleano Ranch Road is a four-lane Secondary, from Cantu-Galleano Ranch Road to Bellegrave Avenue is a three-lane Secondary, from Bellegrave Avenue to Elba Drive is a four-lane Major, from Elba Drive to Boca Place is a two-lane Collector, from Boca Place to Limonite Avenue is a four-lane Major, and from Limonite Avenue to 68th street is a three-lane Major. The speed limit on Wineville Avenue varies from 45–50 miles per hour.

Etiwanda Avenue is oriented in a north-south direction and is a six-lane Urban Arterial from the northern City limits to State Route 60 (SR-60) and transitions to a four-lane Arterial from SR-60 to Van Buren Boulevard. The segment from Van Buren Boulevard to Cantu-Galleano Ranch Road is a four-lane Major, from Cantu-Galleano to Bellegrave Avenue is a three-lane Major, from Bellegrave Avenue to Limonite Avenue is a four-lane Major, and from Limonite Avenue Holmes Avenue is a two-lane Secondary. Etiwanda Avenue has a speed limit of 45–55 miles per hour.

Bain Street is oriented in a north-south direction and is a two-lane Collector. Additional right-of-way is available for a four-lane Major. The speed limit on Bain Street is 45 miles per hour.

Country Village Road is oriented in a north-south direction and is a three-lane Major from Philadelphia Avenue to Country Club Drive. The segment from Country Club Drive to Ben Nevis Boulevard is a four-lane Major. The speed limit on Country Village Road is 45 miles per hour.

Pedley Road is oriented in a north-south direction and is a two-lane Major from Granite Hill Drive to Francisco Junior Avenue. The segment from Francisco Junior Avenue to Mission Boulevard is a four-lane Major, from Mission Boulevard to Jurupa Road is a three-lane Major, from Jurupa Road to 60th Street is a two-lane Collector, and from 60th Street to Limonite Avenue is a two-lane Major. The speed limit on Pedley Road is 45 miles per hour.

Pyrite Street is oriented in a north-south direction and is a two-lane Collector north of Granite Hill Drive. The segment from Granite Hill Drive to SR-60 EB Ramps is a two-lane Secondary, from SR-60 WB Ramps to Mission Boulevard is a two-lane Collector, from Mission Boulevard to Galena Street is a two-lane Major, and from Galena Street to Jurupa Road is a two-lane Collector. The speed limit on Pyrite Street is 40 miles per hour.

Clay Street is oriented in a north-south direction from Limonite Avenue to General Road and transitions to an east-west direction from General Road to Van Buren Boulevard. Clay Street is a four-lane Major with a speed limit of 35 miles per hour.

Camino Real is oriented in a north-south direction and is a two-lane Secondary from Granite Hill Drive to Mission Boulevard. The segment from Mission Boulevard to Jurupa Road is a four-lane Arterial, from Jurupa Road to Whitney Drive is a two-lane Collector, from Whitney Drive to Limonite Avenue is a four-lane Major. The speed limit on Camino Real is 25–40 miles per hour.

Philadelphia Avenue is oriented in an east-west direction from the western City limits to Rochester Avenue, from Rochester Avenue to Wineville Avenue is a two-lane Major, from Wineville Avenue to Etiwanda Avenue is a three-lane Major, and from Etiwanda Avenue to Country Village Road is a two-lane Major. The speed limit on Philadelphia Avenue is 45 miles per hour.

Van Buren Boulevard is oriented in a north-south direction and is a four-lane Arterial from the western City limits to the southern City limits. The speed limit on Van Buren Boulevard is generally 55 miles per hour.

Riverside Drive is oriented in an east-west direction and is a three-lane Major. The speed limit on Riverside Drive is 50 miles per hour.

Cantu-Galleano Ranch Road is oriented in an east-west direction and is a six-lane Urban Arterial from the I-15 northbound ramps to Wineville Avenue/Road. The segment from Wineville Avenue/Road to Etiwanda Avenue is a two-lane Arterial, and from Etiwanda Avenue to west of Dodd Street is a four-lane Major. The speed limit on Cantu-Galleano Ranch Road is 45 miles per hour.

Mission Boulevard is oriented an east-west direction and is a four-lane Secondary from SR-60 EB Ramps to Bellegrave Avenue, from Bellegrave Avenue to Pedley Road is a four-lane Major, from Pedley Road to Pyrite Street is a four-lane Secondary, from Pyrite Street to SR-60 EB Ramps is a four-lane Major, from SR-60 EB Ramps to Valley Way is a four-lane Secondary, and from Valley Way to east of Rubidoux Boulevard is a four-lane Arterial. The speed limit on Mission Boulevard is generally 35–45 miles per hour.

Bellegrave Avenue is oriented in an east-west direction and is a three to four-lane Major from Wineville Avenue to Bain Street, and transitions to a two-lane Major east of Bain Street. Bellegrave Avenue has a speed limit of 25–45 miles per hour.

Jurupa Road is oriented in an east-west direction and is two-lane Secondary roadway from Bellegrave Avenue to Etiwanda Avenue and from Etiwanda Avenue to Valley is a two-lane Collector. The speed limit on Jurupa Road is 40–45 miles per hour.

Valley Way is oriented in a north-south direction and is two-lane Collector from Jurupa Road to Mission Boulevard, from Mission Boulevard to SR-60 is a four-lane Arterial, from SR-60 to Sierra Avenue is a four-lane Major, and north of Sierra Avenue is a two-lane Major. The speed limit on Valley Way is 30–45 miles per hour.

Limonite Avenue is oriented in an east-west direction and is a four-lane Major from I-15 SB Ramps to I-15 NB Ramps, from I-15 NB Ramps to Wineville Avenue is a four-lane Arterial, from Wineville Avenue to Etiwanda Avenue is a four-lane Major, from Etiwanda Avenue to Collings Street is a two-lane Major, from Collins Street to Pedley Road is a four-lane Major, from Pedley Road to Clay Street is a four-lane Arterial, from Clay Street to Riverview Drive is a five-lane Urban Arterial, and from Riverview Drive to Mission Boulevard is a four-lane Major. The speed limit on Limonite Avenue is generally 45–50 miles per hour.

Rubidoux Boulevard is oriented in a north-south direction and is a two-lane Collector from Tilton Avenue to Mission Boulevard, a four-lane Major from Mission Boulevard to 20th Street, a four-lane arterial from 20th Street to Production Circle, and a four-lane Major from Production Circle to the northern City limits. The speed limit on Rubidoux Boulevard is 40–50 miles per hour.

Congestion

Congestion results when traffic demand approaches or exceeds the available capacity of the system. While this is a simple concept, it is not constant. Traffic demands vary significantly depending on the season of the year, the day of the week, and even the time of day. Also, the capacity can change because of weather, work zones, traffic incidents, or special events.

Congestion can be classified as either recurring or non-recurring. Recurring congestion most often occurs when the volume of traffic on a facility becomes more than that facility can handle. Non-recurring congestion is usually short in duration and is caused by such things as weather, construction, or special events. One way to gauge the level of congestion is grading a facility on its level of service.

Level of Service Definitions

Roadway operations and the relationship between capacity and traffic volumes are generally expressed in terms of levels of service (which are defined using the letter grades A through F). These levels recognize that, while an absolute limit exists as to the amount of traffic traveling through a given intersection (the absolute capacity), the conditions that motorists experience rapidly deteriorate as traffic approaches the absolute capacity. Under such conditions, congestion is experienced. There is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays. This near-capacity situation is labeled Level of Service (LOS) E. Beyond LOS E, capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it. An upstream queue will then form and continue to expand in length until the demand volume again declines.

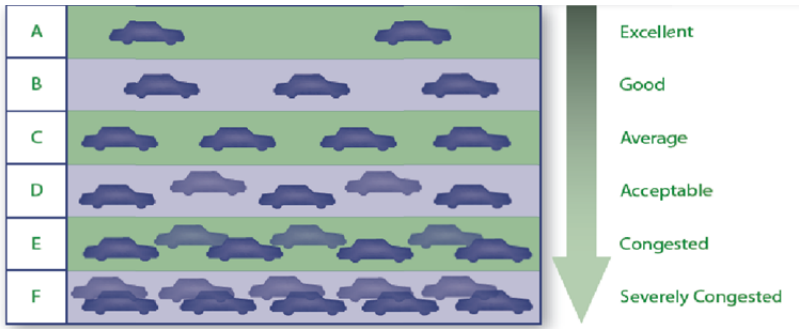
A complete description of the meaning of level of service can be found in the Transportation Research Board Special Report 209, *Highway Capacity Manual 2010* (HCM 2010). For both roadway segments and intersections, the HCM establishes levels of service A through F as shown in Table 2.A and Figure 2.5.

Table 2.A: Level of Service Definitions

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

Source: Highway Capacity Manual 2010

FIGURE 2.5: LEVEL OF SERVICE



Source: FHWA

The LOS criteria used to evaluate signalized and unsignalized intersections are based on HCM 2010 methodologies and are shown in

Table 2.B. All levels of service were calculated using Synchro 9 software, which uses HCM 2010 methodologies.

Table 2.B: Level of Service Criteria for Unsignalized and Signalized Intersections

Level of Service	Unsignalized Intersection Average Delay per Vehicle (seconds)	Signalized Intersection Average Delay per Vehicle (seconds)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Source: Highway Capacity Manual, 2010.

The level of service criteria used to evaluate roadway segments is based on the daily capacity for each functional classification and is shown in Table 2.C. The daily traffic volume represents the total vehicles (both directions) traveling on a roadway segment within 24 hours.

Table 2.C: Roadway Segment Capacity and Levels of Service

Functional Classification	Number of Lanes	Maximum Two-Way Daily Traffic Volume		
		Level of Service C	Level of Service D	Level of Service E
Collector Street	2	10,400	11,700	13,000
Secondary	4	20,700	23,300	25,900
Major	4	27,300	30,700	34,100
Arterial	4	28,700	32,300	35,900
Urban Arterial	4	28,700	32,300	35,900
Urban Arterial	6	43,100	48,500	53,900
Urban Arterial	8	57,400	64,600	71,800
Expressway	6	49,000	55,200	61,300
Expressway	8	65,400	73,500	81,700
Freeway	6	94,000	105,800	200,600
Freeway	8	128,400	144,500	160,500

Source: Riverside County Congestion Management Program, 2011

Level of Service Standard

With the development of this General Plan Circulation Element, the City of Jurupa Valley will establish an LOS standard for intersections and roadways. This set of standards will balance the need for safe and efficient mobility with key quality of life and community standards. Many cities within the County maintain LOS D as their minimum threshold for their roadway systems. The County of Riverside maintains an LOS standard of D; therefore, for this particular analysis, LOS D was used for the intersection and roadway segment LOS analysis. Intersections or roadway segments operating at LOS E or F exceed the minimum LOS standard D. This threshold may be revisited and modified based on a balancing of overall community objectives.

Caltrans endeavors to maintain levels of service between C and D at all intersections under its jurisdiction; this has been interpreted to mean that a maximum average delay at a Caltrans intersection exceeding 45 seconds is considered to exceed the minimum LOS standard.

Existing Intersection Traffic Volumes

Existing intersection traffic volumes are based on a.m. and p.m. peak hour intersection turn movement counts within the City collected by Counts Unlimited in June 2015 and National Data and Surveying Services in September 2015. For several intersections, counts were conducted between 2012 and 2014. For these intersections, a growth rate of 1

percent per year was applied to develop 2015 volumes at these locations. Count sheets are contained in Appendix A. Classification counts separate vehicle types into passenger cars, two-axle trucks, three-axle trucks, and trucks with four or more axles. The concept of passenger car equivalents (PCEs), accounts for the larger impact of trucks on traffic operations. It does so by assigning each type of truck a PCE factor that represents the number of passenger vehicles that could travel through an intersection in the same time that a particular type of truck could. For example, trucks with four or more axles have been assigned a PCE factor of 3.0, indicating that three passenger vehicles could travel through an intersection in the same amount of time required for a single truck with four or more axles. PCE volumes for study area locations with classification counts were computed using a PCE factor of 1.5 for two-axle trucks, 2.0 for three-axle trucks, and 3.0 for trucks with four or more axles. The percentage of trucks at the remaining study intersections without classification counts was determined from classification counts at nearby intersections. PCE volumes for these intersections were computed using a PCE factor of 2.0 for all trucks. Detailed volume development worksheets are included in Appendix B. Figures 2.6-1 and 2.6-2 illustrate the existing intersection geometrics and stop control at the study intersections. The existing a.m. and p.m. peak hour traffic volumes for the study intersections are illustrated in Figures 2.7-1 and 2.7-2.

Existing Roadway Segment Traffic Volumes

The existing daily traffic volumes at study area roadway segments are based on traffic counts conducted by the City of Jurupa Valley between 2012 and 2014. A growth rate of one percent per year was then applied to the counts. Table 2.D shows the existing daily traffic volumes at study area roadway segments.

Existing Intersection Levels of Service

A site survey was conducted at the study area intersections to observe the intersection geometrics, turn pocket lengths, and existing signal cycle lengths. The results of the survey were included as input parameters into the Synchro 9 software. A level of service analysis was conducted at study area intersections to determine current intersection performance and is shown in Table 2.E, which shows all intersections are currently operating at satisfactory levels of service, with the exception of the following 12 intersections:

- Wineville Road/Mission Boulevard (p.m. peak hour);
- Mission Boulevard/SR-60 EB Off-Ramp (a.m. and p.m. peak hours);
- Etiwanda Avenue/Limonite Avenue (a.m. and p.m. peak hours);
- Country Village Road/SR-60 WB Ramps (a.m. peak hour);
- Pedley Road/SR-60 WB Ramps (a.m. and p.m. peak hours);
- Van Buren Boulevard/Jurupa Road (a.m. and p.m. peak hours);
- Pedley Road/Jurupa Road (a.m. and p.m. peak hours);
- Van Buren Boulevard/Clay Street (p.m. peak hour);
- Camino Real/Jurupa Road (a.m. peak hour);
- Armstrong Road/Sierra Avenue (a.m. and p.m. peak hours);
- Riverview Drive/Mission Boulevard (p.m. peak hour);
- Rubidoux Boulevard/Market Street (p.m. peak hour); and
- Rubidoux Boulevard/Mission Boulevard (p.m. peak hour).

Figures 2.8-1 and 2.8-2 illustrate the locations of the study area intersections and corresponding a.m. and p.m. levels of service.

Existing Roadway Segment Levels of Service

A level of service analysis was conducted at study area roadway segments to determine current roadway segment performance. As shown in Table 2.D, all roadway segments are currently operating at

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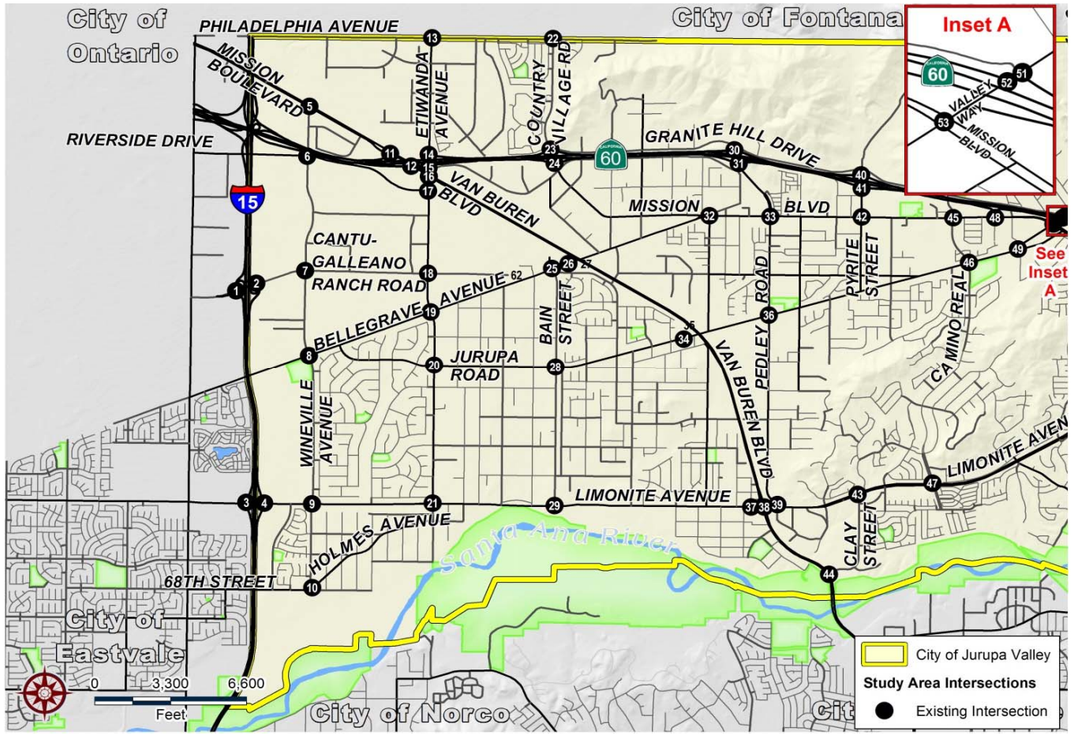
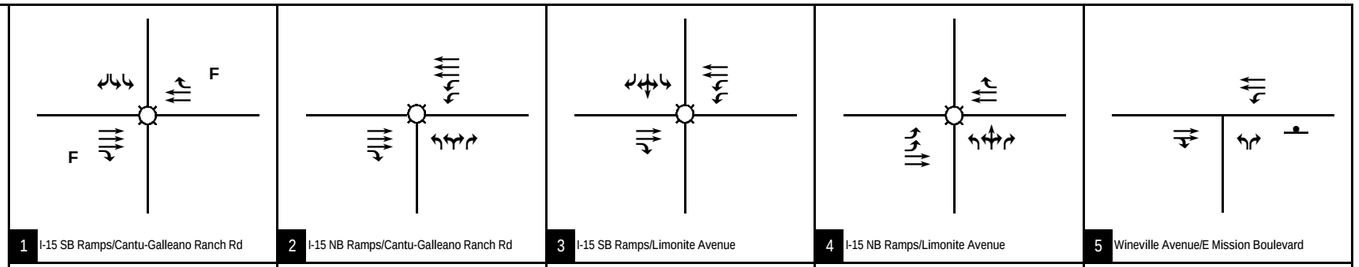




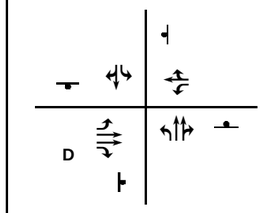
1 I-15 SB Ramps/Cantu-Galleano Ranch Rd

2 I-15 NB Ramps/Cantu-Galleano Ranch Rd

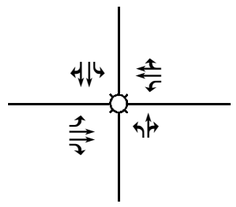
3 I-15 SB Ramps/Limonite Avenue

4 I-15 NB Ramps/Limonite Avenue

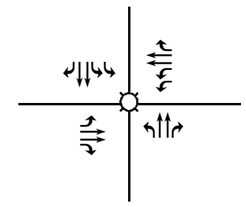
5 Wineville Avenue/E Mission Boulevard



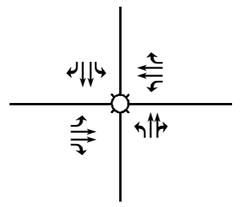
6 Wineville Avenue/Riverside Drive



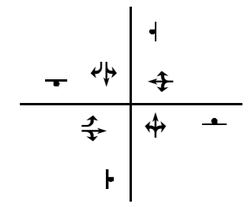
7 Wineville Avenue/Cantu-Galleano Ranch Rd



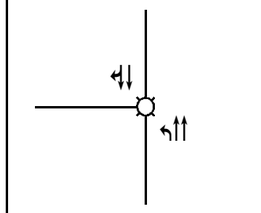
8 Wineville Avenue/Bellegrave Avenue



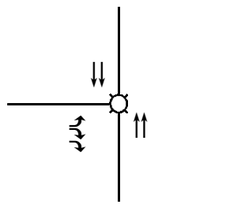
9 Wineville Avenue/Limonite Avenue



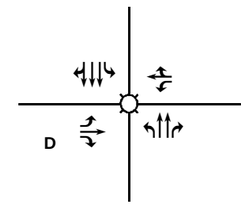
10 Wineville Avenue/68th Street



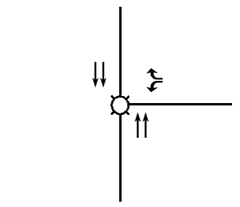
11 E Mission Boulevard/SR-60 Westbound On-Ram



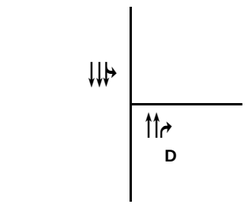
12 E Mission Boulevard/SR-60 Eastbound Off-Ramp



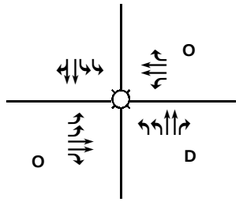
13 Etiwanda Avenue/Philadelphia Avenue



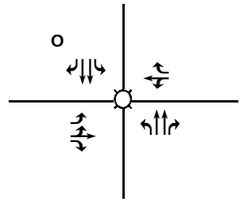
14 Etiwanda Avenue/SR-60 Westbound Off-Ramp



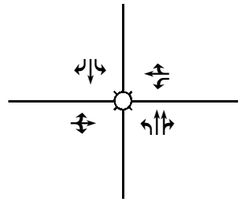
15 Etiwanda Avenue/SR-60 Eastbound On-Ramp



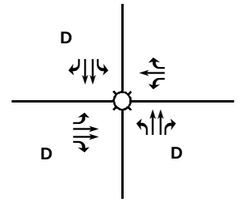
16 Etiwanda Avenue/Van Buren Boulevard



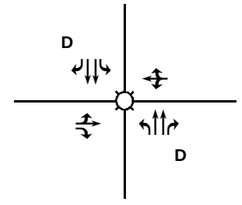
17 Etiwanda Avenue/Riverside Drive



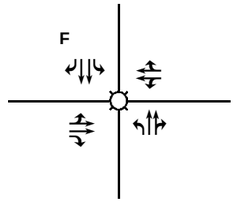
18 Etiwanda Avenue/Cantu-Galleano Ranch Rd



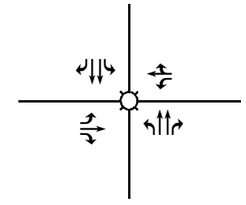
19 Etiwanda Avenue/Bellegrave Avenue



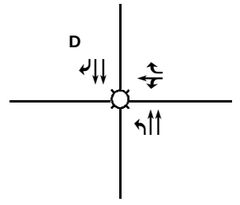
20 Etiwanda Avenue/Jurupa Road



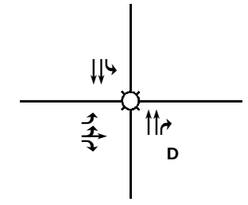
21 Etiwanda Avenue/Limonite Avenue



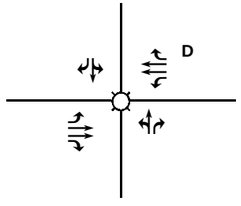
22 Country Village Road/Philadelphia Avenue



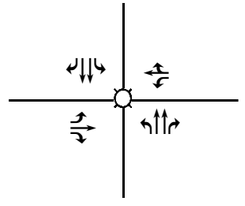
23 Country Village Road/SR-60 Westbound Ramps



24 Mission Boulevard/SR-60 Eastbound Ramps



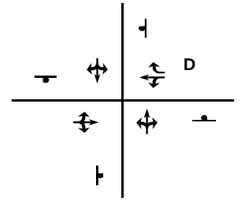
25 Bain Street/Bellegrave Avenue



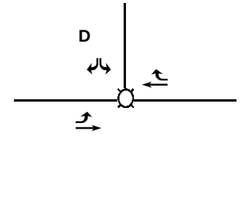
26 Van Buren Boulevard /Bellegrave Avenue

Future Intersection

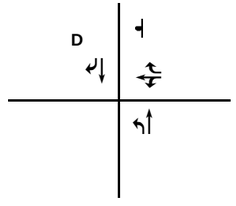
27 Future Bellegrave Ave Intersection @ Van Buren Boulevard



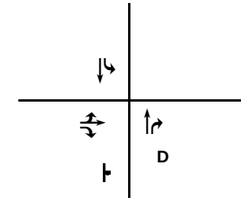
28 Bain Street/Jurupa Road



29 Bain Street/Limonite Avenue



30 Pedley Road/SR-60 Westbound Ramps



31 Pedley Road/SR-60 Eastbound Ramps

LSA

Legend

Signal
Stop Sign

D De-Facto Right-Turn Lane
F Free Right-Turn Lane
O Right-Turn Overlap

Jurupa Valley General Plan
Traffic Study
Figure 2.6-1
Existing Intersection Geometrics & Stop Control

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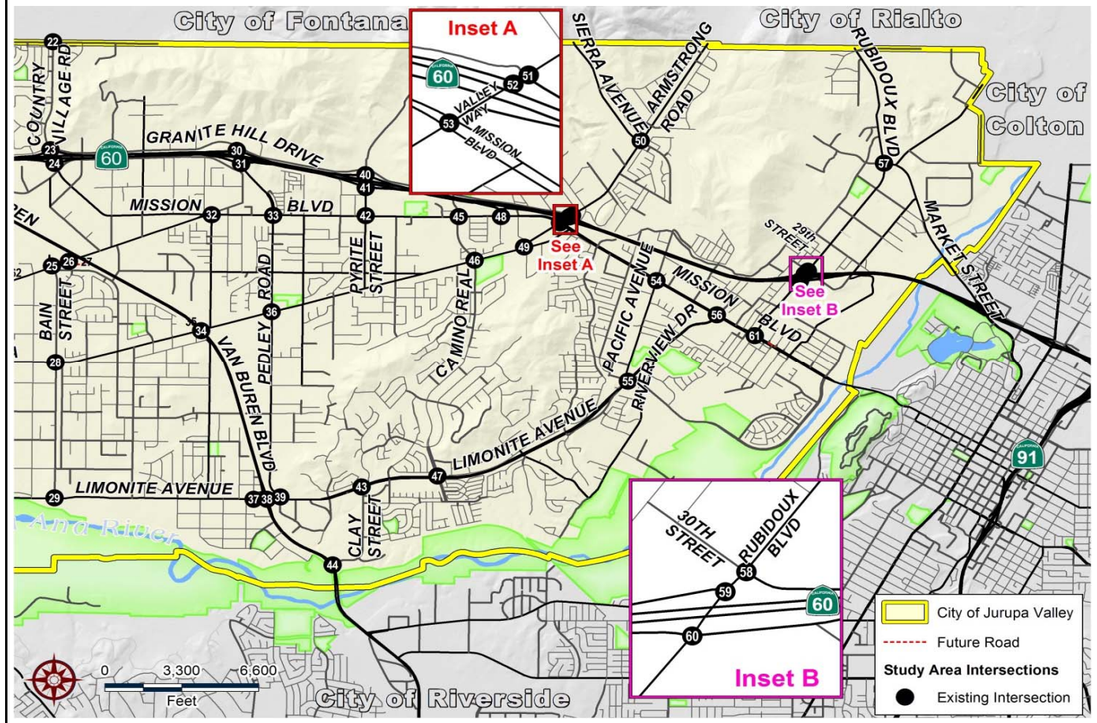
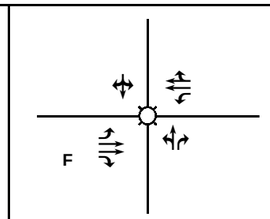
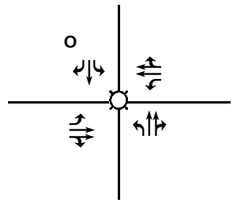
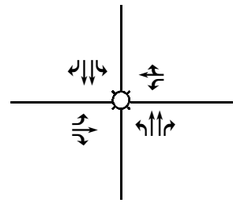




32 Bellegrave Avenue/Mission Boulevard



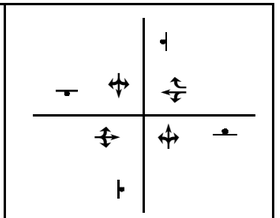
33 Pedley Road/Mission Boulevard



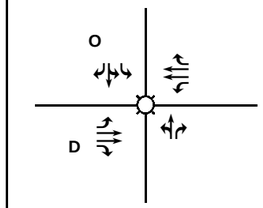
34 Van Buren Boulevard /Jurupa Road

Future Intersection

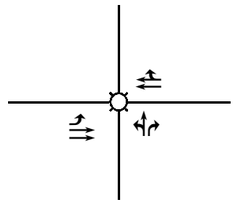
35 Future Jurupa Rd Intersection @ Van Buren Boulevard



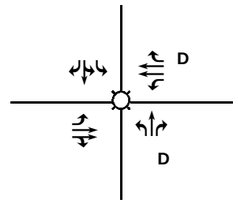
36 Pedley Road/Jurupa Road



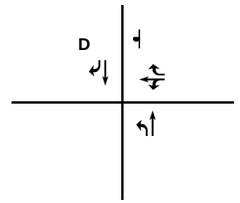
37 Collins Street/Limonite Avenue



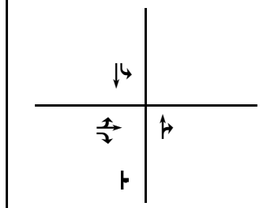
38 Van Buren Boulevard /Limonite Avenue



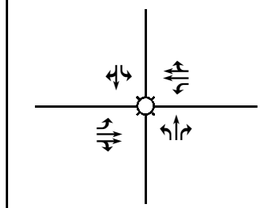
39 Pedley Road-Morton Avenue/Limonite Avenue



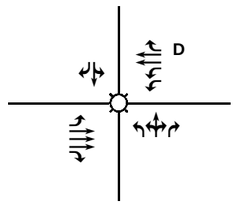
40 Pyrite Street/SR-60 Westbound Ramps



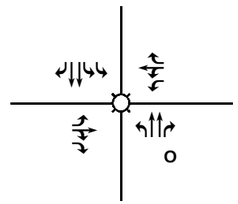
41 Pyrite Street/SR-60 Eastbound Ramps



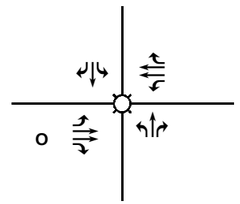
42 Pyrite Street/Mission Boulevard



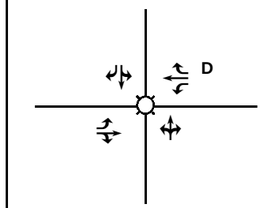
43 Clay Street/Limonite Avenue



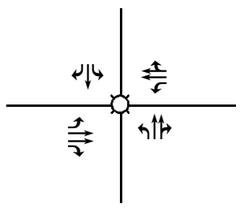
44 Van Buren Boulevard /Clay Street



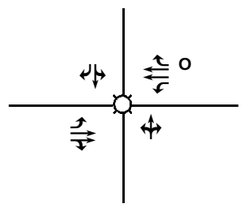
45 Camino Real /Mission Boulevard



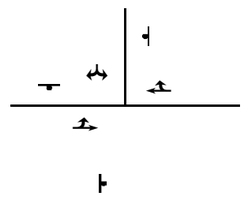
46 Camino Real /Jurupa Road



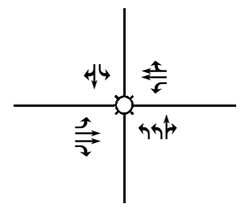
47 Camino Real /Limonite Avenue



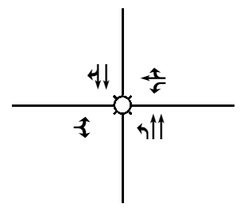
48 Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard



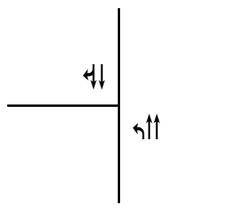
49 Valley Way/Jurupa Road



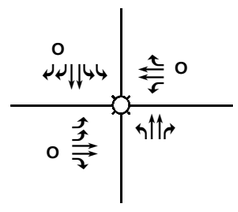
50 Armstrong Road/Sierra Avenue



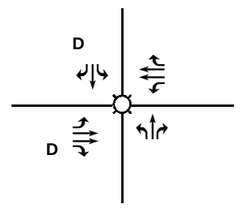
51 Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive



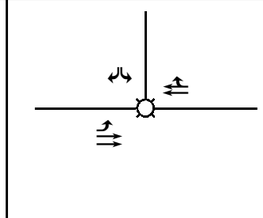
52 Valley Way/SR-60 Westbound On Ramp



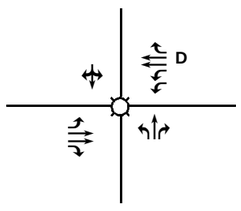
53 Valley Way/Mission Boulevard



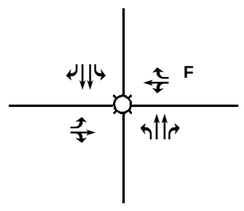
54 Pacific Avenue/Mission Boulevard



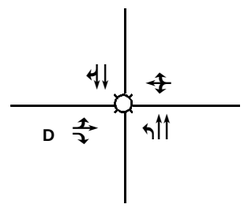
55 Pacific Avenue/Limonite Avenue



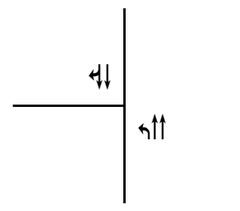
56 Riverview Drive/Mission Boulevard



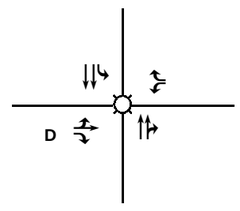
57 Rubidoux Boulevard/Market Street



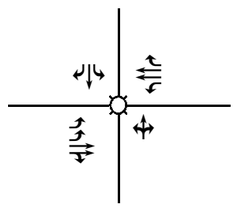
58 Rubidoux Boulevard/SR-60 Westbound Off-Ramp-30th Street



59 Rubidoux Boulevard/SR-60 Westbound On-Ramp



60 Rubidoux Boulevard/SR-60 Eastbound Ramps



61 Rubidoux Boulevard/Mission Boulevard

Future Intersection

62 Bellegrave Avenue/Cantu-Galleano Ranch Rd

LSA

Legend

Signal

Stop Sign

D De-Facto Right-Turn Lane

F Free Right-Turn Lane

O Right-Turn Overlap

Jurupa Valley General Plan
Traffic Study

Figure 2.6-2
Existing Intersection Geometrics & Stop Control

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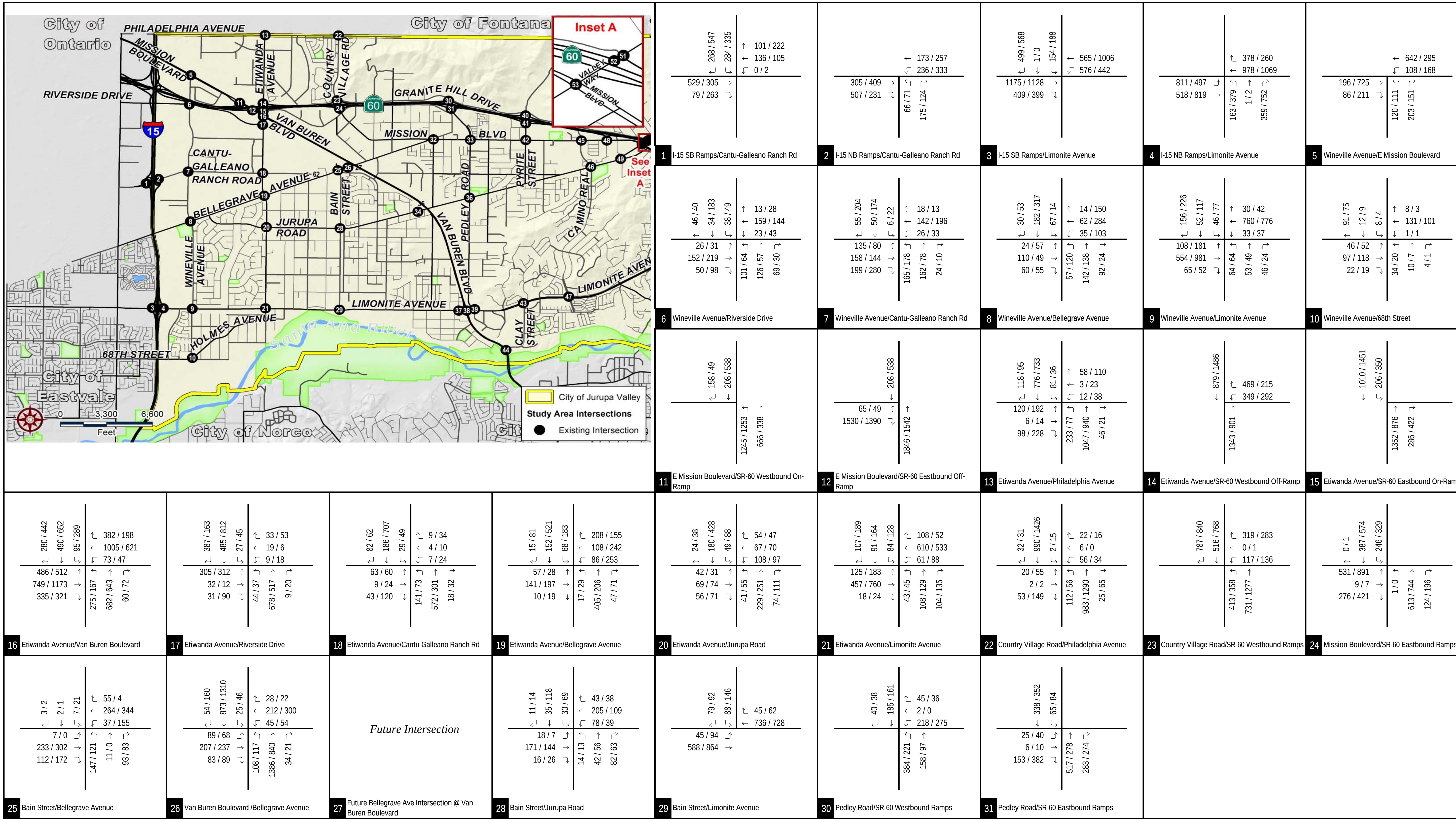

LSA

XXX / YYY AM / PM Peak Hour Volume (In PCEs)

Jurupa Valley General Plan
Traffic Study

Figure 2.7-1
Existing Peak Hour Traffic Volumes

R:\CJV1502_Jurupa GP\Traffic\z45_Vol_Existing_NP 11/2/2016

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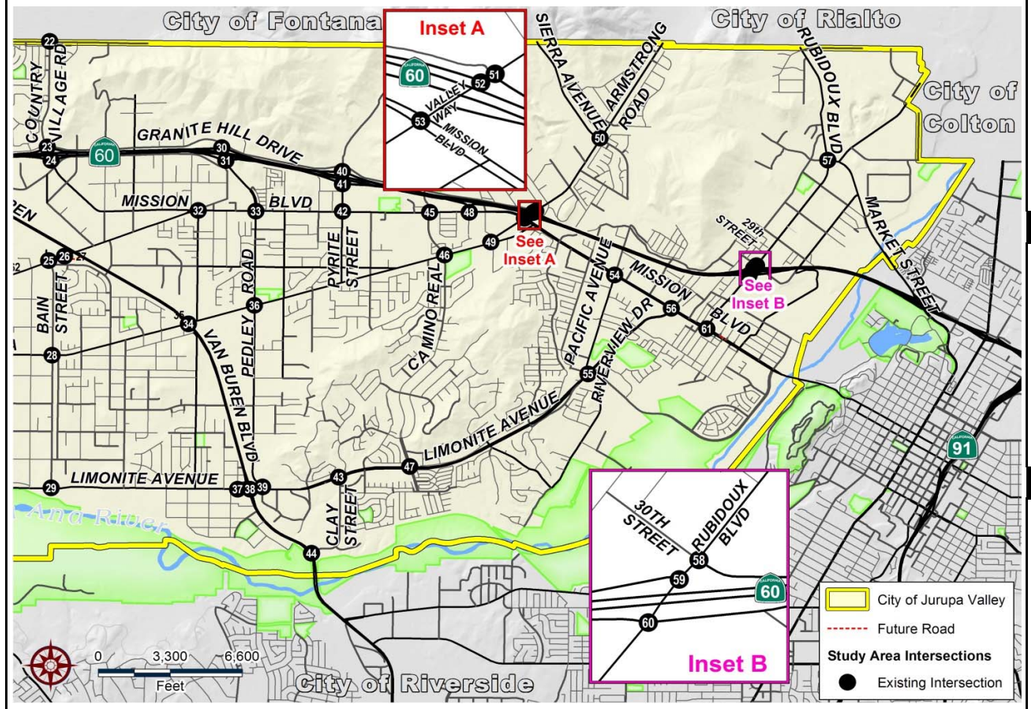

4 / 5	10 / 18	39 / 40	28 / 54								
1 / 4			222 / 227								
192 / 349			131 / 176	4 / 4		10 / 20	109 / 182				
5 / 8											

32 Bellegrave Avenue/Mission Boulevard

120 / 175	277 / 391	60 / 104	104 / 53								
109 / 142			204 / 199								
159 / 335			40 / 28	27 / 59		452 / 330	57 / 45				
31 / 55											

33 Pedley Road/Mission Boulevard

23 / 44	939 / 1523	22 / 33	25 / 25								
84 / 44			154 / 162								
213 / 204			207 / 230	65 / 83		1447 / 887	266 / 273				
63 / 76											

34 Van Buren Boulevard /Jurupa Road

Future Intersection

35 Future Jurupa Rd Intersection @ Van Buren Boulevard

56 / 56	175 / 356	62 / 15	60 / 23								
83 / 50			241 / 210								
281 / 286			75 / 94	44 / 37		291 / 205	60 / 90				
29 / 50											

36 Pedley Road/Jurupa Road

40 / 40	28 / 34	169 / 187	108 / 117								
20 / 29			617 / 738								
618 / 860			51 / 106	22 / 81		1 / 12	37 / 103				
24 / 54											

37 Collins Street/Limonite Avenue

			113 / 122								
68 / 80			549 / 631								
444 / 769				279 / 330		2 / 1	115 / 100				

38 Van Buren Boulevard /Limonite Avenue

89 / 86	10 / 5	91 / 96	51 / 40								
86 / 91			562 / 651								
460 / 766			10 / 10	10 / 15		5 / 5	5 / 5				
10 / 10											

39 Pedley Road-Morton Avenue/Limonite Avenue

175 / 98	82 / 192		79 / 71								
			1 / 3								
			78 / 121	258 / 146		130 / 231					

40 Pyrite Street/SR-60 Westbound Ramps

118 / 193	42 / 120										
72 / 182											
5 / 1											
72 / 300				316 / 195		101 / 64					

41 Pyrite Street/SR-60 Eastbound Ramps

54 / 48	108 / 181	59 / 210	196 / 120								
50 / 40			220 / 197								
216 / 348			63 / 31	61 / 23		154 / 65	74 / 35				
60 / 37											

42 Pyrite Street/Mission Boulevard

38 / 39	49 / 40	21 / 11	17 / 18								
22 / 36			464 / 535								
379 / 693			356 / 428	117 / 126		29 / 59	323 / 483				
73 / 178											

43 Clay Street/Limonite Avenue

29 / 31	1425 / 1872	32 / 49	25 / 39								
7 / 20			14 / 16								
3 / 15			559 / 612	63 / 33		1961 / 1560	447 / 688				
8 / 31											

44 Van Buren Boulevard /Clay Street

44 / 29	73 / 53	35 / 31	30 / 10								
43 / 20			251 / 266								
208 / 371			44 / 82	124 / 104		67 / 31	104 / 56				
62 / 147											

45 Camino Real /Mission Boulevard

59 / 42	130 / 198	42 / 25	73 / 28								
78 / 37			271 / 272								
302 / 355			81 / 162	25 / 30		223 / 104	162 / 126				
34 / 56											

46 Camino Real /Jurupa Road

157 / 142	74 / 97	89 / 80	65 / 71								
80 / 139			493 / 609								
394 / 762			108 / 141	135 / 86		75 / 92	140 / 170				
89 / 151											

47 Camino Real /Limonite Avenue

24 / 56	5 / 5	267 / 701	198 / 174								
80 / 60			303 / 300								
334 / 342			6 / 6	15 / 10		3 / 2	4 / 4				
12 / 7											

48 Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard

249 / 322	5 / 21		23 / 14								
306 / 269			223 / 106								
222 / 178											

49 Valley Way/Jurupa Road

31 / 22	277 / 196	3 / 13	10 / 12								
7 / 36			22 / 19								
12 / 39			42 / 24	767 / 784		148 / 290	18 / 35				
605 / 774											

50 Armstrong Road/Sierra Avenue

20 / 29	1121 / 1019		457 / 439								
54 / 60			69 / 20								
95 / 69			187 / 294	93 / 32		589 / 789					

51 Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive

383 / 258	1011 / 1123										
				274 / 169		675 / 813					

52 Valley Way/SR-60 Westbound On Ramp

372 / 286	271 / 354	369 / 471	644 / 460								
306 / 512			134 / 194								
282 / 517			37 / 58	10 / 8		321 / 255	39 / 40				
19 / 39											

53 Valley Way/Mission Boulevard

64 / 62	35 / 48	20 / 27	45 / 15								
55 / 82			458 / 472								
547 / 531			105 / 122	73 / 90		35 / 37	106 / 37				
52 / 527											

54 Pacific Avenue/Mission Boulevard

88 / 103	83 / 63		97 / 57								
			285 / 588								
111 / 123											
552 / 567											

55 Pacific Avenue/Limonite Avenue

36 / 27	60 / 46	16 / 29	31 / 39								
42 / 101			479 / 486								
560 / 750			410 / 458	205 / 84		93 / 67	372 / 339				
117 / 137											

56 Riverview Drive/Mission Boulevard

14 / 25	508 / 519	273 / 263	285 / 26								
23 / 17			23 / 543								
35 / 34			198 / 275	3 / 11		261 / 441	213 / 312				
8 / 7											

57 Rubidoux Boulevard/Market Street

16 / 18	584 / 754		88 / 78								
7 / 31			89 / 91								
164 / 168			328 / 445	68 / 101		461 / 722					

58 Rubidoux Boulevard/SR-60 Westbound Off-Ramp-30th Street

352 / 413	723 / 954										
				263 / 177		529 / 823					

59 Rubidoux Boulevard/SR-60 Westbound On-Ramp

549 / 830	174 / 124		10 / 4								
283 / 478			7 / 14								
15 / 29				497 / 518		499 / 299					
159 / 275											

60 Rubidoux Boulevard/SR-60 Eastbound Ramps

269 / 447	85 / 148	273 / 242	182 / 147								
377 / 335			351 / 512								
406 / 468			90 / 202	18 / 27		157 / 115	10 / 21				
4 / 11											

61 Rubidoux Boulevard/Mission Boulevard

LSA

XXX / YYY AM / PM Peak Hour Volume (In PCEs)

Jurupa Valley General Plan
Traffic Study

Figure 2.7-2
Existing Peak Hour Traffic Volumes

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Table 2.D: Existing Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Existing Conditions		
			Daily Volume	V/C	LOS
Segments on Wineville Avenue/Road					
1	East Mission Boulevard to Riverside Drive	4-Lane Major	4,443	0.13	C
2	Riverside Drive to Cantu-Galleano Ranch Road	4-Lane Secondary	3,995	0.15	C
3	Cantu-Galleano Ranch Road to Bellegrave Avenue	3-Lane Secondary	4,326	0.22	C
4	Bellegrave Avenue to Limonite Avenue	3-Lane Major	4,340	0.17	C
5	Limonite Avenue to 68th Street	3-Lane Major	2,600	0.10	C
Segments on Etiwanda Avenue					
6	Philadelphia Avenue to SR-60 WB Off-Ramp	6-Lane Urban Arterial	32,607	0.60	C
7	SR-60 WB Off-Ramp to SR-60 EB On-Ramp	4-Lane Arterial	30,196	0.84	D
8	SR-60 EB On-Ramp to Van Buren Boulevard	4-Lane Arterial	22,794	0.63	C
9	Van Buren Boulevard to Riverside Drive	4-Lane Major	16,803	0.49	C
10	Riverside Drive to Cantu-Galleano Ranch Road	4-Lane Major	12,059	0.35	C
11	Cantu-Galleano Ranch Road to Bellegrave Avenue	3-Lane Major	11,130	0.44	C
12	Bellegrave Avenue to Jurupa Road	4-Lane Arterial	10,422	0.29	C
13	Jurupa Road to Limonite Avenue	4-Lane Arterial	11,407	0.32	C
14	Limonite Avenue to Holmes Avenue	2-Lane Secondary	8,175	0.63	C
Segments on Bain Street					
15	Bellegrave Avenue to Jurupa Road	2-Lane Collector	3,402	0.26	C
16	Jurupa Road to Limonite Avenue	2-Lane Collector	2,830	0.22	C
Segments on Country Village Road					
17	Philadelphia Avenue to SR-60 WB Ramps	3-Lane Major	38,338	1.50	F
18	SR-60 WB Ramps to SR-60 EB Ramps	4-Lane Major	43,211	1.27	F
Segments on Pedley Road					
19	SR-60 WB Ramps to SR-60 EB Ramps	2-Lane Major	8,646	0.51	C
20	SR-60 EB Ramps to Mission Boulevard	2-Lane Major	14,121	0.83	D
21	Mission Boulevard to Jurupa Road	3-Lane Major	11,646	0.46	C
22	Jurupa Road to Limonite Avenue	2-Lane Major	10,138	0.59	C

Table 2.D: Existing Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Existing Conditions		
			Daily Volume	V/C	LOS
Segments on Pyrite Street					
23	SR-60 WB Ramps to SR-60 EB Ramps	2-Lane Major	6,800	0.40	C
24	SR-60 EB Ramps to Mission Boulevard	2-Lane Collector	7,530	0.58	C
Segments on Clay Street					
25	Limonite Avenue to Van Buren Boulevard	4-Lane Major	18,645	0.55	C
Segments on Camino Real					
26	Mission Boulevard to Jurupa Road	4-Lane Arterial	6,843	0.19	C
27	Jurupa Road to Limonite Avenue	4-Lane Major	8,114	0.24	C
Segments on Philadelphia Avenue					
28	Etiwanda Avenue to Country Village Road	2-Lane Major	3,458	0.20	C
Segments on Van Buren Boulevard-East Mission Boulevard					
29	Wineville Road to SR-60 WB On-Ramp	4-Lane Arterial	17,255	0.48	C
30	SR-60 WB On-Ramp to SR-60 EB Off-Ramp	4-Lane Arterial	30,077	0.84	D
31	SR-60 EB Off Ramp to Etiwanda Avenue	4-Lane Arterial	27,804	0.77	C
32	Etiwanda Avenue to Bellegrave Avenue	4-Lane Arterial	41,999	1.17	F
33	Bellegrave Avenue to Jurupa Road	4-Lane Arterial	56,117	1.56	F
34	Jurupa Road to Limonite Avenue	4-Lane Arterial	50,795	1.41	F
35	Limonite Avenue to Clay Street	4-Lane Arterial	50,912	1.42	F
Segments on Riverside Drive					
36	Wineville Road to Etiwanda Avenue	3-Lane Major	6,353	0.25	C
Segments on Cantu-Galleano Rancho Road					
37	I-15 SB Ramps to I-15 NB Ramps	6-Lane Urban Arterial	10,001	0.19	C
38	I-15 NB Ramps to Wineville Avenue	6-Lane Urban Arterial	10,172	0.19	C
39	Wineville Avenue/Road to Etiwanda Avenue	2-Lane Arterial	4,843	0.27	C
Segments on Mission Boulevard					
40	SR-60 EB Ramps to Bellegrave Avenue	4-Lane Secondary	10,825	0.42	C
41	Bellegrave Avenue to Pedley Road	4-Lane Major	10,612	0.31	C

Table 2.D: Existing Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Existing Conditions		
			Daily Volume	V/C	LOS
42	Pedley Road to Pyrite Street	4-Lane Secondary	8,738	0.34	C
43	Pyrite Street to Camino Real	4-Lane Major	12,372	0.36	C
44	Camino Real to SR-60 EB Ramps	4-Lane Major	10,875	0.32	C
45	SR-60 EB Ramps to Valley Way	4-Lane Secondary	19,354	0.75	C
46	Valley Way to Riverview Drive	4-Lane Arterial	18,752	0.52	C
47	Riverview Drive to Rubidoux Boulevard	4-Lane Arterial	18,063	0.50	C
48	East of Rubidoux Boulevard	4-Lane Arterial	19,936	0.56	C
Segments on Bellegrave Avenue					
49	West of Wineville Avenue	3-Lane Major	16,747	0.65	C
50	Wineville Avenue to Etiwanda Avenue	3-Lane Major	8,489	0.33	C
51	Etiwanda Avenue to Bain Street	4-Lane Major	10,350	0.30	C
52	Bain Street to Van Buren Boulevard	2-Lane Major	7,679	0.45	C
53	Van Buren Boulevard to Mission Boulevard	2-Lane Major	8,022	0.47	C
Segments on Jurupa Road					
54	Bellegrave Avenue to Etiwanda Avenue	2-Lane Secondary	4,514	0.35	C
55	Etiwanda Avenue to Bain Street	2-Lane Collector	4,870	0.37	C
56	Bain Street to Van Buren Boulevard	2-Lane Collector	10,562	0.81	D
57	Van Buren Boulevard to Pedley Road	2-Lane Collector	11,584	0.89	D
58	Pedley Road to Camino Real	2-Lane Collector	8,499	0.65	C
59	Camino Real to Valley Way	2-Lane Collector	9,700	0.75	C
Segments on Valley Way-Armstrong Road					
60	Jurupa Road to Mission Boulevard	2-Lane Collector	7,721	0.59	C
61	Mission Boulevard to SR-60 EB On-Ramp	4-Lane Arterial	31,166	0.87	D
62	SR-60 EB On-Ramp to SR-60 WB Ramps	4-Lane Arterial	30,305	0.84	D
63	SR-60 WB Ramps to Sierra Avenue	4-Lane Major	27,994	0.82	D
64	North of Sierra Avenue	2-Lane Major	10,902	0.64	C

Table 2.D: Existing Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Existing Conditions		
			Daily Volume	V/C	LOS
Segments on Limonite Avenue					
65	I-15 SB Ramps to I-15 NB Ramps	4-Lane Major	32,893	0.96	E
66	I-15 NB Ramps to Wineville Avenue	4-Lane Arterial	27,564	0.77	C
67	Wineville Avenue to Etiwanda Avenue	4-Lane Major	22,764	0.67	C
68	Etiwanda Avenue to Bain Street	2-Lane Major	20,765	1.22	F
69	Bain Street to Collins Street	2-Lane Major	20,418	1.20	F
70	Collins Street to Van Buren Boulevard	4-Lane Major	26,016	0.76	C
71	Van Buren Boulevard to Pedley Road	4-Lane Major	19,143	0.56	C
72	Pedley Road to Clay Street	4-Lane Arterial	19,249	0.54	C
73	Clay Street to Riverview Drive	5-Lane Urban Arterial	25,339	0.74	C
74	Riverview Drive to Mission Boulevard	4-Lane Major	14,864	0.44	C
Segments on Rubidoux Boulevard					
75	Mission Boulevard to SR-60 EB Ramps	4-Lane Major	18,500	0.54	C
76	SR-60 EB Ramps to SR-60 WB Ramps	4-Lane Major	19,432	0.57	C
77	SR-60 WB Ramps to Market Street	4-Lane Major	21,309	0.62	C
78	North of Market Street	4-Lane Major	18,679	0.55	C
Segments on Holmes Avenue					
79	Wineville Avenue to Etiwanda Avenue	2-Lane Collector	1,846	0.14	C
Segments on Sierra Avenue					
80	West of Armstrong Road	4-Lane Secondary	22,555	0.87	D
Segments on Market Street					
81	East of Rubidoux Boulevard	2-Lane Secondary	17,036	1.32	F
Segments on Agua Mansa Road					
82	North of Market Street	3-Lane Secondary	13,408	0.69	C

LOS = Level of Service, V/C = Volume to Capacity
Capacity based on County of Riverside Link Volume Capacities, March 2001.
Shaded Rows Exceed LOS Standard

Table 2.E: Existing Intersection Levels of Service

	Intersection	Control	Existing Conditions					
			A.M. Peak Hour			P.M. Peak Hour		
			Delay (sec.)	Delay (sec.)	LOS	Delay (sec.)	Delay (sec.)	LOS
1	I-15 SB Ramps/Cantu-Galleano Ranch Road	Signal	16.0	16.0	B	17.6	17.6	B
2	I-15 NB Ramps/Cantu-Galleano Ranch Road	Signal	16.4	16.4	B	21.9	21.9	C
3	I-15 SB Ramps/Limonite Avenue	Signal	30.6	30.6	C	22.6	22.6	C
4	I-15 NB Ramps/Limonite Avenue	Signal	32.5	32.5	C	29.9	29.9	C
5	Wineville Road/E Mission Boulevard	TWSC	28.9	28.9	D	>100	190.1	F
6	Wineville Road/Riverside Drive	AWSC	11.7	11.7	B	13.0	13.0	B
7	Wineville Avenue/Wineville Road/Cantu-Galleano Ranch Road	Signal	39.2	39.2	D	42.3	42.3	D
8	Wineville Avenue/Bellegrave Avenue	Signal	41.8	41.8	D	42.8	42.8	D
9	Wineville Avenue/Limonite Avenue	Signal	30.8	30.8	C	34.9	34.9	C
10	Wineville Avenue/68th Street	AWSC	9.4	9.4	A	8.7	8.7	A
11	E Mission Boulevard/SR-60 WB On-Ramp	Signal	21.7	21.7	C	21.7	21.7	C
12	E Mission Boulevard/SR-60 EB Off-Ramp	Signal	>100	164.4	F	57.4	57.4	E
13	Etiwanda Avenue/Philadelphia Avenue	Signal	26.1	26.1	C	27.4	27.4	C
14	Etiwanda Avenue/SR-60 WB Off-Ramp	Signal	21.4	21.4	C	13.7	13.7	B
15	Etiwanda Avenue/SR-60 EB On-Ramp	TWSC	22.2	22.2	C	13.9	13.9	B
16	Etiwanda Avenue/Van Buren Boulevard	Signal	45.3	45.3	D	53.7	53.7	D
17	Etiwanda Avenue/Riverside Drive	Signal	35.1	35.1	D	33.6	33.6	C
18	Etiwanda Avenue/Cantu-Galleano Ranch Road	Signal	52.2	52.2	D	42.8	42.8	D
19	Etiwanda Avenue/Bellegrave Avenue	Signal	40.8	40.8	D	46.3	46.3	D
20	Etiwanda Avenue/Jurupa Road	Signal	26.0	26.0	C	24.9	24.9	C
21	Etiwanda Avenue/Limonite Avenue	Signal	65.3	65.3	E	64.8	64.8	E
22	Country Village Road/Philadelphia Avenue	Signal	13.9	13.9	B	38.9	38.9	D
23	Country Village Road/SR-60 WB Ramps	Signal	75.9	75.9	E	45.0	45.0	D
24	Mission Boulevard/SR-60 EB Ramps	Signal	26.2	26.2	C	29.3	29.3	C
25	Bain Street/Bellegrave Avenue	Signal	30.8	30.8	C	47.9	47.9	D
26	Van Buren Boulevard /Bellegrave Avenue	Signal	44.9	44.9	D	43.9	43.9	D

Table 2.E: Existing Intersection Levels of Service

	Intersection	Control	Existing Conditions					
			A.M. Peak Hour			P.M. Peak Hour		
			Delay (sec.)	Delay (sec.)	LOS	Delay (sec.)	Delay (sec.)	LOS
27	Future Bellegrave Avenue Intersection @ Van Buren Boulevard	TWSC	*Future Intersection*			*Future Intersection*		
28	Bain Street/Jurupa Road	AWSC	13.0	13.0	B	10.1	10.1	B
29	Bain Street/Limonite Avenue	Signal	12.6	12.6	B	17.8	17.8	B
30	Pedley Road/SR-60 WB Ramps	TWSC	>100	416.2	F	78.3	78.3	F
31	Pedley Road/SR-60 EB Ramps	TWSC	22.5	22.5	C	18.9	18.9	C
32	Bellegrave Avenue/Mission Boulevard	Signal	20.0	20.0	B	21.4	21.4	C
33	Pedley Road/Mission Boulevard	Signal	42.3	42.3	D	43.1	43.1	D
34	Van Buren Boulevard/Jurupa Road	Signal	>100	123.9	F	>100	124.6	F
35	Future Jurupa Road Intersection @ Van Buren Boulevard	TWSC	*Future Intersection*			*Future Intersection*		
36	Pedley Road/Jurupa Road	AWSC	>100	138.6	F	62.4	62.4	F
37	Collins Street/Limonite Avenue	Signal	28.4	28.4	C	33.3	33.3	C
38	Van Buren Boulevard /Limonite Avenue	Signal	24.2	24.2	C	24.5	24.5	C
39	Pedley Road-Morton Avenue/Limonite Avenue	Signal	40.1	40.1	D	41.6	41.6	D
40	Pyrite Street/SR-60 WB Ramps	TWSC	21.4	21.4	C	23.1	23.1	C
41	Pyrite Street/SR-60 EB Ramps	TWSC	15.2	15.2	C	24.7	24.7	C
42	Pyrite Street/Mission Boulevard	Signal	36.0	36.0	D	43.3	43.3	D
43	Clay Street/Limonite Avenue	Signal	52.0	52.0	D	54.9	54.9	D
44	Van Buren Boulevard/Clay Street	Signal	42.9	42.9	D	70.6	70.6	E
45	Camino Real/Mission Boulevard	Signal	44.3	44.3	D	46.7	46.7	D
46	Camino Real/Jurupa Road	Signal	74.1	74.1	E	51.8	51.8	D
47	Camino Real /Limonite Avenue	Signal	50.4	50.4	D	50.5	50.5	D
48	Byrne Road-SR-60 EB Ramps/Mission Boulevard	Signal	34.3	34.3	C	38.0	38.0	D
49	Valley Way/Jurupa Road	AWSC	19.3	19.3	C	16.0	16.0	C
50	Armstrong Road/Sierra Avenue	Signal	60.0	60.0	E	64.6	64.6	E
51	Valley Way/SR-60 WB Off-Ramp-Granite Hill Drive	Signal	42.5	42.5	D	43.4	43.4	D
52	Valley Way/SR-60 WB On Ramp	TWSC	22.0	22.0	C	17.5	17.5	C

Table 2.E: Existing Intersection Levels of Service

Intersection		Control	Existing Conditions					
			A.M. Peak Hour			P.M. Peak Hour		
			Delay (sec.)	Delay (sec.)	LOS	Delay (sec.)	Delay (sec.)	LOS
53	Valley Way/Mission Boulevard	Signal	38.3	38.3	D	38.9	38.9	D
54	Pacific Avenue/Mission Boulevard	Signal	25.0	25.0	C	26.7	26.7	C
55	Pacific Avenue/Limonite Avenue	Signal	19.8	19.8	B	18.5	18.5	B
56	Riverview Drive/Mission Boulevard	Signal	52.0	52.0	D	61.4	61.4	E
57	Rubidoux Boulevard/Market Street	Signal	39.4	39.4	D	>100	217.7	F
58	Rubidoux Boulevard/SR-60 WB Off-Ramp-30th Street	Signal	19.2	19.2	B	20.6	20.6	C
59	Rubidoux Boulevard/SR-60 WB On-Ramp	TWSC	16.5	16.5	C	16.9	16.9	C
60	Rubidoux Boulevard/SR-60 EB Ramps	Signal	42.9	42.9	D	32.5	32.5	C
61	Rubidoux Boulevard/Mission Boulevard	Signal	54.7	54.7	D	76.4	76.4	E

AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
Delay = Average control delay in seconds (For TWSC intersections, reported delay is for worst-case movement).
LOS = Level of Service
Shaded Rows Exceed LOS Standard

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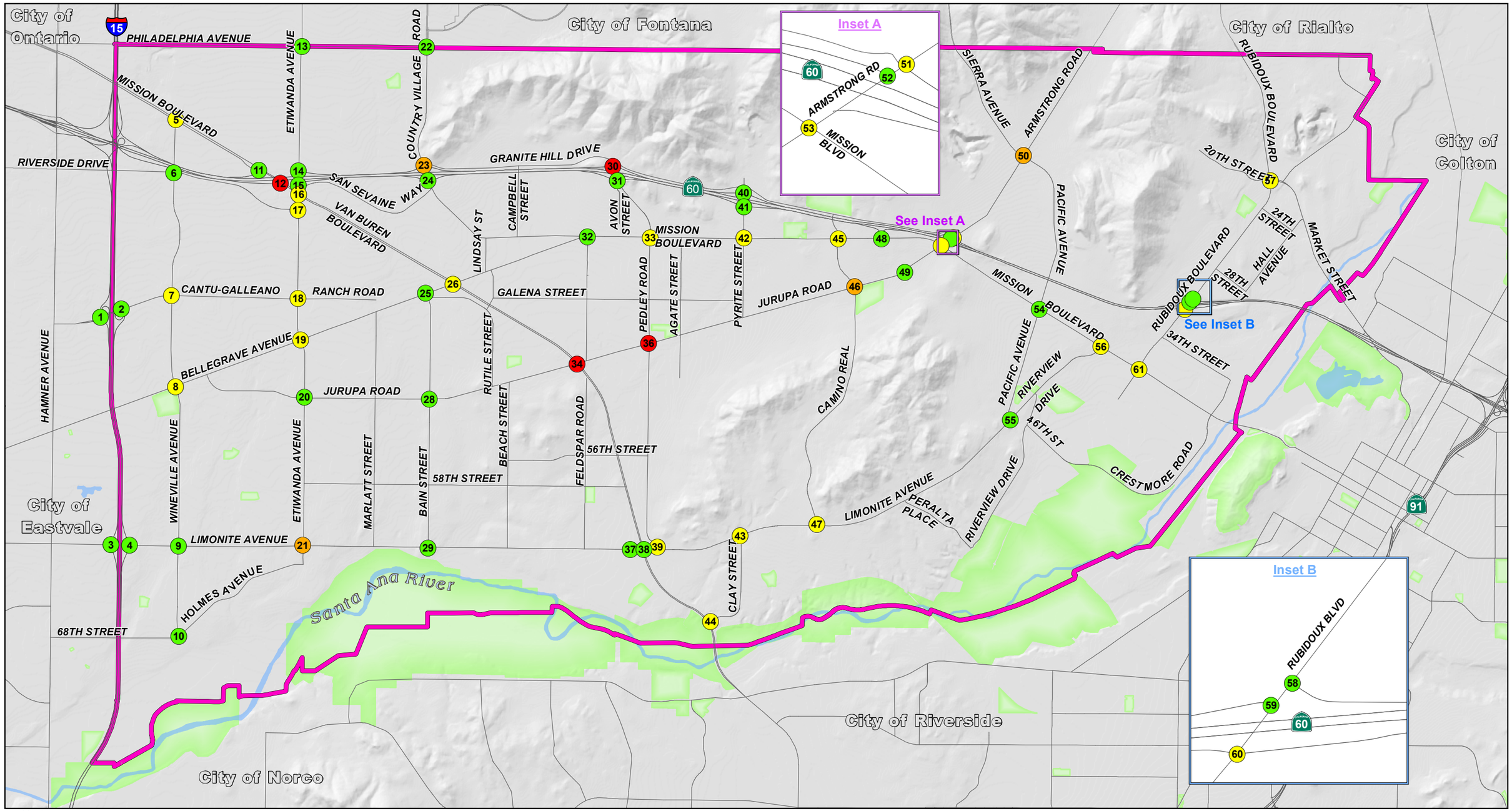

LSA

City of Jurupa Valley
Parks

Intersections

Level of Service A - C
Level of Service D
Level of Service E
Level of Service F

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 2.8-1
Existing A.M. Peak Hour Intersection Levels of Service

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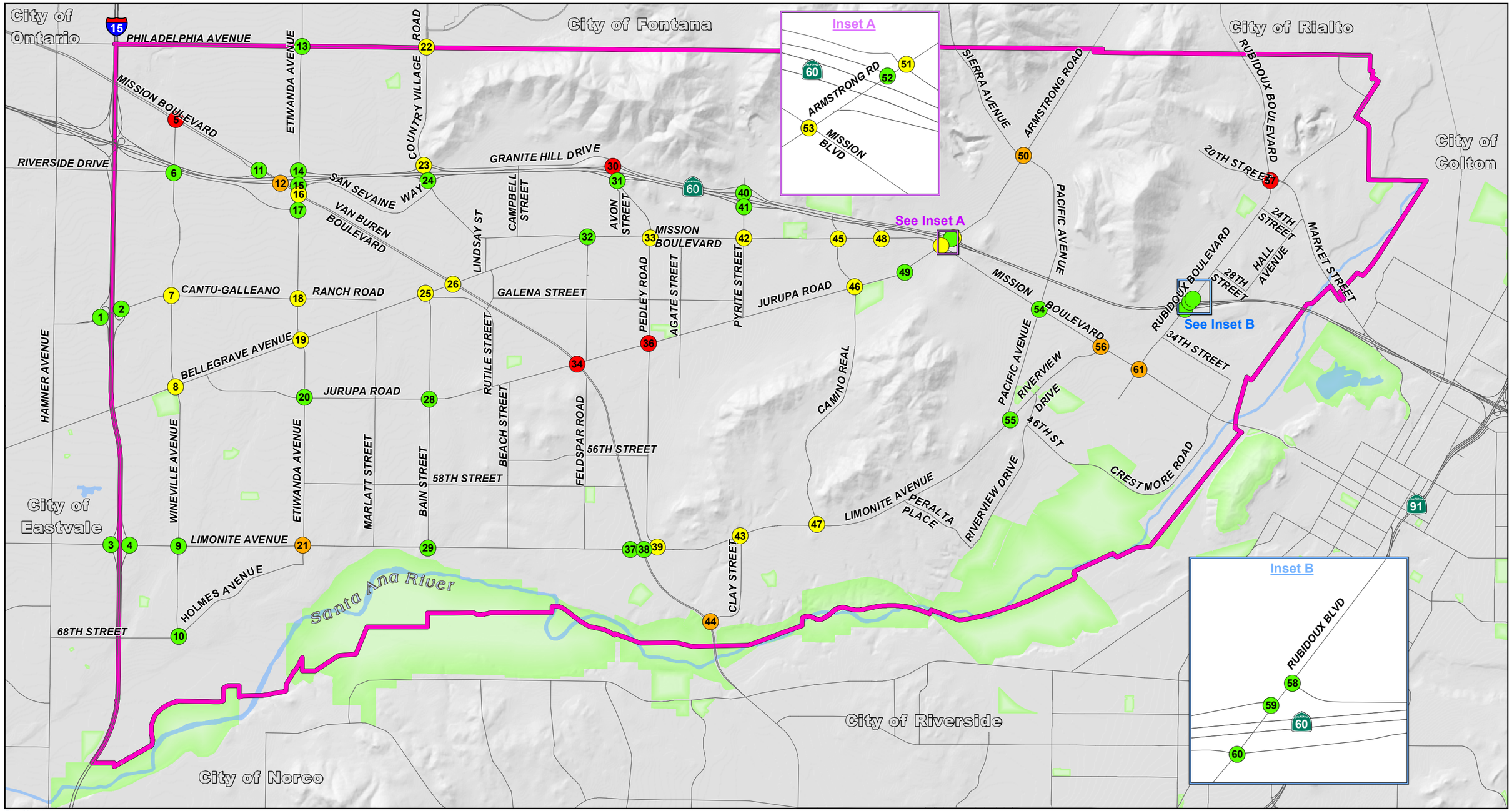

LSA

City of Jurupa Valley
Parks

Intersections

Level of Service A - C
Level of Service D
Level of Service E
Level of Service F

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 2.8-2
Existing P.M. Peak Hour Intersection Levels of Service

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satisfactory levels of service, with the exception of the following nine roadway segments:

- Country Village Road from Philadelphia Avenue to SR-60 Westbound Ramps;
- Country Village Road from SR-60 Westbound Ramps to SR-60 Eastbound Ramps;
- Van Buren Boulevard from Etiwanda Avenue to Bellegrave Avenue;
- Van Buren Boulevard from Bellegrave Avenue to Jurupa Road;
- Van Buren Boulevard from Jurupa Road to Limonite Avenue;
- Van Buren Boulevard from Limonite Avenue to Clay Street;
- Limonite Avenue from I-15 Southbound Ramps to I-15 Northbound Ramps;
- Limonite Avenue from Etiwanda Avenue to Bain Street;
- Limonite Avenue from Bain Street to Collins Streets; and
- Market Street east of Rubidoux Boulevard.

Figure 2.9 illustrates the locations of the roadway segments and corresponding existing levels of service.

Truck Restrictions

Due to its location relative to major highways and urban centers, Jurupa Valley serves as a major logistics shipping and receiving center for Southern California. Along with that regional role comes significant commercial truck traffic using highway off-ramps and City streets. Connectivity with truck routes within the City to regional truck routes and access to freeways provides for an efficient, safe movement of goods.

Most commercial truck traffic is concentrated in the northern and eastern areas of the City, near the SR-60 corridor. The City does not currently have designated truck routes, per se; however, based on information received from the City's Engineering Staff, there are truck restrictions on some of the roadways within the City. Figure 2.10 illustrates truck restrictions and shows the following roadway segments restrict truck access:

- Etiwanda Avenue from Riverside Drive to Cantu-Galleano Ranch Road;
- Etiwanda Avenue from Cantu-Galleano Ranch Road to Bellegrave Avenue;
- Jurupa Road from Camino Real to Valley Way;
- Valley Way-Armstrong Road from Jurupa Road to Mission Boulevard;
- Holmes Avenue from Wineville Avenue to Etiwanda Avenue. Etiwanda Avenue between Riverside Drive to Cantu-Galleano Ranch Road; and
- Between Riverside Drive and Cantu-Galleano Ranch Road

Bicycle Facilities

The City of Jurupa Valley has expressed a vision that encourages choice in travel modes and accommodates those without automobiles for safe mobility and healthy outcomes. A planned bicycle route system within the City of Jurupa Valley provides an important alternative to driving an automobile. A planned system guides the City and development on the orderly and planned implementation of the City's multi-modal transportation system.

The key to successful bicycle mobility is connectivity. Bicyclists need to be able to travel seamlessly on the bicycle network and get to where they need to go. They also need to feel secure and safe when using the facilities by having sufficient separation from vehicles. The "Three Feet for Safety Act," which was incorporated into the California Vehicle Code

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City of Ontario
City of Fontana
City of Rialto
City of Colton
City of Eastvale
City of Norco
City of Riverside
Santa Ana River
PHILADELPHIA AVENUE
MISSION BOULEVARD
RIVERSIDE DRIVE
ETIWANDA AVENUE
COUNTRY VILLAGE ROAD
GRANITE HILL DRIVE
SAN SEVAINE WAY
VAN BUREN BOULEVARD
SIERRA AVENUE
ARMSTRONG ROAD
RUBIDOUX BOULEVARD
20TH STREET
24TH STREET
MARKET STREET
HALL AVENUE
PACIFIC AVENUE
LINDSAY ST
CAMPBELL STREET
AVON STREET
MISSION BOULEVARD
PEDLEY ROAD
AGATE STREET
PYRITE STREET
JURUPA ROAD
CANTU-GALLEANO RANCH ROAD
GALENA STREET
BELLEGRAVE AVENUE
HAMNER AVENUE
RUTILE STREET
BEACH STREET
FELDSPAR ROAD
56TH STREET
58TH STREET
BAIN STREET
MARLATT STREET
WINEVILLE AVENUE
ETIWANDA AVENUE
LIMONITE AVENUE
HOLMES AVENUE
68TH STREET
CAMINO REAL
RIVERVIEW DRIVE
46TH ST
34TH STREET
28TH STREET
CRESTMORE ROAD
PERALTA PLACE
CLAY STREET
60
91
15

LSA

City of Jurupa Valley
Parks

Level of Service
Level of Service A - C
Level of Service D
Level of Service E
Level of Service F

Daily Volume
45,000
30,000
10,000
20,000 Daily Volume

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study
Figure 2.9
Existing Roadway Segment Levels of Service

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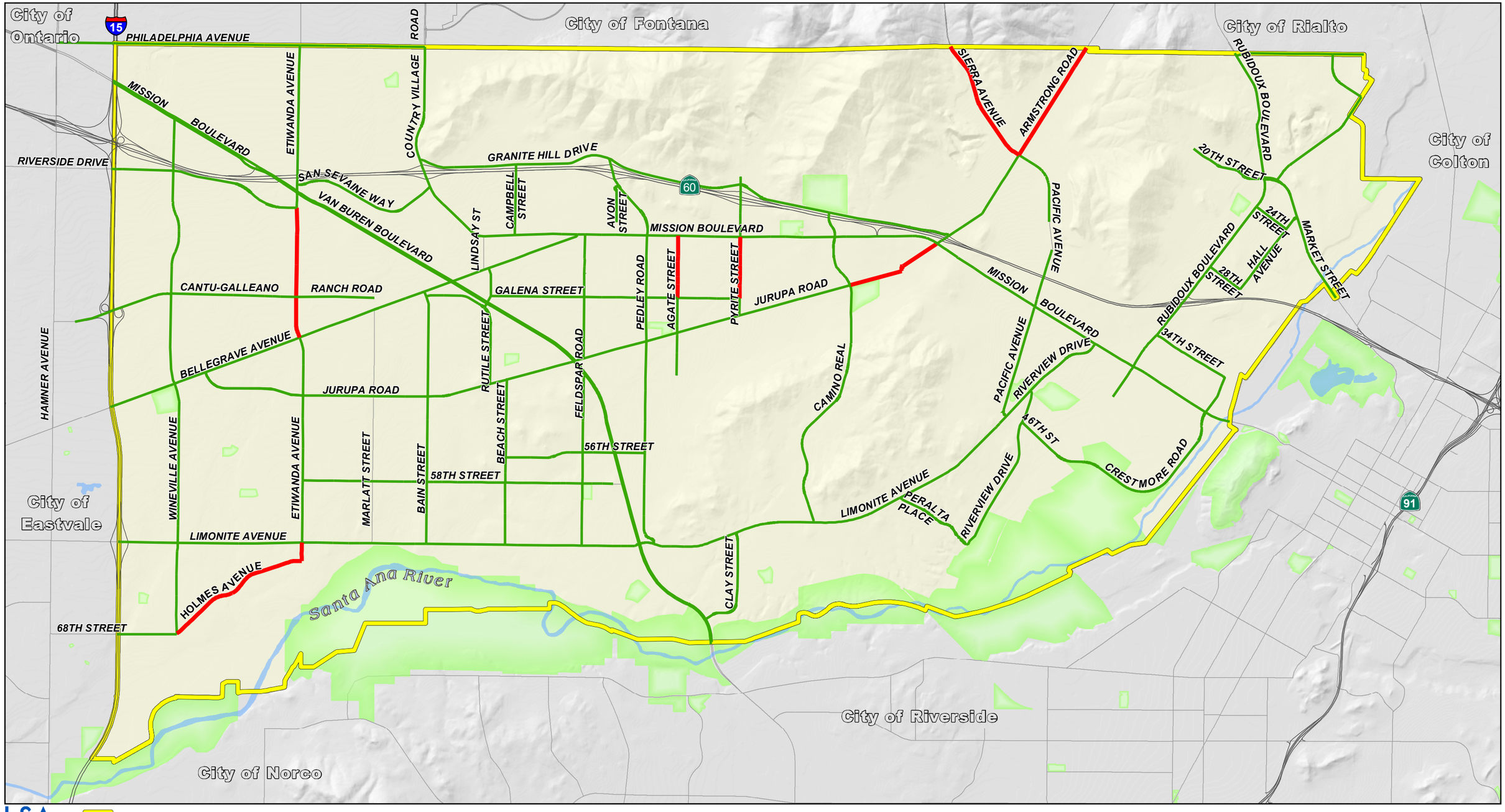

LSA

- City of Jurupa Valley
- Parks
- Trucks Not Allowed
- Trucks Allowed

SOURCE: City of Jurupa Valley 11/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 2.10
Truck Restrictions

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in September 2014, requires motorists overtaking or passing a bicycle in the same direction to leave a minimum distance of three feet between the motor vehicle and bicyclist.

Bicycle classifications include Class 1 bike paths, Class 2 bike paths, and Combination Trails (Regional/Class 1 bike paths). These facilities are described below. Each type of facility has certain characteristics and offers varying levels of safety, perceived or otherwise.

- Class 1: Provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow minimized. The right-of-way for Class 1 bikeways may be substantial, separated from roadways by landscaped strips or other barriers. They may also be designed and signed to also permit golf carts.
- Class 2: Intended for preferential use by bicycles and are provided for within the paved areas of roadways. Bike lane pavement striping and other markings and bikeway signs are intended to promote an orderly flow of traffic by establishing demarcations between lanes designated for bicycles and lanes designated for motor vehicles.
- Combination Class 1 Bikeway/Regional Trails: Regional collectors linking the urban and rural communities and major water bodies and regional parks in the County and provide opportunities for long-distance users to take advantage of this system for long one-way or loop-type trips. These facilities may also include pedestrian and equestrian uses.

Based on a survey of major City streets, no designated bicycle facilities currently exist within the City. This existing deficiency of bicycle facilities poses a safety concern for bicyclists because they share the road with motor vehicles without the proper separation to feel secure. Bicyclists also use sidewalks, which can increase the risk of accidents with pedestrians. The County of Riverside General Plan has a proposed network of bicycle facilities. As part of this General Plan, a comprehensive bicycle network will be proposed that promotes a safe and efficient network that provides connectivity within the City and to the networks of adjacent jurisdictions. This connectivity may be developed with nodes connected by paths. These nodes may include bike stations, water facilities, and other desirable amenities for bicyclists. Safety can also be considered in the General Plan context based on design of facilities that may include 3-foot buffers in the striping plan. Safety will also be a consideration of this General Plan in the development of policies related to education and enforcement. The purpose of this development via addition of intermediate rest points and destinations is to encourage commuter travel by bicycle. Development of General Plan policies may consider following the 5 E's as described by The League of American Bicyclists (Engineering, Education, Enforcement, Encouragement, and Evaluation) as a guide to the City's successful implementation of a bicycle plan.

Trails

The City of Jurupa Valley has a strong equestrian heritage that dates back hundreds of years. In 1742, the Anza Party traveled on trails through Jurupa Valley on its historic journey to Alta California, prior to the development of California's 21 missions. Trails continue to be an important part of both the heritage and the transportation system of Jurupa Valley. They are part of what gives the City its unique character and help promote its casual, healthy equestrian lifestyle.

Jurupa Valley offers pedestrian, bicycle, equestrian and multi-purpose trails that link urban, rural, and natural areas. These trails accommodate hikers, bicyclists, equestrians and others as an integral part of the County's circulation system. These trails serve both as a means of connecting the unique communities and activity centers within the City to adjacent communities, and as an effective alternate mode of transportation. In addition to transportation, the trail system also serves as a community amenity by providing recreation and leisure opportunities.

The City's trail network is currently planned and implemented through the City's development review process by the Jurupa Valley Community

Recreation and Parks District. Jurupa Valley can be found in the following locations:

- On the east side of Bain Street, between Bellegrave Avenue and Limonite Avenue.
- On the west side Etiwanda Avenue between Bellegrave Avenue and Limonite Avenue.
- On the north and south sides of Bellegrave Avenue, from Etiwanda Avenue to Wineville Avenue.
- On the east side of Wineville Avenue, between Limonite Avenue and 68th Street.
- On the east side of Wineville Avenue between Bellegrave Avenue and Redbud Street.
- On the south side of Cantu-Galleano Ranch Road between Calle Del Sol and Etiwanda.
- On the north side of Limonite Avenue, between Wineville Street and Etiwanda Avenue.
- On the south side of 68th Street between I-15 and Lucretia Street.
- On the east side of Lucretia Street between 66th and 68th Streets.
- On the south side of 66th Street between Lucretia Street and Etiwanda Avenue.

The City currently has one developed trail that it maintains, the Santa Ana River Trail. The Santa Ana River Trail is part of a planned regional trail extending across multiple jurisdictions from the Pacific Ocean in Orange County to the San Bernardino Mountains in San Bernardino County. Some communities have trails built and maintained by another entity such as a homeowners' association, a community service area, or a local park and recreation district. These trails lack connectivity to other parts of the County trail system, resulting in a fragmented system. Providing connectivity between City trails and between County trails and state and federal trails, historic trails, and trails in other jurisdictions will be instrumental in creating a usable trail system. The City has four general types of multi-use, recreational trails:

- **Parkway Trails** are located in, along, or adjacent to a stream's floodplain. Ordinarily it extends the length of the stream but may be broken into segments. Road and trailside parks are part of a parkway.
- **Regional Trails** are the main trails within the County, generally maintained and operated by the County of Riverside's Parks and Open Space District. They are designed to eventually provide linkages between areas that could be quite distant from each other. They are also designed to connect with state and federal trails as well as trails within Jurupa Valley, other cities, and unincorporated areas. Regional trails will have an easement of 14 to 20 feet wide and a trail width of 10 feet.
- **Community Trails** are designed to link areas of a community to the regional trail system and to link areas of a community with each other, as further described below. Such trails are typically maintained and operated by a local parks and recreation district. Typically, community trails have an easement width of 10 to 14 feet wide and a trail width of 4 to 8 feet.
- **Historic Trails** are designated historic routes that recognize the rich history of Jurupa Valley and Riverside County. In Jurupa Valley, the Juan Bautista de Anza National Historic Trail is one segment of a planned 1,200-mile trail connecting historic, cultural, and recreation sites from Nogales, Arizona to the San Francisco Bay Area. Historic trail route designations are graphical representations of the general locations of these historic routes and do not necessarily represent a planned regional or community trail. In some case, the trails have more detailed planning documents that describe interpretive routes for autos and/or non-motorized modes of transportation. There generally are regional or community trail designations that either follow or parallel these routes, thus providing opportunities to

recognize the historic significance of these routes and allowing the possibility of developing interpretive signage and visitor facilities.

Freight

Commercial rail operations, while not as prevalent as they once were, are still common in Jurupa Valley. The Union Pacific (UP) and the Burlington Northern Santa Fe (BNSF) Railroads provide freight service in Riverside County, connecting the County with major markets within California and other destinations north and east. A railroad spur track traverses several large areas of Jurupa Valley and still provides valuable railroad access for a wide variety of commercial and industrial uses, thereby reducing dependence on trucking and air transport. With the increase in residential development in Jurupa Valley, railroad compatibility with adjacent uses is a key land use issue. Stack and rail noise, vibration, and the potential for derailing calls for special planning and design considerations where development is proposed adjacent to or near railroads.

Pedestrian Facilities

Walking is a form of non-motorized transportation that provides health benefits, enhances air quality, reduces traffic congestion, and increases community cohesion by keeping a pedestrian level of activity. Walking is often a primary form of transportation for children, the elderly, and those who cannot afford other transportation modes.

Sidewalks provide safe passage for pedestrians by creating a right-of-way that is separate from vehicular traffic. They are particularly important in, to, and from activity areas around the City, such as shopping districts, schools, recreation centers, and government buildings. Sidewalks encourage pedestrian activity, which is a defining element of community and neighborhood identity. In addition, good pedestrian connections are imperative for transit service because most transit trips begin and end with a pedestrian trip. Lack of sidewalks discourages pedestrian transportation.

The typical pedestrian system could be described as a grid system of streets with sidewalks on both sides that provide easy and direct connections between the trip origin and destination. It should also provide for convenient and safe street crossings and include sidewalks separated from streets and provide shade from trees.

The existing pedestrian facilities were evaluated using five pedestrian measurements described below.

- **Directness:** The directness measure represents the actual pedestrian distance from trip origin to destination. Since pedestrian trips are highly dependent on trip length, the pedestrian infrastructure's ability to provide the shortest and most direct route is critical. The ideal pedestrian network is the grid system, since curved street patterns add distance to the potential trip. Barriers can also affect pedestrian travel. Freeways, rivers, and railroads can divide a community and restrict direct connections between one another except at a limited number of street over/under crossings.
- **Continuity:** Continuity measures the completeness of the pedestrian system. A continuous sidewalk system not only allows the pedestrian to make an uninterrupted trip, it may also be required for a stroller or wheelchair user to utilize the sidewalks. Gaps in continuity can come in the form of missing segments, broken or overgrown vegetation, or physical barriers such discontinuous streets or fences. Continuity is measured by the completeness of the sidewalk/walkway system and by identifying whether or not gaps exist. Other aspects of continuity are whether there are sidewalks along one or both sides of the street and whether there exists an overall continuity of sidewalk that provides a line of sight from block to block.
- **Street Crossings:** The Achilles heel of pedestrian and equestrian systems is the intersections where they must cross streets. Intersections are where the pedestrian and equestrian must interface with automobiles, which can be especially dangerous for equestrians, since response times may be slower, which can result

in safety concerns. As streets get wider and carry higher volumes of traffic, potential uses by pedestrians are avoided as safety becomes a concern. There are many factors that affect the pedestrian's real and perceived comfort and safety in crossing the street ranging from traffic control, crosswalks, number and width of travel lanes, travel speeds, and traffic volumes. Major arterial roadways can significantly affect a pedestrian's safety in crossing a street.

- **Visual Interest and Amenity:** This measure of the pedestrian system's attractiveness and appeal is the most difficult to quantify and compare, and the most likely to change as an area matures. Some aspects of this measure are related to facilities that enhance the comfort of the user. These include elements such as shade trees, street lighting, benches, distance from sidewalk or trail to traffic lanes, relationship to buildings and street furniture, existence of curbside parking, and speed of traffic. The latter may be particularly important to pedestrians with mobility or visual impairments. Other elements are important to the visual appeal such as landscaping, planter boxes, trash receptacles, and public art.
- **Pedestrian Security:** The pedestrian environment must feel like a safe place for people to walk. The key pedestrian security facility element is whether the pedestrian is clearly visible to other pedestrians or activities. Whereas this measurement is more appropriate at a site level, one can begin to identify areas where security might be an issue at the neighborhood level. Pedestrians require a sense of security, both through visual line of sight with others and separation from vehicles. Pedestrians feel safer if there is adequate distance from adjacent travel lanes, curbside parking, and minimal conflicts with vehicles exiting driveways. They also require well-lighted pathways and sidewalks for night use.

Figure 2.11 illustrates the existing sidewalks within the City of Jurupa Valley and Table 2.F lists the roadway segments without and with pedestrian facilities. As shown in Figure 2.11, there are many gaps in continuity of sidewalks that would prevent pedestrians from making uninterrupted trips within the City. Also, Van Buren Boulevard, Jurupa Road, Camino Real, Limonite Avenue, and Mission Boulevard have curves that add distance to potential pedestrian trips. Amenities such as shade trees, street lighting, and benches, occur on few segments and have many gaps in continuity. Therefore, the City lacks a comprehensive pedestrian network that connects all areas of the City to parks, libraries, schools, and other local destinations.

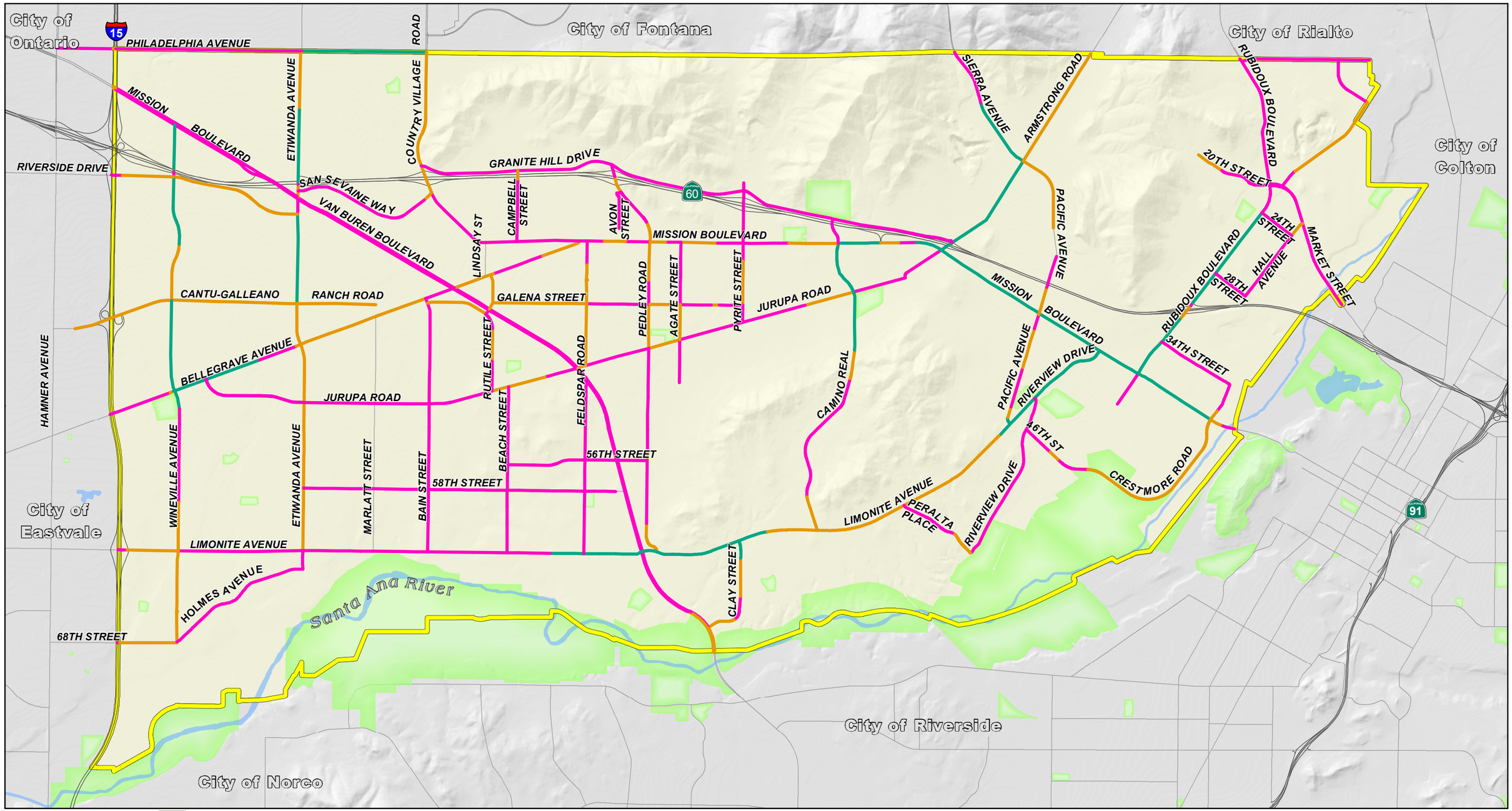
Transit

The Riverside Transit Agency (RTA) provides numerous public transportation opportunities for residents and visitors in Jurupa Valley. These public transportation opportunities include fixed-route transit, intercity transit, paratransit, senior transit, rural transit, and private transit services.

Fixed-Route and Demand-Response Services

Transit, paratransit, and private provider services are characterized as being either a fixed-route or demand-response systems. The Community Transit Association of America (CTAA) defines fixed-route service to include any transit service in which vehicles run along an established path at preset times. Demand-response service is any non-fixed-route system of transporting individuals that requires advanced scheduling by the customer including services provided by public entities, non-profits, and private providers.

RTA operates fixed routes providing public transit service throughout western Riverside County and coordinates transit services throughout a 2,500-square mile service area. RTA provides local and regional services throughout the region with 35 fixed routes, eight CommuterLink routes, and Dial-A-Ride services.



LSA

- City of Jurupa Valley
- Parks
- Sidewalks on Both Sides
- Sidewalks on One Side
- No Existing Sidewalks

SOURCE: LSA Associates 11/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 2.11
Existing Sidewalks

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Table 2.F: Existing Conditions of Major Roadway Segments

Segments	No of Lanes	Existing Functional Classification	Modes			
			Vehicular LOS	Pedestrian Facilities	Bicycle Facilities	Transit Routes
Segments on Wineville Avenue/Road						
East Mission Boulevard to Riverside Drive	4-Lane	Major	C	YES	NO	NO
Riverside Drive to Cantu-Galleano Ranch Road	4-Lane	Secondary	C	YES	NO	NO
Cantu-Galleano Ranch Road to Bellegrave Avenue	3-Lane	Secondary	C	YES	NO	NO
Bellegrave Avenue to Limonite Avenue	3-Lane	Major	C	NO	NO	NO
Limonite Avenue to 68th Street	3-Lane	Major	C	YES	NO	NO
Segments on Etiwanda Avenue						
Philadelphia Avenue to SR-60 WB On-Ramp	6-Lane	Urban Arterial	C	YES	NO	NO
SR-60 WB On-Ramp to SR-60 EB Off-Ramp	4-Lane	Arterial	C	YES	NO	NO
SR-60 EB Off-Ramp to Van Buren Boulevard	4-Lane	Arterial	C	YES	NO	NO
Van Buren Boulevard to Riverside Drive	4-Lane	Major	C	NO	NO	NO
Riverside Drive to Cantu-Galleano Ranch Road	4-Lane	Major	C	YES	NO	NO
Cantu-Galleano Ranch Road to Bellegrave Avenue	3-Lane	Major	C	YES	NO	NO
Bellegrave Avenue to Jurupa Road	4-Lane	Arterial	C	YES	NO	NO
Jurupa Road to Limonite Avenue	4-Lane	Arterial	C	YES	NO	NO
Segments on Bain Street						
Bellegrave Avenue to Jurupa Road	2-Lane	Collector	C	NO	NO	NO
Jurupa Road to Limonite Avenue	2-Lane	Collector	C	NO	NO	NO
Segments on Country Village Road						
Philadelphia Avenue to SR-60 WB Ramps	3-Lane	Major	F	YES	NO	YES
SR-60 WB Ramps to SR-60 EB Ramps	4-Lane	Major	F	YES	NO	YES
Segments on Pedley Road						
SR-60 WB Ramps to SR-60 EB Ramps	2-Lane	Major	C	NO	NO	NO
SR-60 EB Ramps to Mission Boulevard	2-Lane	Major	D	NO	NO	NO
Mission Boulevard to Jurupa Road	3-Lane	Major	C	YES	NO	NO
Jurupa Road to Limonite Avenue	2-Lane	Major	C	NO	NO	NO

Table 2.F: Existing Conditions of Major Roadway Segments

Segments	No of Lanes	Existing Functional Classification	Modes			
			Vehicular LOS	Pedestrian Facilities	Bicycle Facilities	Transit Routes
Segments on Pyrite Street						
SR-60 WB Ramps to SR-60 EB Ramps	2-Lane	Major	C	NO	NO	NO
SR-60 EB Ramps to Mission Boulevard	2-Lane	Collector	C	NO	NO	NO
Segments on Clay Street						
Limonite Avenue to Van Buren Boulevard	4-Lane	Major	C	YES	NO	NO
Segments on Camino Real						
Mission Boulevard to Jurupa Road	4-Lane	Arterial	C	YES	NO	NO
Jurupa Road to Limonite Avenue	4-Lane	Major	C	NO	NO	NO
Segments on Philadelphia Avenue						
Etiwanda Avenue to Country Village Road	2-Lane	Major	C	YES	NO	NO
Segments on Van Buren Boulevard-East Mission Boulevard						
Wineville Road to SR-60 WB On-Ramp	4-Lane	Arterial	C	NO	NO	NO
SR-60 WB On-Ramp to SR-60 EB Off-Ramp	4-Lane	Arterial	D	NO	NO	NO
SR-60 EB Off Ramp to Etiwanda Avenue	4-Lane	Arterial	C	NO	NO	NO
Etiwanda Avenue to Bellegrave Avenue	4-Lane	Arterial	F	NO	NO	NO
Bellegrave Avenue to Jurupa Road	4-Lane	Arterial	F	NO	NO	NO
Jurupa Road to Limonite Avenue	4-Lane	Arterial	F	NO	NO	NO
Limonite Avenue to Clay Street	4-Lane	Arterial	F	NO	NO	YES
Segments on Riverside Drive						
Wineville Road to Etiwanda Avenue	3-Lane	Major	C	YES	NO	NO
Segments on Cantu-Galleano Rancho Road						
I-15 Southbound Ramps to I-15 Northbound Ramps	6-Lane	Urban Arterial	C	YES	NO	NO
I-15 Northbound Ramps to Wineville Avenue/Road	6-Lane	Urban Arterial	C	YES	NO	NO
Wineville Avenue/Road to Etiwanda Avenue	2-Lane	Arterial	C	YES	NO	NO
Segments on Mission Boulevard						
SR-60 EB Ramps to Bellegrave Avenue	4-Lane	Secondary	C	NO	NO	YES

Table 2.F: Existing Conditions of Major Roadway Segments

Segments	No of Lanes	Existing Functional Classification	Modes			
			Vehicular LOS	Pedestrian Facilities	Bicycle Facilities	Transit Routes
Bellegrave Avenue to Pedley Road	4-Lane	Major	C	NO	NO	YES
Pedley Road to Pyrite Street	4-Lane	Secondary	C	YES	NO	YES
Pyrite Street to Camino Real	4-Lane	Major	C	YES	NO	YES
Camino Real to SR-60 EB Ramps	4-Lane	Major	C	YES	NO	YES
SR-60 EB Ramps to Valley Way	4-Lane	Secondary	C	NO	NO	YES
Valley Way to Riverview Drive	4-Lane	Arterial	C	YES	NO	YES
Riverview Drive to Rubidoux Boulevard	4-Lane	Arterial	C	YES	NO	YES
Segments on Bellegrave Avenue						
Wineville Avenue to Etiwanda Avenue	3-Lane	Major	C	YES	NO	NO
Etiwanda Avenue to Bain Street	4-Lane	Major	C	YES	NO	NO
Bain Street to Van Buren Boulevard	2-Lane	Major	C	NO	NO	NO
Van Buren Boulevard to Mission Boulevard	2-Lane	Major	C	YES	NO	NO
Segments on Jurupa Road						
Etiwanda Avenue to Bain Street	2-Lane	Collector	C	NO	NO	YES
Bain Street to Van Buren Boulevard	2-Lane	Collector	D	NO	NO	YES
Van Buren Boulevard to Pedley Road	2-Lane	Collector	D	YES	NO	YES
Pedley Road to Camino Real	2-Lane	Collector	C	NO	NO	NO
Camino Real to Valley Way	2-Lane	Collector	C	NO	NO	NO
Segments on Valley Way-Armstrong Road						
Jurupa Road to Mission Boulevard	2-Lane	Collector	C	NO	NO	NO
Mission Boulevard to SR-60 EB On-Ramp	4-Lane	Arterial	D	YES	NO	NO
SR-60 EB On-Ramp to SR-60 WB Ramps	4-Lane	Arterial	D		NO	NO
SR-60 WB Ramps to Sierra Avenue	4-Lane	Major	D	YES	NO	NO
Segments on Limonite Avenue						
I-15 Southbound Ramps to I-15 Northbound Ramps	4-Lane	Major	E	NO	NO	YES
I-15 Northbound Ramps to Wineville Avenue	4-Lane	Arterial	D	YES	NO	YES

Table 2.F: Existing Conditions of Major Roadway Segments

Segments	No of Lanes	Existing Functional Classification	Modes			
			Vehicular LOS	Pedestrian Facilities	Bicycle Facilities	Transit Routes
Wineville Avenue to Etiwanda Avenue	4-Lane	Major	C	NO	NO	YES
Etiwanda Avenue to Bain Street	2-Lane	Major	F	NO	NO	YES
Bain Street to Collins Street	2-Lane	Major	F	NO	NO	YES
Collins Street to Van Buren Boulevard	4-Lane	Major	C	YES	NO	YES
Van Buren Boulevard to Pedley Road	4-Lane	Major	C	YES	NO	YES
Pedley Road to Clay Street	4-Lane	Arterial	C	YES	NO	YES
Clay Street to Riverview Drive	5-Lane	Arterial	C	YES	NO	YES
Riverview Drive to Mission Boulevard	4-Lane	Major	C	YES	NO	YES
Segments on Rubidoux Boulevard						
Mission Boulevard to SR-60 EB Ramps	4-Lane	Major	C	YES	NO	YES
SR-60 EB Ramps to SR-60 WB Ramps	4-Lane	Major	C	YES	NO	YES
SR-60WB Ramps to Market Street	4-Lane	Major	C	YES	NO	YES
Segments on Holmes Avenue						
Wineville Avenue to Etiwanda Avenue	2-Lane	Collector	C	NO	NO	NO

LOS = Level of Service
Shaded Rows Exceed LOS Standard

CommuterLink routes provide express bus routes to Riverside, Orange, San Diego, and San Bernardino Counties and include RTA's newest generation of express buses.

Dial-A-Ride is an origin to destination reservation transportation service for seniors and persons with disabilities. Dial-A-Ride vehicles travel to areas within three-quarters of a mile of an RTA local fixed-route.

Figure 2.12 illustrates the fixed-route transit services and previously referenced Table 2.F lists the roadway segments without and with transit services in the City. As shown in Figure 2.12, RTA currently provides five fixed routes that operate within and through the City on most major roadways. Adequate connectivity exists on most major roadways; however, there are existing deficiencies on Van Buren Boulevard from Limonite Avenue to the northwestern City limits, Bellegrave Avenue from the western City limits to Mission Boulevard, Jurupa Road from Van Buren Boulevard to Mission Boulevard, Camino Real from Mission Boulevard to Limonite Avenue, and Etiwanda Avenue from Jurupa Road to the northern City limits.

The composition of the existing transit facilities will require change over time due to existing deficiencies and changes in demographics, land use, and population. Because transit facilities within the City are currently operated by RTA, the City should develop goals and policies in the General Plan that encourages more coordination and collaboration with RTA to provide residents with additional mode choices including an expanded transit system.

Commuter Rail

Although railroads are independent operations, the interaction between rail and other modes of transportation does affect the transportation system. Motorized vehicles, pedestrians, and freight movement are all affected by delay caused by trains at at-grade crossings.

Commuter rail service through the City of Jurupa Valley is provided by Metrolink and is illustrated in Figure 2.13. The Pedley Metrolink Station is located on Pedley Road in Jurupa Valley and connects to the Riverside-Downtown station to the east and the East Ontario station to the west. RTA fixed route 29 provides a transit connection to the Pedley Metrolink station.

The Pedley Metrolink Station is served by Metrolink's Riverside Line, which provides rail service from Riverside to Downtown Los Angeles. The Riverside line includes stops at Downtown Riverside, Pedley, East Ontario, Downtown Pomona, City of Industry, Montebello, and Downtown Los Angeles. Figure 2.13 illustrates Metrolink's Riverside Line.

Airports

There is one airport located within the City of Jurupa Valley and six regional airports in the vicinity. Previously referenced Figure 2.1 illustrates the airports. Flabob Airport and Riverside Municipal Airport offer general aviation facilities and Ontario International Airport provides scheduled commercial service.

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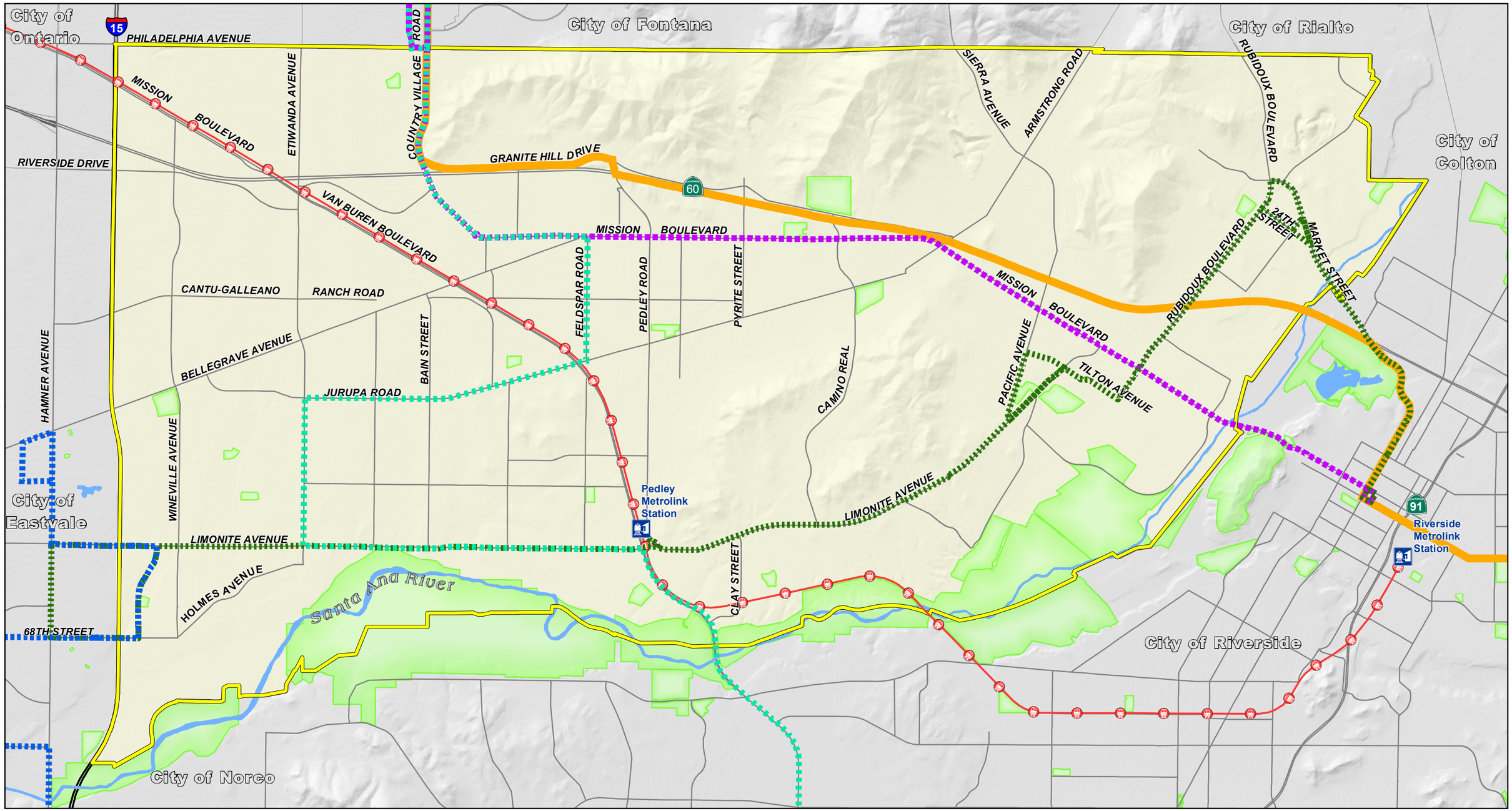

LSA

City of Jurupa Valley
Parks
Metrolink Station

Transit Routes
Route 3
Route 21
Route 29
Route 49
Route 204
Metrolink Riverside Route

SOURCE: Riverside County 7/2015; Riverside Transit Agency, 2015.

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 2.12
Transit Routes and Commuter Rail

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FIGURE 2.13: METROLINK ROUTES

CHAPTER 3 – GENERAL PLAN BUILD-OUT TRAFFIC

CHAPTER CONTENTS

The City of Jurupa Valley's long-term mobility system goals and policies are closely correlated to the Land Use Element. These goals and policies are intended to provide a balance between the City's future growth and land use development, roadway size, and traffic levels of service. This chapter describes the roadway network traffic volumes under forecast build-out conditions.

Analysis Scenarios

To provide the transportation infrastructure and describe the future transportation conditions, two General Plan scenarios were evaluated; Future No Project and General Plan Build-out conditions. The Future No Project scenario includes land use data and the roadway network from the County of Riverside's Circulation Element adopted in 2003 through the Riverside County Integrated Project (RCIP). The General Plan Build-out includes the land use data and roadway network from the City of Jurupa Valley Land Use Element. For both scenarios, build-out conditions are assumed for year 2035.

Future No Project

To forecast future traffic volumes within the City of Jurupa Valley, a travel demand model (TDM) was applied. The Riverside County Transportation Analysis Model (RivTAM) is a focused model developed using the Southern California Association of Governments (SCAG) Regional Model and refined to include updates such as additional zones, roadways, and transit networks. RivTAM was used to forecast the Future No Project traffic volumes using data including population, households, school enrollments, household income, employment, and the roadway network adopted in the County of Riverside's Circulation Element. This data were then converted to socioeconomic data and input into the model prior to running the four-step modeling process (trip generation, trip distribution, mode choice, and trip assignment) to develop future no project traffic volumes.

General Plan Build-out

The General Plan Build-out was conducted using future traffic projections from RivTAM. In consultation with City staff, RivTAM was refined to include data from the City of Jurupa Valley Land Use Element, which was converted into socioeconomic data and input to the RivTAM General Plan Build-out conditions. The Traffic Analysis Zone (TAZ) structure within the City of Jurupa Valley was refined to include updated zone boundaries based on current and future land uses, and existing and future roadways. The refined forecasts were used to conduct a citywide analysis to determine areas of congestion, and levels of service.

Future No Project Conditions

Roadway Network

The Future No Project scenario roadway network incorporates all roadways shown in the Riverside County Circulation Element and included in the RivTAM network. Figures 3.1-1 and 3.1-2 illustrate the Future No Project intersection geometrics and stop control.

Intersection Traffic Volumes

The intersection traffic volumes for Future no Project conditions were developed using the RivTAM base year and future year model networks. Raw traffic model data from RivTAM base and future year model runs were post-processed using National Cooperative Highway Research Program (NCHRP) 255 methodologies to develop peak-hour turning movement volumes at each study area intersection and roadway segments. The following describes the methodology used to post-process model volumes to develop peak hour intersection volumes for Future No Project conditions:

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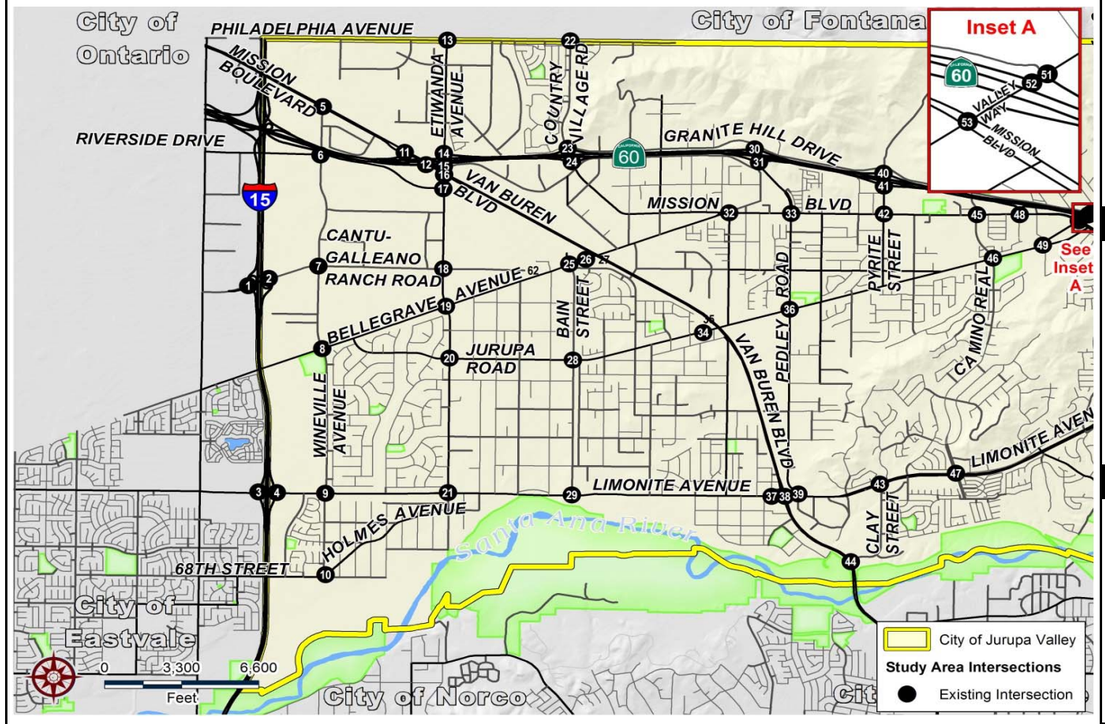

1 I-15 SB Ramps/Cantu-Galleano Ranch Rd	2 I-15 NB Ramps/Cantu-Galleano Ranch Rd	3 I-15 SB Ramps/Limonite Avenue	4 I-15 NB Ramps/Limonite Avenue	5 Wineville Avenue/E Mission Boulevard
6 Wineville Avenue/Riverside Drive	7 Wineville Avenue/Cantu-Galleano Ranch Rd	8 Wineville Avenue/Bellegrave Avenue	9 Wineville Avenue/Limonite Avenue	10 Wineville Avenue/68th Street
11 E Mission Boulevard/SR-60 Westbound On-Ram	12 E Mission Boulevard/SR-60 Eastbound Off-Ramp	13 Etiwanda Avenue/Philadelphia Avenue	14 Etiwanda Avenue/SR-60 Westbound Off-Ramp	15 Etiwanda Avenue/SR-60 Eastbound On-Ramp
16 Etiwanda Avenue/Van Buren Boulevard	17 Etiwanda Avenue/Riverside Drive	18 Etiwanda Avenue/Cantu-Galleano Ranch Rd	19 Etiwanda Avenue/Bellegrave Avenue	20 Etiwanda Avenue/Jurupa Road
21 Etiwanda Avenue/Limonite Avenue	22 Country Village Road/Philadelphia Avenue	23 Country Village Road/SR-60 Westbound Ramps	24 Mission Boulevard/SR-60 Eastbound Ramps	
25 Bain Street/Bellegrave Avenue	26 Van Buren Boulevard /Bellegrave Avenue	27 Future Bellegrave Ave Intersection @ Van Buren Boulevard	28 Bain Street/Jurupa Road	29 Bain Street/Limonite Avenue
30 Pedley Road/SR-60 Westbound Ramps	31 Pedley Road/SR-60 Eastbound Ramps			

Does Not Exist in Alternative

LSA

Legend

- Signal
- Stop Sign
- **D** De-Facto Right-Turn Lane
- **F** Free Right-Turn Lane
- **O** Right-Turn Overlap

Jurupa Valley General Plan
Traffic Study

Figure 3.1-1
Future No Project Intersection Geometrics & Stop Control

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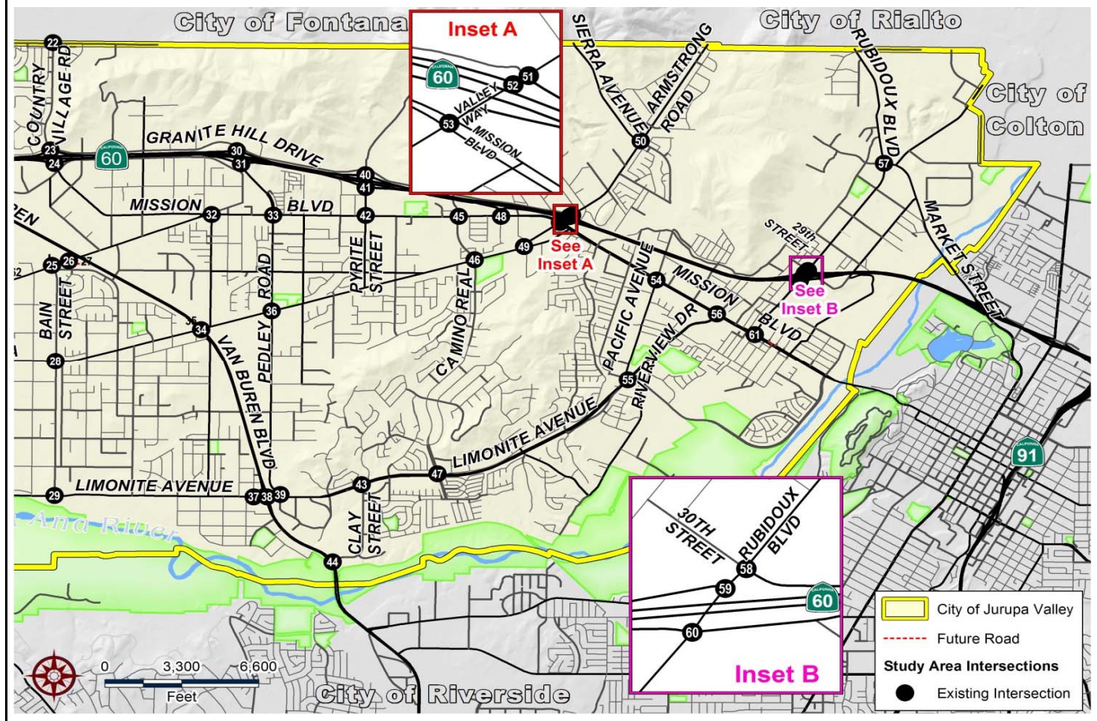

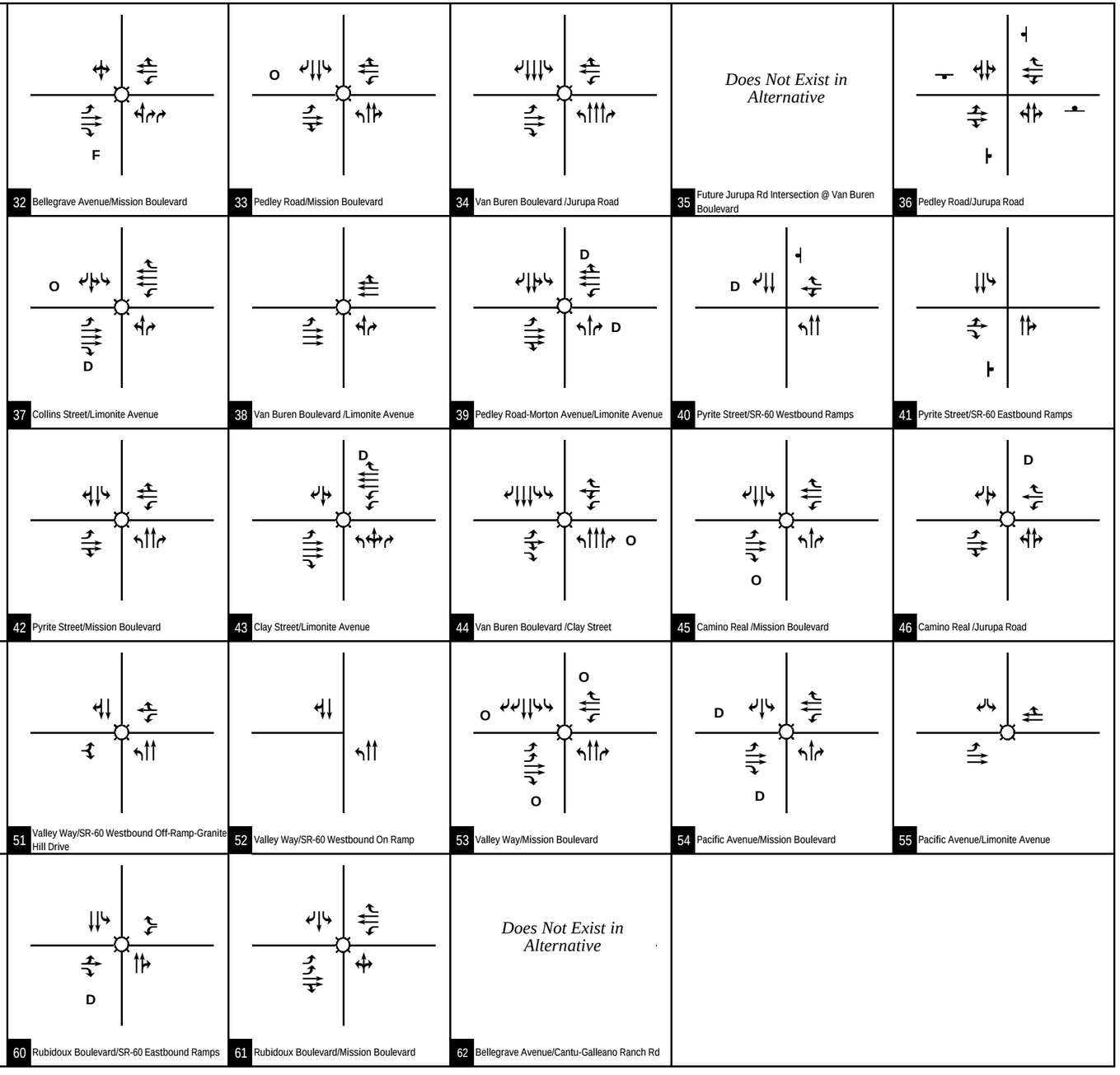

LSA

Legend

- Signal
- Stop Sign

D De-Facto Right-Turn Lane
F Free Right-Turn Lane
O Right-Turn Overlap

Jurupa Valley General Plan
Traffic Study

Figure 3.1-2
Future No Project Intersection Geometrics & Stop Control

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1. The difference between the modeled 2007 and 2035 peak period directional arterial traffic volumes in PCEs (for each intersection approach and departure) was identified from loaded network plots. This difference defines growth in traffic over the 28-year period.
2. The incremental growth in peak period approach and departure volumes between 2007 and 2035 was factored to develop the incremental change in peak-hour volumes. RivTAM uses a three-hour a.m. peak period and a four-hour p.m. peak period. The Southern California Association of Governments (SCAG) has established that the a.m. peak hour comprises 38 percent of the peak period and the p.m. peak hour comprises 28 percent of the peak period. Therefore, the incremental changes in peak period volumes were multiplied by the appropriate factors to develop incremental changes in peak-hour volumes.
3. The incremental growth in approach and departure volumes between 2007 and 2035 was factored to reflect the forecast growth between the year of the ground counts (2015) and 2035. For this purpose, linear growth between the 2007 base condition and the forecast 2035 condition was assumed. As the increment between existing (2015) and build-out (2035) is 20 years of the 28-year time span, a factor of 0.71 (i.e., 20/28) was used.
4. The forecast growth in approach and departure volumes through build-out year (2035) conditions was added to the 2015 ground counts, resulting in "post-processed" build-out year (2035) link volumes.
5. Forecast year 2035 turn volumes were developed using existing (2015) turn volumes and the future approach and departure volumes, based on the methodologies contained in *National Cooperative Highway Research Program Report* (NCHRP) *255: Highway Traffic Data for Urbanized Area Project Planning and Design* (Transportation Research Board, December 1982).

Detailed volume development worksheets are contained in Appendix B. The Future No Project a.m. and p.m. peak hour intersection traffic volumes are illustrated in Figures 3.2-1 and 3.2-2.

Roadway Segment Traffic Volumes

The roadway segment volumes for Future No Project were developed using the same methodology described under "Intersection Traffic Volumes." Table 3.A illustrates the Future No Project daily traffic volumes at study area roadway segments. Volume development worksheets are contained in Appendix B.

Intersections Levels of Service

A level of service analysis for Future No Project was conducted at study area intersections to determine the projected intersection performance. Table 3.B illustrates the results of this analysis and shows that all intersections are projected to operate at satisfactory levels of service (D or better), with the exception of the following intersections:

- I-15 Northbound Ramps/Limonite Avenue (p.m. peak hour);
- Wineville Avenue/Mission Boulevard (a.m. and p.m. peak hours);
- Wineville Avenue/Riverside Drive (p.m. peak hour);
- Wineville Avenue/Road/Cantu-Galleano Ranch Road (p.m. peak hour);
- Wineville Avenue/Limonite Avenue (p.m. peak hour);
- Mission Boulevard/SR-60 Eastbound Off-Ramp (a.m. and p.m. peak hours);
- Etiwanda Avenue/SR-60 Eastbound On-Ramp (a.m. and p.m. peak hours);
- Etiwanda Avenue/Van Buren Boulevard (a.m. and p.m. peak hours);
- Etiwanda Avenue/Bellegrave Avenue (a.m. and p.m. peak hours);

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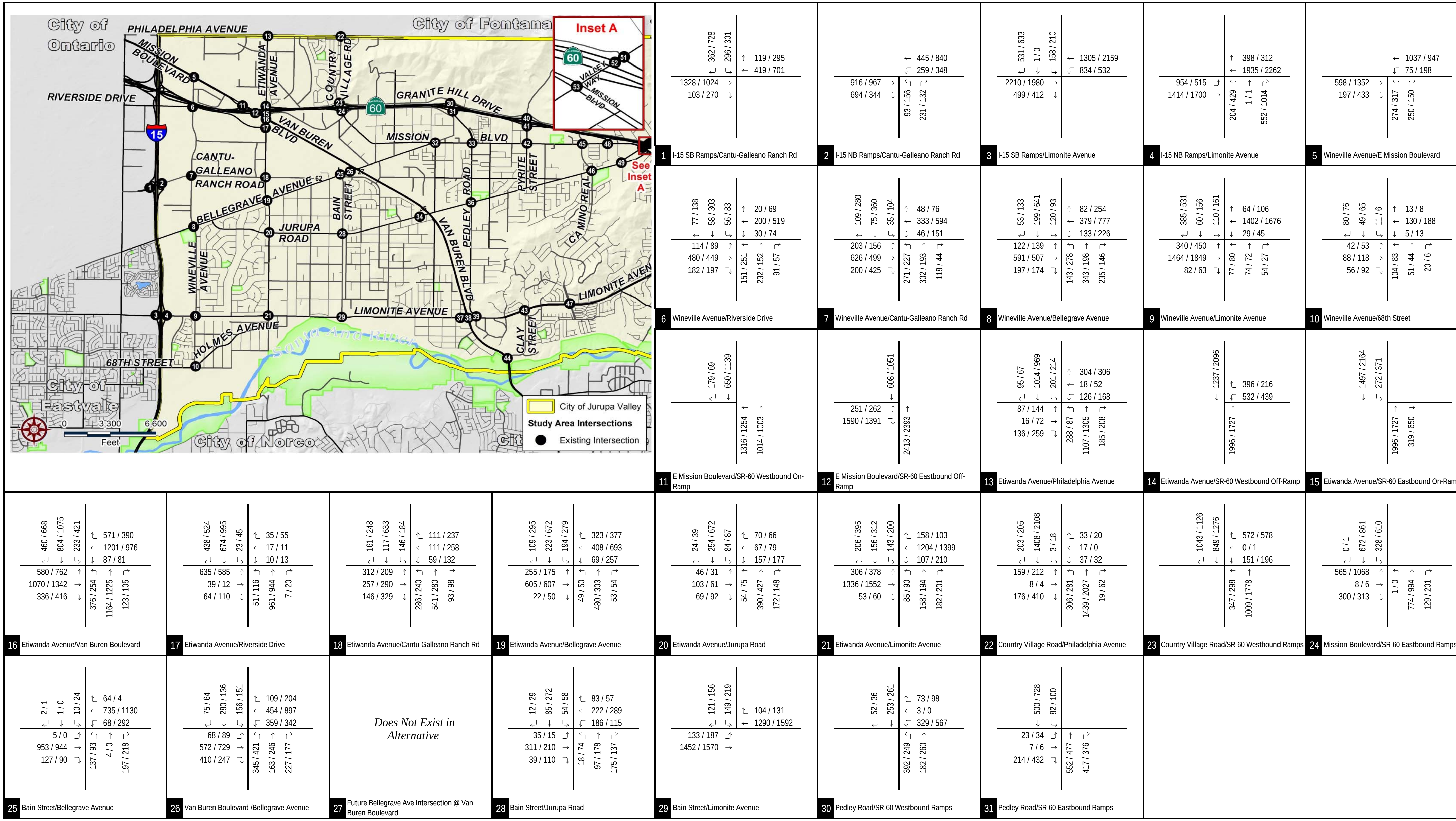

LSA

XXX / YYY AM / PM Peak Hour Volume (In PCEs)

Jurupa Valley General Plan
Traffic Study

Figure 3.2-1

Future No Project Peak Hour Traffic Volumes

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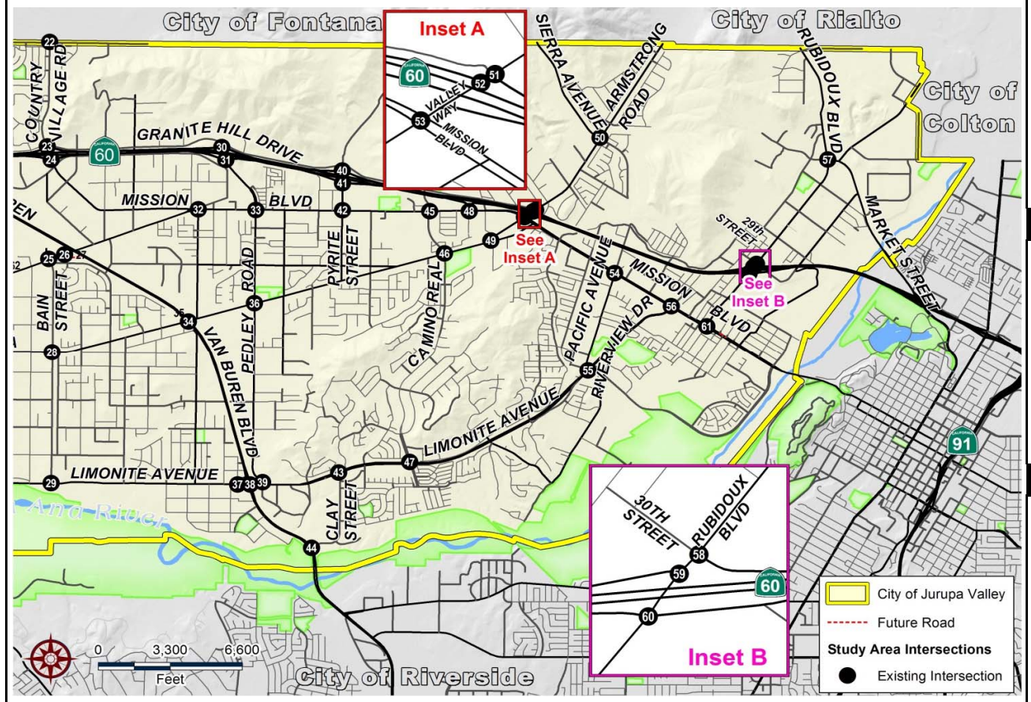

4 / 6	27 / 47	23 / 13	12 / 26
1 / 4			318 / 441
307 / 381			490 / 799
39 / 74		38 / 41	27 / 49
			555 / 511

32 Bellegrave Avenue/Mission Boulevard

152 / 177	315 / 456	90 / 157	119 / 144
150 / 156			508 / 567
560 / 576			89 / 92
83 / 73		54 / 74	434 / 395
			133 / 84

33 Pedley Road/Mission Boulevard

102 / 144	1522 / 1768	41 / 81	38 / 78
224 / 150			352 / 375
363 / 391			174 / 189
94 / 69		123 / 95	1798 / 1359
			212 / 235

34 Van Buren Boulevard /Jurupa Road

Does Not Exist in Alternative

35 Future Jurupa Rd Intersection @ Van Buren Boulevard

73 / 103	222 / 362	102 / 33	83 / 52
83 / 71			620 / 747
665 / 746			189 / 176
53 / 58		82 / 74	291 / 263
			141 / 212

36 Pedley Road/Jurupa Road

51 / 83	19 / 32	185 / 255	121 / 121
33 / 39			1209 / 1634
1542 / 1643			53 / 104
35 / 66		24 / 102	1 / 7
			37 / 90

37 Collins Street/Limonite Avenue

			460 / 449
230 / 122			873 / 1128
1532 / 1862		507 / 726	9 / 5
			549 / 723

38 Van Buren Boulevard /Limonite Avenue

254 / 238	12 / 8	183 / 189	73 / 116
343 / 493			1068 / 1325
1717 / 2070			8 / 12
21 / 22		12 / 15	4 / 7
			4 / 3

39 Pedley Road-Morton Avenue/Limonite Avenue

244 / 169	168 / 278		84 / 125
			1 / 3
			81 / 99
		258 / 119	186 / 340

40 Pyrite Street/SR-60 Westbound Ramps

136 / 202	113 / 180		
113 / 201			
12 / 2			
76 / 398		319 / 252	161 / 148

41 Pyrite Street/SR-60 Eastbound Ramps

55 / 48	100 / 200	77 / 227	237 / 187
57 / 34			494 / 558
593 / 578			123 / 102
111 / 63		97 / 52	139 / 82
			152 / 91

42 Pyrite Street/Mission Boulevard

91 / 89	70 / 45	17 / 11	21 / 23
99 / 85			802 / 1155
758 / 1232			366 / 452
268 / 343		301 / 270	54 / 76
			282 / 490

43 Clay Street/Limonite Avenue

69 / 55	2819 / 2946	220 / 298	151 / 300
13 / 46			17 / 16
3 / 15			571 / 576
3 / 8		21 / 9	3088 / 3285
			434 / 687

44 Van Buren Boulevard /Clay Street

82 / 85	134 / 150	97 / 109	95 / 83
114 / 84			559 / 680
580 / 579			96 / 203
114 / 185		152 / 152	117 / 147
			190 / 98

45 Camino Real /Mission Boulevard

86 / 77	190 / 294	52 / 32	87 / 52
107 / 68			602 / 754
648 / 683			180 / 363
87 / 124		60 / 72	287 / 168
			327 / 212

46 Camino Real /Jurupa Road

248 / 205	77 / 96	178 / 145	84 / 146
103 / 217			796 / 1084
801 / 1290			109 / 164
89 / 140		133 / 78	59 / 96
			166 / 183

47 Camino Real /Limonite Avenue

23 / 71	3 / 3	480 / 1028	453 / 560
118 / 120			719 / 815
989 / 669			9 / 9
12 / 6		14 / 9	2 / 2
			7 / 4

48 Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard

547 / 560	156 / 314		314 / 250
478 / 568			366 / 324
592 / 554			

49 Valley Way/Jurupa Road

163 / 129	435 / 480	231 / 445	364 / 537
57 / 154			309 / 444
553 / 510			176 / 234
597 / 760		749 / 890	356 / 630
			244 / 231

50 Armstrong Road/Sierra Avenue

15 / 67	1454 / 1592		471 / 484
62 / 83			79 / 70
236 / 206			399 / 699
		235 / 178	1286 / 1381

51 Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive

391 / 339	1536 / 1823		
		303 / 304	1060 / 1430

52 Valley Way/SR-60 Westbound On Ramp

791 / 721	623 / 944	318 / 493	644 / 498
539 / 768			256 / 343
366 / 526			76 / 109
69 / 101		46 / 32	773 / 625
			69 / 67

53 Valley Way/Mission Boulevard

251 / 208	372 / 563	359 / 455	502 / 229
184 / 226			415 / 561
650 / 572			246 / 507
39 / 415		64 / 95	379 / 503
			406 / 196

54 Pacific Avenue/Mission Boulevard

303 / 637	27 / 102		36 / 86
371 / 681			449 / 685
771 / 638			

55 Pacific Avenue/Limonite Avenue

51 / 46	51 / 41	20 / 28	34 / 36
63 / 128			880 / 1035
1194 / 1235			431 / 486
167 / 209		286 / 165	82 / 58
			445 / 359

56 Riverview Drive/Mission Boulevard

24 / 13	510 / 374	559 / 635	363 / 169
51 / 48			62 / 854
201 / 112			319 / 599
22 / 7		5 / 3	214 / 539
			430 / 450

57 Rubidoux Boulevard/Market Street

19 / 20	650 / 917		122 / 84
10 / 33			90 / 94
168 / 187			328 / 493
		72 / 116	667 / 861

58 Rubidoux Boulevard/SR-60 Westbound Off-Ramp-30th Street

358 / 448	770 / 1149		
		302 / 193	732 / 978

59 Rubidoux Boulevard/SR-60 Westbound On-Ramp

594 / 1024	176 / 125		10 / 3
383 / 502			7 / 15
21 / 30			
235 / 351		640 / 666	658 / 382

60 Rubidoux Boulevard/SR-60 Eastbound Ramps

306 / 646	108 / 272	312 / 295	220 / 147
519 / 462			688 / 731
912 / 813			198 / 366
10 / 29		64 / 87	342 / 247
			36 / 57

61 Rubidoux Boulevard/Mission Boulevard

Does Not Exist in Alternative

62 Bellegrave Avenue/Cantu-Galleano Ranch Rd

LSA

XXX / YYY AM / PM Peak Hour Volume (In PCEs)

Jurupa Valley General Plan
Traffic Study

Figure 3.2-2

Future No Project Peak Hour Traffic Volumes

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Table 3.A: Future No Project Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Existing Conditions		
			Daily Volume	V/C	LOS
Segments on Wineville Avenue/Road					
1	East Mission Boulevard to Riverside Drive	4-Lane Major	8,329	0.24	C
2	Riverside Drive to Cantu-Galleano Ranch Road	4-Lane Major	10,381	0.30	C
3	Cantu-Galleano Ranch Road to Bellegrave Avenue	4-Lane Arterial	9,792	0.27	C
4	Bellegrave Avenue to Limonite Avenue	4-Lane Arterial	12,915	0.36	C
5	Limonite Avenue to 68th Street	4-Lane Major	3,771	0.11	C
Segments on Etiwanda Avenue					
6	Philadelphia Avenue to SR-60 WB Off-Ramp	6-Lane Urban Arterial	47,594	0.88	D
7	SR-60 WB Off-Ramp to SR-60 EB On-Ramp	6-Lane Urban Arterial	45,807	0.85	D
8	SR-60 EB On-Ramp to Van Buren Boulevard	6-Lane Urban Arterial	40,198	0.75	C
9	Van Buren Boulevard to Riverside Drive	6-Lane Urban Arterial	28,040	0.52	C
10	Riverside Drive to Cantu-Galleano Ranch Road	6-Lane Urban Arterial	19,142	0.36	C
11	Cantu-Galleano Ranch Road to Bellegrave Avenue	4-Lane Major	17,667	0.52	C
12	Bellegrave Avenue to Jurupa Road	4-Lane Arterial	15,210	0.42	C
13	Jurupa Road to Limonite Avenue	4-Lane Arterial	16,647	0.46	C
Segments on Bain Street					
14	Bellegrave Avenue to Jurupa Road	4-Lane Major	6,676	0.20	C
15	Jurupa Road to Limonite Avenue	4-Lane Major	7,789	0.23	C
Segments on Country Village Road					
16	Philadelphia Avenue to SR-60 WB Ramps	6-Lane Urban Arterial	53,714	1.00	E
17	SR-60 WB Ramps to SR-60 EB Ramps	4-Lane Arterial	52,092	1.45	F
Segments on Pedley Road					
18	SR-60 WB Ramps to SR-60 EB Ramps	4-Lane Arterial	11,885	0.33	C
19	SR-60 EB Ramps to Mission Boulevard	4-Lane Arterial	18,366	0.51	C
20	Mission Boulevard to Jurupa Road	4-Lane Arterial	14,057	0.39	C
21	Jurupa Road to Limonite Avenue	4-Lane Major	20,373	0.60	C

Table 3.A: Future No Project Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Existing Conditions		
			Daily Volume	V/C	LOS
Segments on Pyrite Street					
22	SR-60 WB Ramps to SR-60 EB Ramps	4-Lane Major	7,941	0.23	C
23	SR-60 EB Ramps to Mission Boulevard	4-Lane Major	9,241	0.27	C
Segments on Clay Street					
24	Limonite Avenue to Van Buren Boulevard	4-Lane Secondary	30,208	1.17	F
Segments on Camino Real					
25	Mission Boulevard to Jurupa Road	4-Lane Major	12,980	0.38	C
26	Jurupa Road to Limonite Avenue	4-Lane Major	13,022	0.38	C
Segments on Philadelphia Avenue					
27	Etiwanda Avenue to Country Village Road	2-Lane Collector	10,470	0.81	D
Segments on Van Buren Boulevard-East Mission Boulevard					
28	Wineville Road to SR-60 WB On-Ramp	6-Lane Urban Arterial	28,067	0.52	C
29	SR-60 WB On-Ramp to SR-60 EB Off-Ramp	6-Lane Urban Arterial	44,832	0.83	D
30	SR-60 EB Off Ramp to Etiwanda Avenue	6-Lane Urban Arterial	42,024	0.78	C
31	Etiwanda Avenue to Bellegrave Avenue	6-Lane Urban Arterial	55,826	1.04	F
32	Bellegrave Avenue to Jurupa Road	6-Lane Urban Arterial	78,475	1.46	F
33	Jurupa Road to Limonite Avenue	6-Lane Urban Arterial	72,965	1.35	F
34	Limonite Avenue to Clay Street	6-Lane Urban Arterial	91,917	1.71	F
Segments on Riverside Drive					
35	Wineville Road to Etiwanda Avenue	4-Lane Major	11,872	0.35	C
Segments on Cantu-Galleano Ranch Road					
36	I-15 SB Ramps to I-15 NB Ramps	6-Lane Urban Arterial	29,159	0.54	C
37	I-15 NB Ramps to Wineville Avenue/Road	4-Lane Arterial	25,126	0.70	C
38	Wineville Avenue/Road to Etiwanda Avenue	6-Lane Urban Arterial	21,618	0.40	C
39	Etiwanda Avenue to Bellegrave Avenue	6-Lane Urban Arterial	12,665	0.23	C
Segments on Mission Boulevard					
40	SR-60 EB Ramps to Bellegrave Avenue	4-Lane Arterial	17,106	0.48	C

Table 3.A: Future No Project Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Existing Conditions		
			Daily Volume	V/C	LOS
41	Bellegrave Avenue to Pedley Road	4-Lane Arterial	23,586	0.66	C
42	Pedley Road to Pyrite Street	4-Lane Arterial	22,052	0.61	C
43	Pyrite Street to Camino Real	4-Lane Arterial	25,092	0.70	C
44	Camino Real to SR-60 EB Ramps	4-Lane Arterial	24,675	0.69	C
45	SR-60 EB Ramps to Valley Way	4-Lane Arterial	33,154	0.92	E
46	Valley Way to Riverview Dr	4-Lane Arterial	29,278	0.82	D
47	Riverview Dr to Rubidoux Boulevard	6-Lane Urban Arterial	35,131	0.65	C
48	East of Rubidoux Boulevard	4-Lane Arterial	35,157	0.98	E
Segments on Bellegrave Avenue					
49	West of Wineville Avenue	4-Lane Major	29,388	0.86	D
50	Wineville Avenue to Etiwanda Avenue	4-Lane Major	30,359	0.89	D
51	Etiwanda Avenue to Cantu-Galleano Ranch Road	4-Lane Major	34,639	1.02	F
52	Cantu-Galleano Ranch Road to Van Buren Boulevard	4-Lane Arterial	33,050	0.92	E
53	Van Buren Boulevard to Mission Boulevard	6-Lane Urban Arterial	23,790	0.44	C
Segments on Jurupa Road					
54	Bellegrave Avenue to Etiwanda Avenue	2-Lane Collector	6,150	0.47	C
55	Etiwanda Avenue to Bain Street	4-Lane Secondary	15,155	0.59	C
56	Bain Street to Van Buren Boulevard	4-Lane Arterial	15,155	0.42	C
57	Van Buren Boulevard to Pedley Road	4-Lane Arterial	16,540	0.46	C
58	Pedley Road to Camino Real	4-Lane Arterial	20,752	0.58	C
59	Camino Real to Valley Way	4-Lane Arterial	21,081	0.59	C
Segments on Valley Way-Armstrong Road					
60	Jurupa Road to Mission Boulevard	4-Lane Major	25,658	0.75	C
61	Mission Boulevard to SR-60 EB On-Ramp	4-Lane Major	49,330	1.45	F
62	SR-60 EB On-Ramp to SR-60 WB Ramps	4-Lane Major	43,411	1.27	F
63	SR-60 WB Ramps to Sierra Avenue	4-Lane Major	34,587	1.01	F
64	North of Sierra Avenue	4-Lane Major	26,579	0.78	C

Table 3.A: Future No Project Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Existing Conditions		
			Daily Volume	V/C	LOS
Segments on Limonite Avenue					
65	I-15 SB Ramps to I-15 NB Ramps	6-Lane Urban Arterial	59,875	1.11	F
66	I-15 NB Ramps to Wineville Avenue	6-Lane Urban Arterial	56,242	1.04	F
67	Wineville Avenue to Etiwanda Avenue	6-Lane Urban Arterial	47,113	0.87	D
68	Etiwanda Avenue to Bain Street	6-Lane Urban Arterial	45,481	0.84	D
69	Bain Street to Collins Street	6-Lane Urban Arterial	39,529	0.73	C
70	Collins Street to Van Buren Boulevard	6-Lane Urban Arterial	44,146	0.82	D
71	Van Buren Boulevard to Pedley Road	6-Lane Urban Arterial	42,069	0.78	C
72	Pedley Road to Clay Street	6-Lane Urban Arterial	37,923	0.70	C
73	Clay Street to Camino Real	6-Lane Urban Arterial	36,554	0.68	C
74	Lakeside Drive to Mission Boulevard	4-Lane Major	15,298	0.45	C
Segments on Rubidoux Boulevard					
75	Mission Boulevard to SR-60 EB Ramps	4-Lane Arterial	23,834	0.66	C
76	SR-60 EB Ramps to SR-60 WB Ramps	4-Lane Arterial	24,318	0.68	C
77	SR-60 WB Ramps to Market Street	4-Lane Major	25,325	0.74	C
78	North of Market Street	4-Lane Arterial	22,975	0.64	C
Segments on Holmes Avenue					
79	Wineville Avenue to Etiwanda Avenue	2-Lane Collector	2,033	0.16	C
Segments on Sierra Avenue					
80	West of Armstrong Road	4-Lane Arterial	34,941	0.97	E
Segments on Market St					
81	East of Rubidoux Boulevard	4-Lane Arterial	28,767	0.80	D
Segments on Agua Mansa Road					
82	North of Market Street	4-Lane Major	24,227	0.71	C

LOS = Level of Service, V/C = Volume to Capacity
Capacity based on County of Riverside Link Volume Capacities, March 2001.
Shaded Rows Exceed LOS Standard

Table 3.B: Future No Project Intersection Levels of Service

	Intersection	Control	Future No Project Conditions					
			A.M. Peak Hour			P.M. Peak Hour		
			Delay (sec.)	Delay (sec.)	LOS	Delay (sec.)	Delay (sec.)	LOS
1	I-15 SB Ramps/Cantu-Galleano Ranch Road	Signal	18.1	18.1	B	25.6	25.6	C
2	I-15 NB Ramps/Cantu-Galleano Ranch Road	Signal	11.3	11.3	B	10.7	10.7	B
3	I-15 SB Ramps/Limonite Avenue	Signal	31.8	31.8	C	31.9	31.9	C
4	I-15 NB Ramps/Limonite Avenue	Signal	38.0	38.0	D	>100	106.6	F
5	Wineville Avenue/E Mission Boulevard	TWSC	>100	249.7	F	>100	192.3	F
6	Wineville Avenue/Riverside Drive	AWSC	19.0	19.0	C	65.6	65.6	F
7	Wineville Avenue/Cantu-Galleano Ranch Road	Signal	43.6	43.6	D	63.0	63.0	E
8	Wineville Avenue/Bellegrave Avenue	Signal	48.1	48.1	D	52.8	52.8	D
9	Wineville Avenue/Limonite Avenue	Signal	55.0	55.0	D	95.3	95.3	F
10	Wineville Avenue/68th Street	AWSC	9.8	9.8	A	10.5	10.5	B
11	E Mission Boulevard/SR-60 Westbound On-Ramp	Signal	10.9	10.9	B	11.5	11.5	B
12	E Mission Boulevard/SR-60 Eastbound Off-Ramp	Signal	>100	129.7	F	84.1	84.1	F
13	Etiwanda Avenue/Philadelphia Avenue	Signal	39.6	39.6	D	39.4	39.4	D
14	Etiwanda Avenue/SR-60 Westbound Off-Ramp	Signal	50.3	50.3	D	21.4	21.4	C
15	Etiwanda Avenue/SR-60 Eastbound On-Ramp	TWSC	>100	580.1	F	>100	560.3	F
16	Etiwanda Avenue/Van Buren Boulevard	Signal	58.0	58.0	E	85.5	85.5	F
17	Etiwanda Avenue/Riverside Drive	Signal	38.0	38.0	D	38.4	38.4	D
18	Etiwanda Avenue/Cantu-Galleano Ranch Road	Signal	42.7	42.7	D	40.5	40.5	D
19	Etiwanda Avenue/Bellegrave Avenue	Signal	59.0	59.0	E	56.5	56.5	E
20	Etiwanda Avenue/Jurupa Road	Signal	>100	196.6	F	>100	208.0	F
21	Etiwanda Avenue/Limonite Avenue	Signal	95.8	95.8	F	>100	163.6	F
22	Country Village Road/Philadelphia Avenue	Signal	22.4	22.4	C	>100	131.2	F
23	Country Village Road/SR-60 Westbound Ramps	Signal	>100	150.8	F	>100	136.0	F
24	Mission Boulevard/SR-60 Eastbound Ramps	Signal	24.6	24.6	C	58.7	58.7	E
25	Bain Street/Bellegrave Avenue	Signal	34.0	34.0	C	89.6	89.6	F
26	Van Buren Boulevard/Bellegrave Avenue	Signal	>100	247.0	F	>100	242.3	F

Table 3.B: Future No Project Intersection Levels of Service

	Intersection	Control	Future No Project Conditions					
			A.M. Peak Hour			P.M. Peak Hour		
			Delay (sec.)	Delay (sec.)	LOS	Delay (sec.)	Delay (sec.)	LOS
27	Future Bellegrave Avenue Intersection @ Van Buren Boulevard	TWSC	*Not Analyzed*			*Not Analyzed*		
28	Bain Street/Jurupa Road	AWSC	15.8	15.8	C	20.0	20.0	C
29	Bain Street/Limonite Avenue	Signal	14.7	14.7	B	26.5	26.5	C
30	Pedley Road/SR-60 Westbound Ramps	TWSC	>100	622.7	F	>100	690.8	F
31	Pedley Road/SR-60 Eastbound Ramps	TWSC	21.7	21.7	C	32.0	32.0	D
32	Bellegrave Avenue/Mission Boulevard	Signal	56.4	56.4	E	>100	179.3	F
33	Pedley Road/Mission Boulevard	Signal	38.1	38.1	D	40.2	40.2	D
34	Van Buren Boulevard/Jurupa Road	Signal	57.2	57.2	E	73.4	73.4	E
35	Future Jurupa Road Intersection @ Van Buren Boulevard	TWSC	*Not Analyzed*			*Not Analyzed*		
36	Pedley Road/Jurupa Road	AWSC	>100	155.5	F	>100	229.9	F
37	Collins Street/Limonite Avenue	Signal	29.1	29.1	C	33.7	33.7	C
38	Van Buren Boulevard/Limonite Avenue	Signal	36.6	36.6	D	57.9	57.9	E
39	Pedley Road-Morton Avenue/Limonite Avenue	Signal	68.4	68.4	E	>100	115.1	F
40	Pyrite Street/SR-60 Westbound Ramps	TWSC	23.8	23.8	C	20.4	20.4	C
41	Pyrite Street/SR-60 Eastbound Ramps	TWSC	16.5	16.5	C	32.6	32.6	D
42	Pyrite Street/Mission Boulevard	Signal	35.3	35.3	D	43.3	41.6	D
43	Clay Street/Limonite Avenue	Signal	54.3	54.3	D	58.8	58.8	E
44	Van Buren Boulevard/Clay Street	Signal	75.7	75.7	E	>100	112.4	F
45	Camino Real/Mission Boulevard	Signal	42.2	42.2	D	43.0	43.0	D
46	Camino Real/Jurupa Road	Signal	53.5	53.5	D	86.1	86.1	F
47	Camino Real/Limonite Avenue	Signal	53.4	53.4	D	57.4	57.4	E
48	Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard	Signal	46.3	46.3	D	>100	143.8	F
49	Valley Way/Jurupa Road	AWSC	>100	129.7	F	>100	118.7	F
50	Armstrong Road/Sierra Avenue	Signal	85.7	85.7	F	>100	169.6	F
51	Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive	Signal	>100	104.9	F	>100	154.3	F
52	Valley Way/SR-60 Westbound On Ramp	TWSC	83.2	83.2	F	>100	167.2	F

Table 3.B: Future No Project Intersection Levels of Service

	Intersection	Control	Future No Project Conditions					
			A.M. Peak Hour			P.M. Peak Hour		
			Delay (sec.)	Delay (sec.)	LOS	Delay (sec.)	Delay (sec.)	LOS
53	Valley Way/Mission Boulevard	Signal	47.6	47.6	D	46.5	46.5	D
54	Pacific Avenue/Mission Boulevard	Signal	75.4	75.4	E	>100	139.3	F
55	Pacific Avenue/Limonite Avenue	Signal	17.3	17.3	B	58.5	58.5	E
56	Riverview Drive/Mission Boulevard	Signal	>100	141.3	F	>100	142.7	F
57	Rubidoux Boulevard/Market Street	Signal	86.1	86.1	F	>100	244.8	F
58	Rubidoux Boulevard/SR-60 Westbound Off-Ramp-30th Street	Signal	17.5	17.5	B	26.3	26.3	C
59	Rubidoux Boulevard/SR-60 Westbound On-Ramp	TWSC	16.0	16.0	C	20.9	20.9	C
60	Rubidoux Boulevard/SR-60 Eastbound Ramps	Signal	68.6	68.6	E	63.9	63.9	E
61	Rubidoux Boulevard/Mission Boulevard	Signal	>100	110.6	F	>100	143.2	F
62	Bellegrave Avenue/Cantu-Galleano Ranch Road	TWSC	*Not Analyzed*			*Not Analyzed*		

AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
Delay = Average control delay in seconds (For TWSC intersections, reported delay is for worst-case movement).
LOS = Level of Service
Shaded Rows Exceed LOS Standard

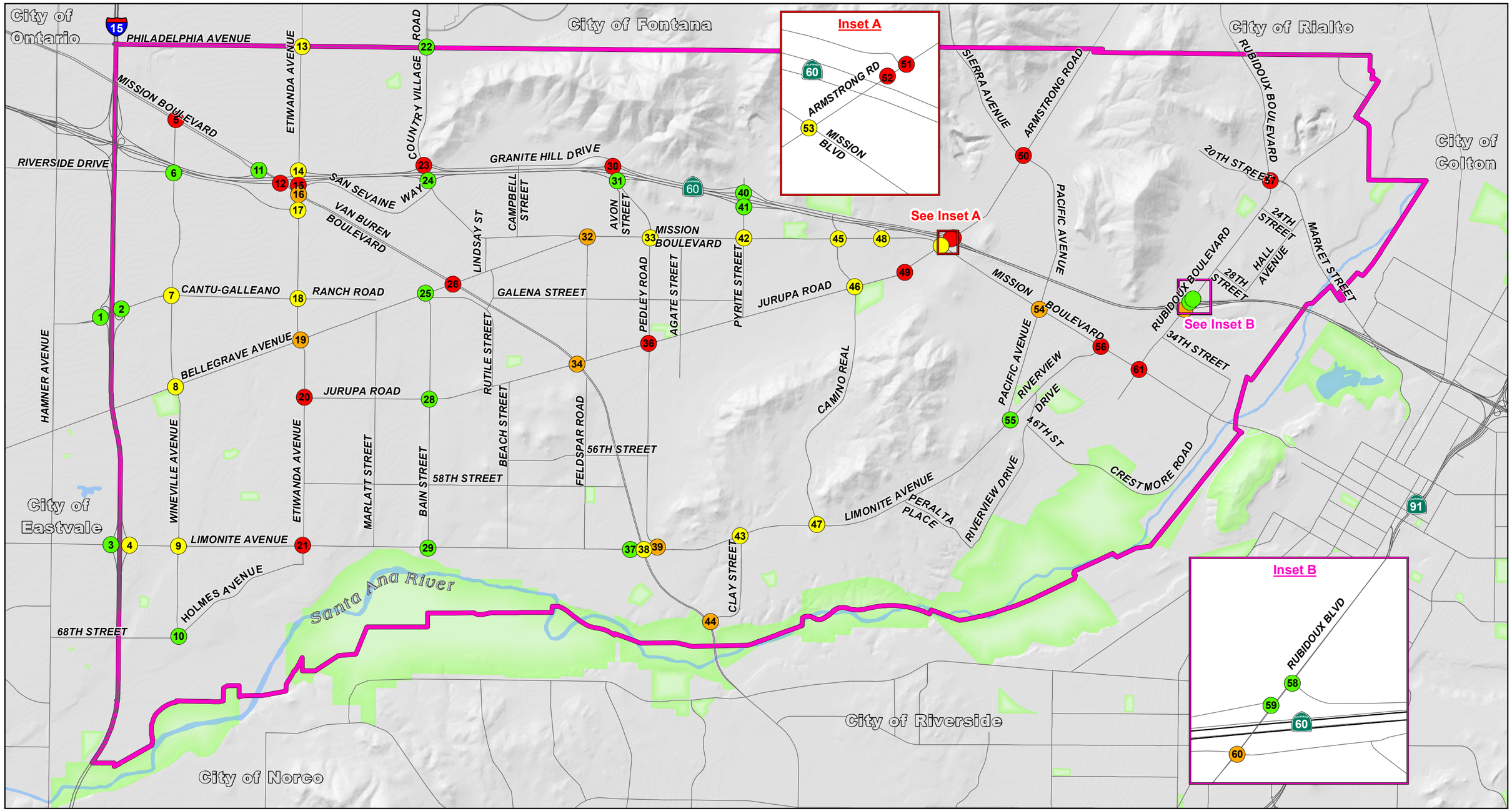
- Etiwanda Avenue/Jurupa Road (a.m. and p.m. peak hours);
- Etiwanda Avenue/Limonite Avenue (a.m. and p.m. peak hours);
- Country Village Road/Philadelphia Avenue (p.m. peak hour);
- Country Village Road/SR-60 Westbound Ramps (a.m. and p.m. peak hours);
- Mission Boulevard/SR-60 Eastbound Ramps (a.m. and p.m. peak hours);
- Bain Street Bellegrave Avenue (p.m. peak hour);
- Van Buren Boulevard/Bellegrave Avenue (a.m. and p.m. peak hours);
- Pedley Road/SR-60 Westbound Ramps (a.m. and p.m. peak hours);
- Bellegrave Avenue/Mission Boulevard (a.m. and p.m. peak hours);
- Van Buren Boulevard/Jurupa Road (a.m. and p.m. peak hours);
- Pedley Road/Jurupa Road (a.m. and p.m. peak hours);
- Van Buren Boulevard/Limonite Avenue (p.m. peak hour);
- Pedley Road-Morton Avenue/Limonite Avenue (a.m. and p.m. peak hours);
- Clay Street/Limonite Avenue (p.m. peak hour);
- Van Buren Boulevard/Clay Street (a.m. and p.m. peak hours);
- Camino Real/Jurupa Road (p.m. peak hour);
- Camino Real/Limonite Avenue (p.m. peak hour);
- Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard (p.m. peak hour);
- Valley Way/Jurupa Road (a.m. and p.m. peak hours);
- Armstrong Road/Sierra Avenue (a.m. and p.m. peak hours);
- Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive (a.m. and p.m. peak hours);
- Valley Way/SR-60 Westbound On-Ramp (a.m. and p.m. peak hours);
- Pacific Avenue/Mission Boulevard (a.m. and p.m. peak hours);
- Pacific Avenue/Limonite Avenue (p.m. peak hour);
- Riverview Drive/Mission Boulevard (a.m. and p.m. peak hours);
- Rubidoux Boulevard/Market Street (a.m. and p.m. peak hours);
- Rubidoux Boulevard/SR-60 Eastbound Ramps (a.m. and p.m. peak hours); and
- Rubidoux Boulevard/Mission Boulevard (a.m. and p.m. peak hours).

Figures 3.3-1 and 3.3-2 illustrate the locations of the study area intersections and corresponding a.m. and p.m. levels of service under Future No Project conditions. LOS worksheets are included in Appendix C.

Roadway Segment Levels of Service

A level of service analysis was conducted at study area roadway segments to determine the projected roadway segment performance under Future No Project conditions. As shown in previously referenced Table 3.A, all roadway segments are projected to operate at satisfactory levels of service (D or better), with the exception of the following roadway segments:

- Country Village Road from Philadelphia Avenue to SR-60 Westbound Ramps;
- Country Village Road from SR-60 Westbound Ramps to SR-60 Eastbound Ramps;
- Clay Street from Limonite Avenue to Van Buren Boulevard;
- Van Buren Boulevard from Etiwanda Avenue to Bellegrave Avenue;



LSA

City of Jurupa Valley
Parks

Intersections

Level of Service A - C
Level of Service D
Level of Service E
Level of Service F

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 3.3-1
Future No Project A.M. Peak Hour Levels of Service

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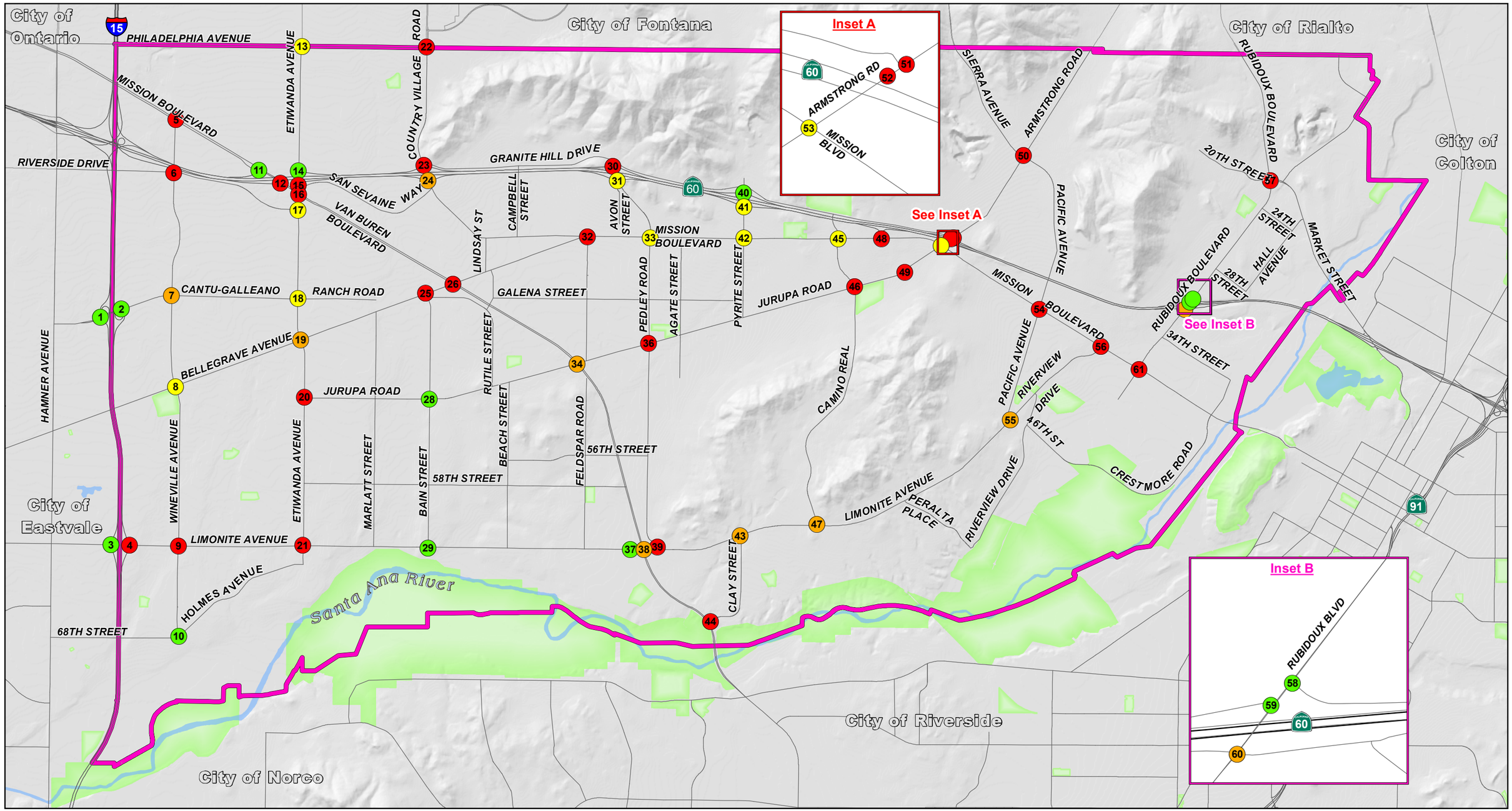

LSA

City of Jurupa Valley
Parks

Intersections

Level of Service A - C
Level of Service D
Level of Service E
Level of Service F

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 3.3-2
Future No Project P.M. Peak Hour Levels of Service

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- Clay Street from Limonite Avenue to Van Buren Boulevard;
- Van Buren Boulevard from Etiwanda Avenue to Bellegrave Avenue;
- Van Buren Boulevard from Bellegrave Avenue to Jurupa Road;
- Van Buren Boulevard from Jurupa Road to Limonite Avenue;
- Van Buren Boulevard from Limonite Avenue to Clay Street;
- Mission Boulevard from SR-60 Eastbound Ramps to Valley Way;
- Mission Boulevard east of Rubidoux Boulevard;
- Bellegrave Avenue from Etiwanda Avenue to Cantu-Galleano Ranch Road;
- Bellegrave Avenue from Cantu-Galleano Ranch Road to Van Buren Boulevard;
- Valley Way from SR-60 Eastbound On-Ramp to SR-60 Westbound Ramps;
- Valley Way from SR-60 Westbound Ramps to Sierra Avenue;
- Limonite Avenue from I-15 Southbound Ramps to I-15 Northbound Ramps;
- Limonite Avenue from I-15 Northbound Ramps to Wineville Avenue; and
- Sierra Avenue west of Armstrong Road.

Figure 3.4 illustrates the locations of the roadway segments and corresponding levels of service under Future No Project conditions.

General Plan Build-out Conditions

Roadway Network

The General Plan Build-out scenario includes modifications to the existing roadway network based on input from the City of Jurupa Valley to reflect the Jurupa Valley Mobility goals. Following are recommended improvements to the City's roadway network:

Etiwanda Avenue: The roadway segment south of Limonite Avenue is proposed to include a two-lane Secondary roadway bridge extension from 66th Street over the Santa Ana River to Arlington Avenue.

Van Buren Boulevard: The roadway segments from Etiwanda Avenue to Clay Street are proposed to be widened from a four-lane Urban Arterial to an eight-lane Expressway. The intersection of Van Buren Boulevard/ Bellegrave Avenue is proposed to realign to the south with a new connector at Van Buren Boulevard/Van Buren Connector. Also, the intersection of Van Buren Boulevard/Jurupa Road is proposed to realign to the north with a new connector at Van Buren Boulevard/Van Buren Connector.

Cantu-Galleano Ranch Road: The roadway segments between Etiwanda Avenue and Van Buren Boulevard are proposed to be widened from four-lane Major roadways to six-lane Urban Arterials. The roadway segment east of Etiwanda Avenue is proposed to align with Bellegrave Avenue and create a new intersection at Bellegrave Avenue/Cantu-Galleano Ranch Road.

Bellegrave Avenue: The roadway segment between Marlatt Street and Dodd Street is proposed to realign with Cantu-Galleano Ranch Road and end at the new intersection of Bellegrave Avenue/Cantu-Galleano Ranch Road. A new intersection west of Bain Street is proposed to connect at Van Buren Connector/Bellegrave Avenue.

Market Street: The roadway segment east of Rubidoux Boulevard is proposed to be widened from a two-lane Arterial to a three-lane Major Roadway.

Figures 3.5-1 and 3.5-2 illustrate the General Plan Build-out intersection geometrics and stop control with the proposed roadway modifications.

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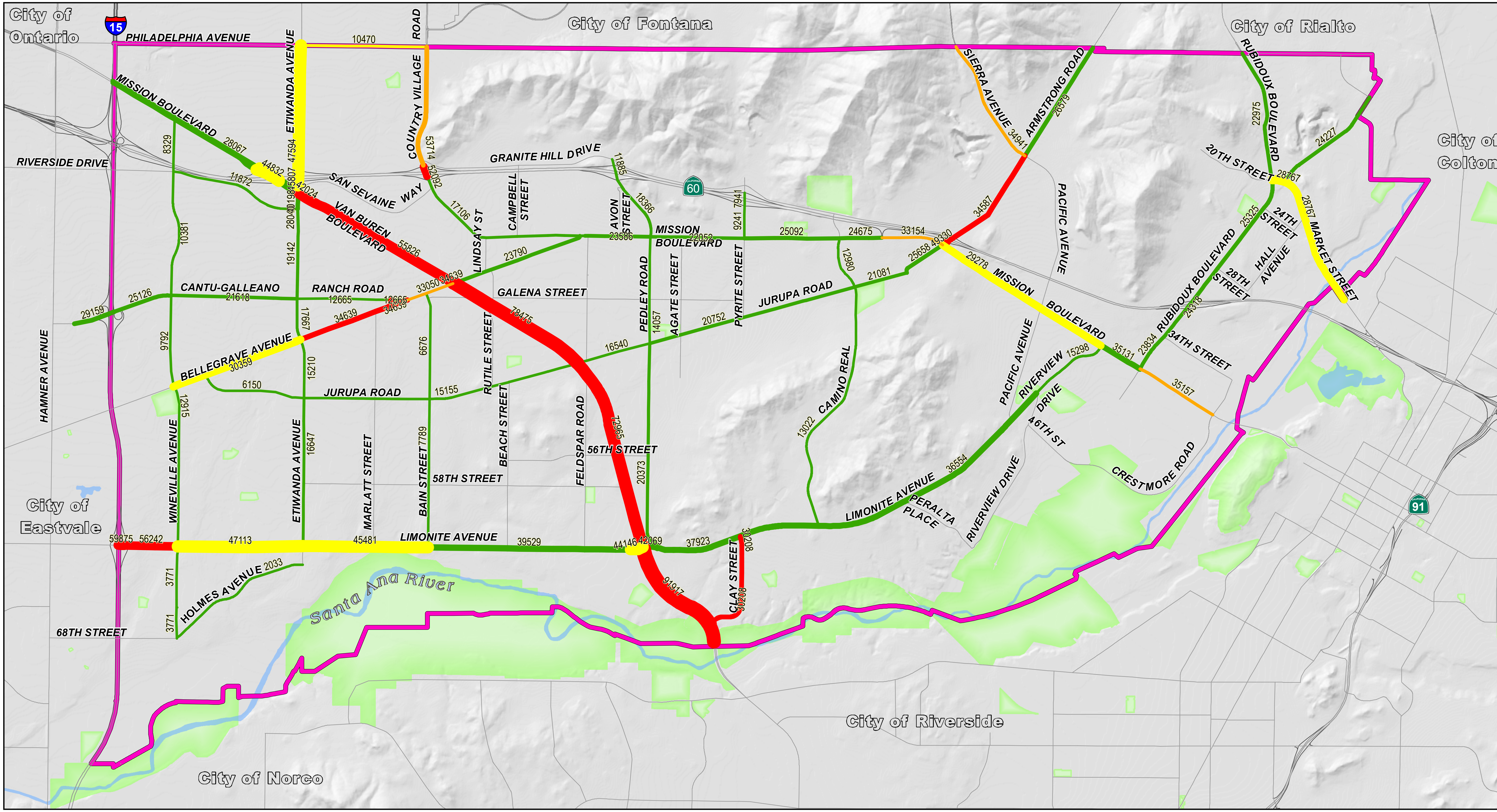
City of Ontario
City of Fontana
City of Rialto
City of Colton
City of Eastvale
City of Norco
City of Riverside
15
60
91
PHILADELPHIA AVENUE
10470
ETIWANDA AVENUE
COUNTRY VILLAGE ROAD
MISSION BOULEVARD
RIVERSIDE DRIVE
GRANITE HILL DRIVE
SAN SEVAINE WAY
VAN BUREN BOULEVARD
CANTU-GALLEANO RANCH ROAD
GALENA STREET
BELLEGRAVE AVENUE
JURUPA ROAD
LINDSAY ST
CAMPBELL STREET
AVON STREET
MISSION BOULEVARD
PEDLEY ROAD
AGATE STREET
PYRITE STREET
RUTILE STREET
BEACH STREET
FELDSPAR ROAD
56TH STREET
58TH STREET
BAIN STREET
MARLATT STREET
WINEVILLE AVENUE
HAMNER AVENUE
LIMONITE AVENUE
HOLMES AVENUE
68TH STREET
Santa Ana River
CLAY STREET
CAMINO REAL
SIERRA AVENUE
ARMSTRONG ROAD
PACIFIC AVENUE
RUBIDOUX BOULEVARD
20TH STREET
24TH STREET
28TH STREET
HALL AVENUE
MARKET STREET
34TH STREET
RIVERVIEW DRIVE
46TH ST
CRESTMORE ROAD
PERALTA PLACE
28067
44832
47594
45807
42024
11872
8329
10381
28040
19142
55826
34639
33050
12665
34639
21618
25126
29159
17667
34639
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9792
30359
6150
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24227
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28767

LSA

City of Jurupa Valley

Parks

Level of Service

Level of Service A- C

Level of Service D

Level of Service E

Level of Service F

Daily Volume

45,000 30,000 10,000

20,000 Daily Volume

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

Jurupa Valley General Plan Traffic Study

Figure 3.4

Future No Project Roadway Segment Levels of Service

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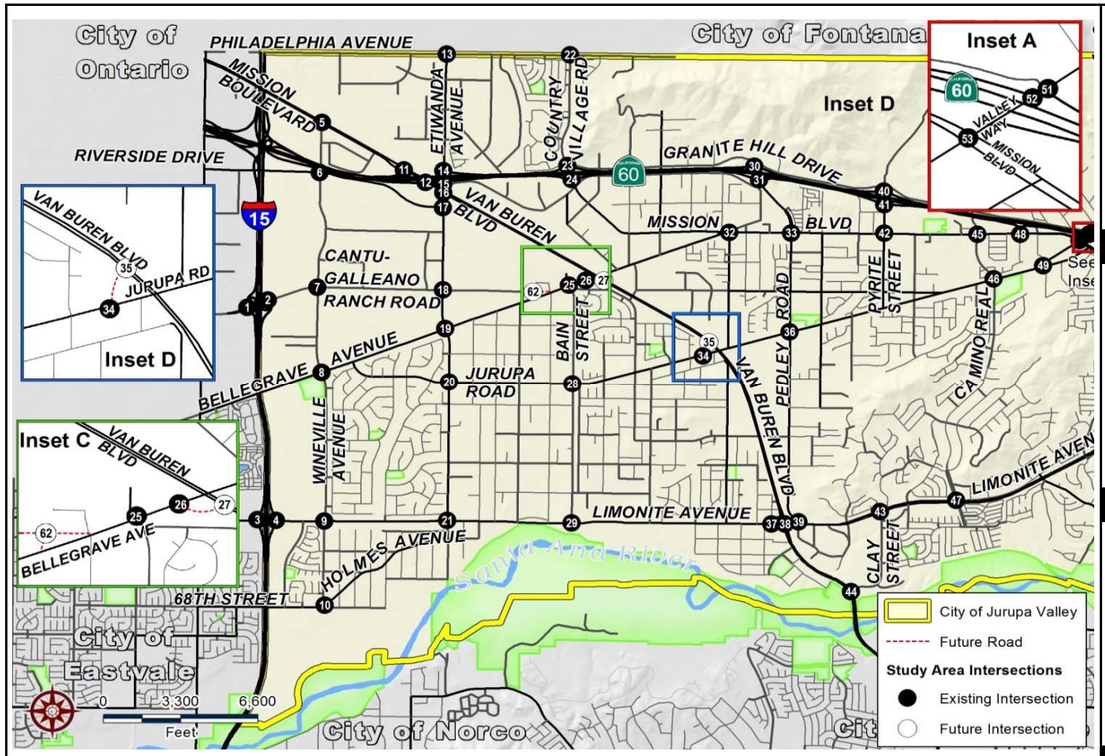
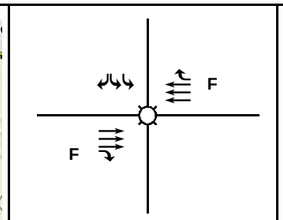
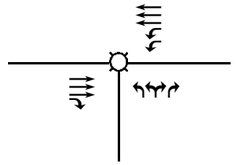
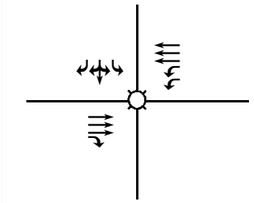




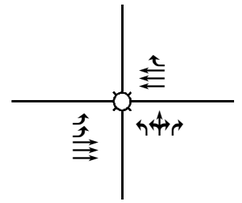
1 I-15 SB Ramps/Cantu-Galleano Ranch Rd



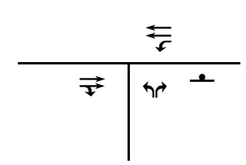
2 I-15 NB Ramps/Cantu-Galleano Ranch Rd



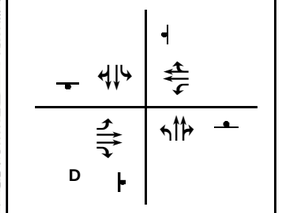
3 I-15 SB Ramps/Limonite Avenue



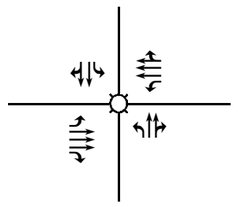
4 I-15 NB Ramps/Limonite Avenue



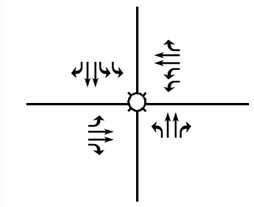
5 Wineville Avenue/E Mission Boulevard



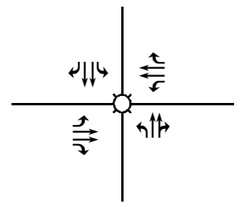
6 Wineville Avenue/Riverside Drive



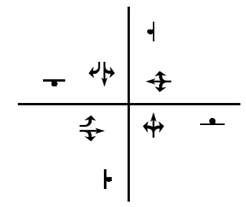
7 Wineville Avenue/Cantu-Galleano Ranch Rd



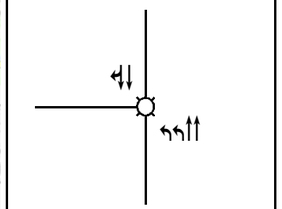
8 Wineville Avenue/Bellegrave Avenue



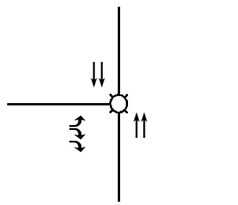
9 Wineville Avenue/Limonite Avenue



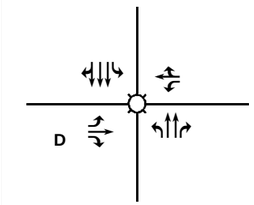
10 Wineville Avenue/68th Street



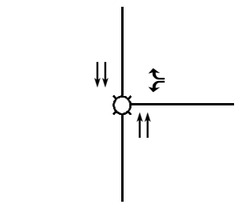
11 E Mission Boulevard/SR-60 Westbound On-Ramp



12 E Mission Boulevard/SR-60 Eastbound Off-Ramp



13 Etiwanda Avenue/Philadelphia Avenue



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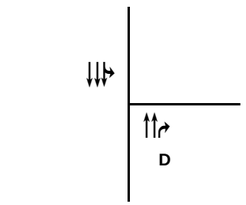
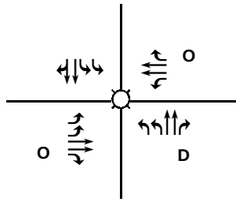
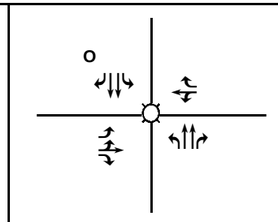


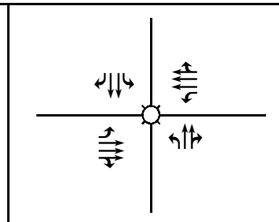
15 Etiwanda Avenue/SR-60 Eastbound On-Ramp



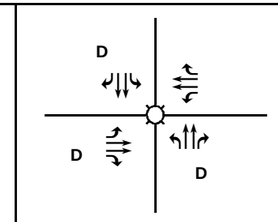
16 Etiwanda Avenue/Van Buren Boulevard



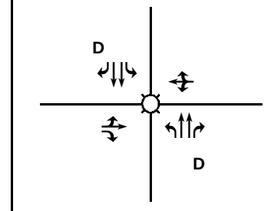
17 Etiwanda Avenue/Riverside Drive



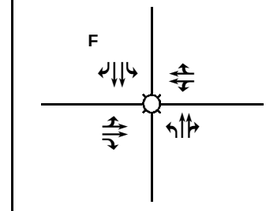
18 Etiwanda Avenue/Cantu-Galleano Ranch Rd



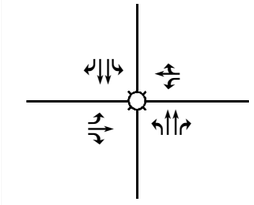
19 Etiwanda Avenue/Bellegrave Avenue



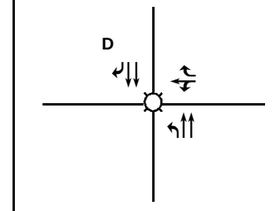
20 Etiwanda Avenue/Jurupa Road



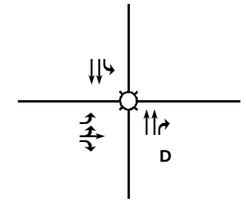
21 Etiwanda Avenue/Limonite Avenue



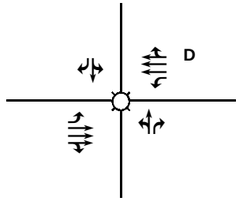
22 Country Village Road/Philadelphia Avenue



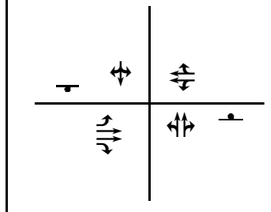
23 Country Village Road/SR-60 Westbound Ramps



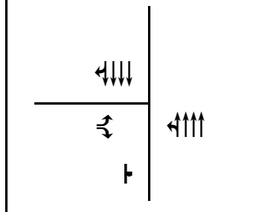
24 Mission Boulevard/SR-60 Eastbound Ramps



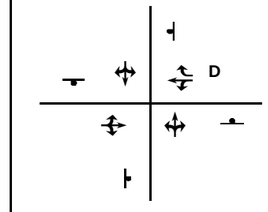
25 Bain Street/Bellegrave Avenue



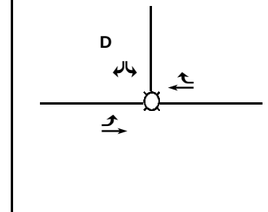
26 Van Buren Boulevard /Bellegrave Avenue



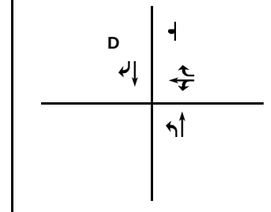
27 Future Bellegrave Ave Intersection @ Van Buren Boulevard



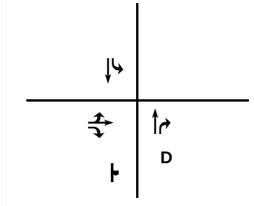
28 Bain Street/Jurupa Road



29 Bain Street/Limonite Avenue



30 Pedley Road/SR-60 Westbound Ramps



31 Pedley Road/SR-60 Eastbound Ramps

LSA

Legend

- Signal
- Stop Sign
- **D** De-Facto Right-Turn Lane
- **F** Free Right-Turn Lane
- **O** Right-Turn Overlap

Jurupa Valley General Plan
Traffic Study

Figure 3.5-1
General Plan Build-Out Intersection Geometrics & Stop Control

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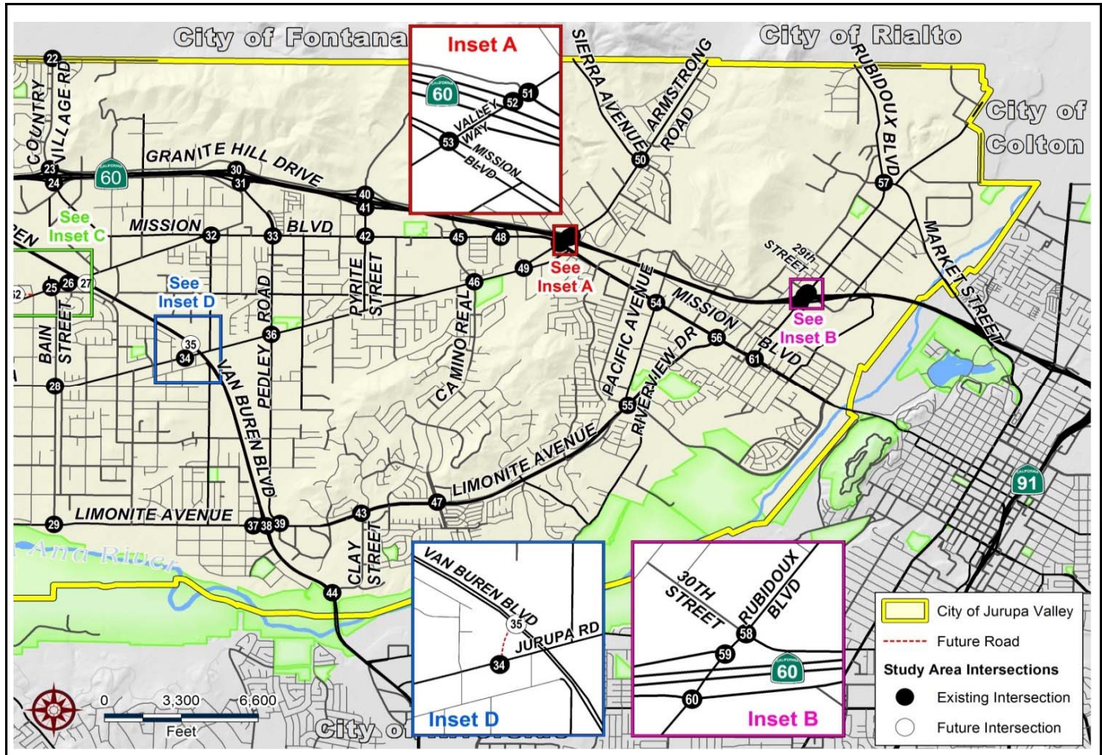

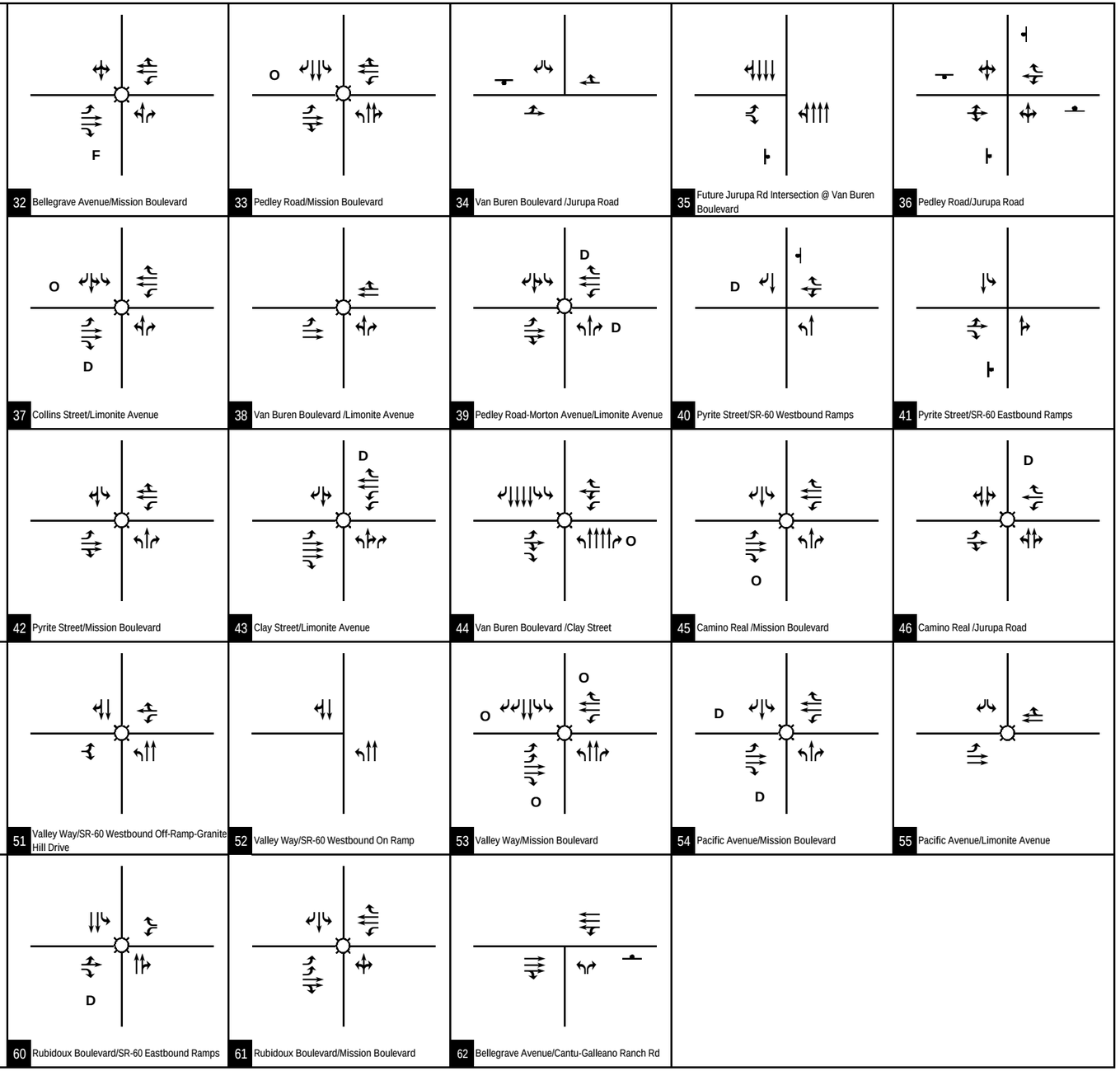

LSA

Legend

Signal

Stop Sign

D De-Facto Right-Turn Lane

F Free Right-Turn Lane

O Right-Turn Overlap

Jurupa Valley General Plan
Traffic Study

Figure 3.5-2
General Plan Build-Out Intersection Geometrics & Stop Control

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Intersection Traffic Volumes

The development of future intersection traffic volumes for General Plan Build-out conditions is similar to the Future No Project conditions with the exception of the roadway network modifications that were described previously for General Plan Build-out. These modifications are not considered significant enough to divert or reroute traffic in large volume. Therefore, the same volume development methodology used for Future No Project conditions was used for General Plan Build-out.

Detailed volume development worksheets are contained in Appendix B. The General Plan Build-out a.m. and p.m. peak hour intersection traffic volumes are illustrated in Figures 3.6-1 and 3.6-2.

Roadway Segment Traffic Volumes

The roadway segment volumes were developed using the same methodology described under "Intersection Traffic Volumes." Table 3.C illustrates the General Plan Build-out daily traffic volumes at study area roadway segments.

Intersection Levels of Service

A level of service analysis for General Plan Build-out was conducted at study area intersections to determine the projected intersection performance. Table 3.D illustrates the results of this analysis, and shows that all intersections are projected to operate at satisfactory levels of service D or better, with the exception of the following intersections:

- I-15 Southbound Ramps/Limonite Avenue (p.m. peak hour);
- I-15 Northbound Ramps/Limonite Avenue (p.m. peak hour);
- Wineville Road/Mission Boulevard (a.m. and p.m. peak hours);
- Wineville Road/Riverside Drive (p.m. peak hour);
- Wineville Avenue/Road/Cantu-Galleano Ranch Road (p.m. peak hour)
- Mission Boulevard/SR-60 Eastbound Off-Ramp (a.m. and p.m. peak hours);
- Etiwanda Avenue/Philadelphia Avenue (a.m. and p.m. peak hours);
- Etiwanda Avenue/SR-60 Eastbound On-Ramp (a.m. and p.m. peak hours);
- Etiwanda Avenue/Van Buren Boulevard (a.m. and p.m. peak hours);
- Etiwanda Avenue/Bellegrave Avenue (a.m. peak hour);
- Etiwanda Avenue/Limonite Avenue (a.m. and p.m. peak hours);
- Country Village Road/Philadelphia Avenue (p.m. peak hour);
- Country Village Road/SR-60 Westbound Ramps (a.m. and p.m. peak hours);
- Van Buren-Bellegrave Connector/Bellegrave Avenue (a.m. and p.m. peak hours);
- Van Buren Boulevard/Van Buren-Bellegrave Connector (a.m. and p.m. peak hours);
- Pedley Road/SR-60 Westbound Ramps (a.m. and p.m. peak hours);
- Jurupa Road/Van Buren-Jurupa Connector (a.m. and p.m. peak hours);
- Van Buren Boulevard/Van Buren-Jurupa Connector (a.m. and p.m. peak hours);
- Pedley Road/Jurupa Road (a.m. and p.m. peak hours);
- Pedley Road-Morton Avenue/Limonite Avenue (a.m. and p.m. peak hours);
- Pyrite Street/SR-60 Westbound Ramps (p.m. peak hour);
- Pyrite Street/SR-60 Eastbound Ramps (p.m. peak hour);
- Clay Street/Limonite Avenue (a.m. and p.m. peak hours);

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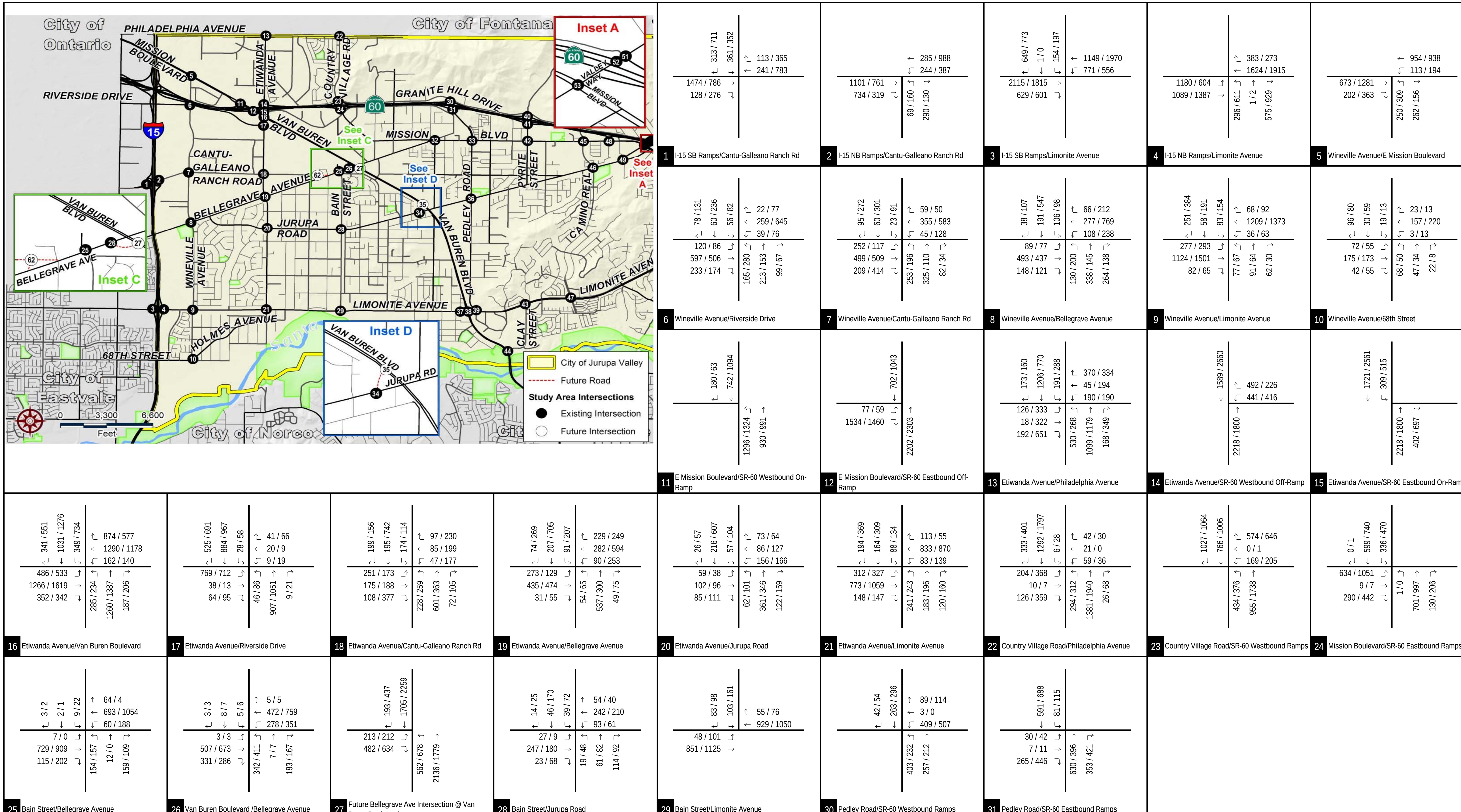

LSA

XXX / YYY AM / PM Peak Hour Volume (In PCEs)

Jurupa Valley General Plan
Traffic Study

Figure 3.6-1
General Plan Build-Out Peak Hour Traffic Volumes

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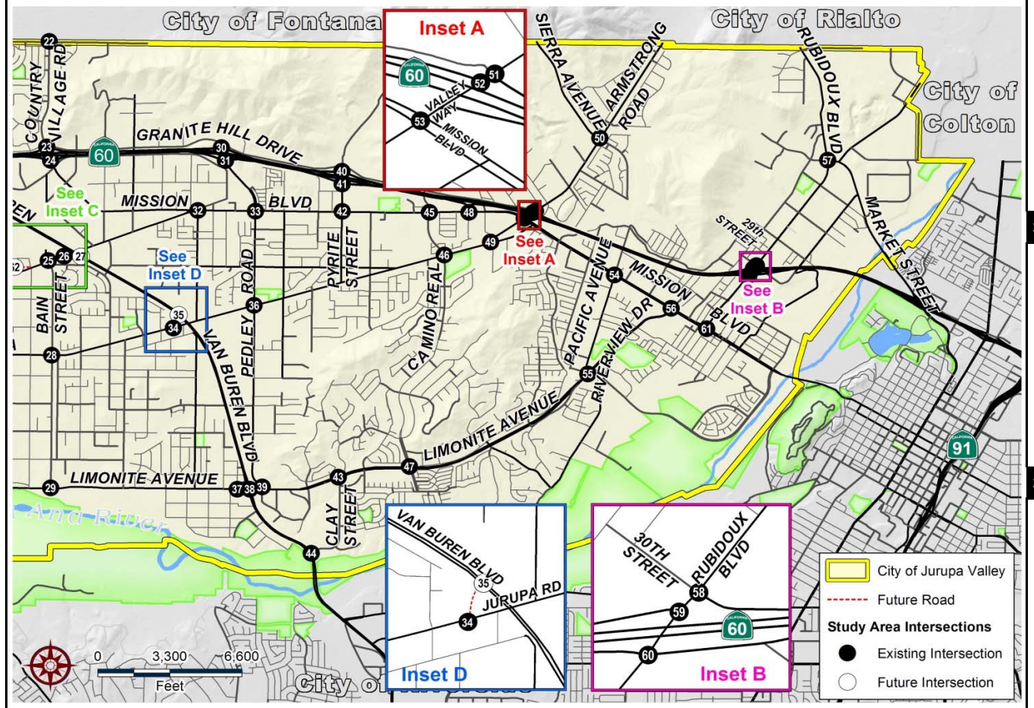

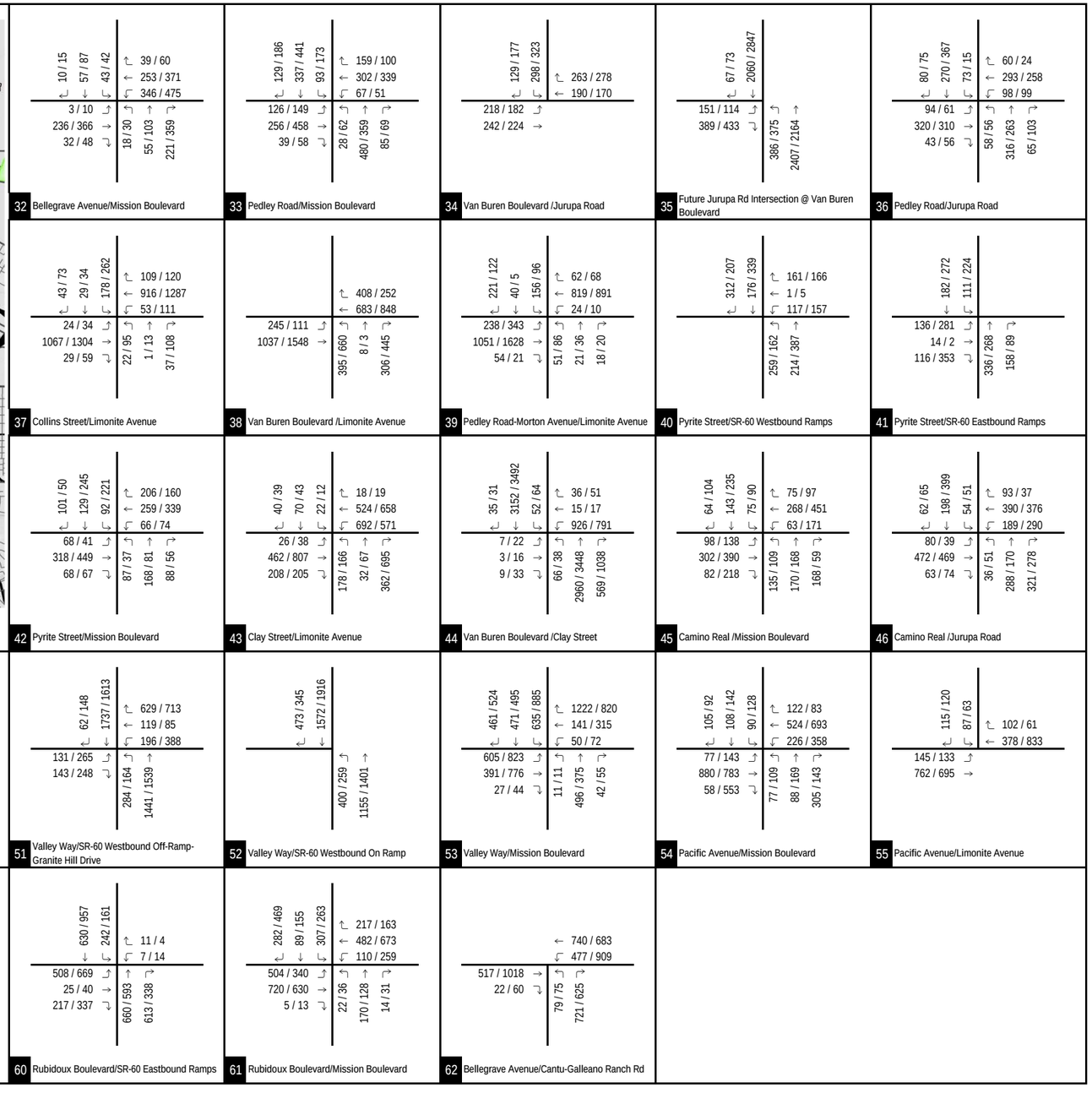

LSA

XXX / YYY AM / PM Peak Hour Volume (In PCEs)

Jurupa Valley General Plan
Traffic Study

Figure 3.6-2
General Plan Build-Out Peak Hour Traffic Volumes

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Table 3.C: General Plan Build-out Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Build-out Conditions		
			Daily Volume	V/C	LOS
Segments on Wineville Avenue/Road					
1	East Mission Boulevard to Riverside Drive	4-Lane Major	7,554	0.22	C
2	Riverside Drive to Cantu-Galleano Ranch Road	4-Lane Secondary	8,745	0.34	C
3	Cantu-Galleano Ranch Road to Bellegrave Avenue	4-Lane Secondary	7,852	0.30	C
4	Bellegrave Avenue to Limonite Avenue	4-Lane Major	9,989	0.29	C
5	Limonite Avenue to 68th Street	3-Lane Major	3,781	0.15	C
Segments on Etiwanda Avenue					
6	Philadelphia Avenue to SR-60 WB Off-Ramp	6-Lane Urban Arterial	52,991	0.98	E
7	SR-60 WB Off-Ramp to SR-60 EB On-Ramp	4-Lane Arterial	52,562	1.46	F
8	SR-60 EB On-Ramp to Van Buren Boulevard	4-Lane Arterial	46,764	1.30	F
9	Van Buren Boulevard to Riverside Drive	4-Lane Major	34,857	1.02	F
10	Riverside Drive to Cantu-Galleano Ranch Road	4-Lane Major	21,637	0.63	C
11	Cantu-Galleano Ranch Road to Bellegrave Avenue	4-Lane Major	13,676	0.40	C
12	Bellegrave Avenue to Jurupa Road	4-Lane Arterial	12,806	0.36	C
13	Jurupa Road to Limonite Avenue	4-Lane Arterial	14,017	0.39	C
14	Limonite Avenue to Holmes Avenue	2-Lane Secondary	29,966	2.31	F
15	South of Holmes Avenue	2-Lane Secondary	29,339	2.27	F
Segments on Bain Street					
15	Bellegrave Avenue to Jurupa Road	2-Lane Collector	5,363	0.41	C
16	Jurupa Road to Limonite Avenue	2-Lane Collector	4,425	0.34	C
Segments on Country Village Road					
17	Philadelphia Avenue to SR-60 WB Ramps	4-Lane Major	50,687	1.49	F
18	SR-60 WB Ramps to SR-60 EB Ramps	4-Lane Major	49,803	1.46	F
Segments on Pedley Road					
19	SR-60 WB Ramps to SR-60 EB Ramps	2-Lane Major	12,440	0.73	C
20	SR-60 EB Ramps to Mission Boulevard	4-Lane Major	20,013	0.59	C
21	Mission Boulevard to Jurupa Road	3-Lane Major	12,952	0.51	C
22	Jurupa Road to Limonite Avenue	2-Lane Major	14,152	0.83	D

Table 3.C: General Plan Build-out Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Build-out Conditions		
			Daily Volume	V/C	LOS
Segments on Pyrite Street					
23	SR-60 WB Ramps to SR-60 EB Ramps	2-Lane Major	10,486	0.61	C
24	SR-60 EB Ramps to Mission Boulevard	2-Lane Collector	10,469	0.81	D
Segments on Clay Street					
25	Limonite Avenue to Van Buren Boulevard	4-Lane Major	24,701	0.72	C
Segments on Camino Real					
26	Mission Boulevard to Jurupa Road	4-Lane Arterial	14,994	0.42	C
27	Jurupa Road to Limonite Avenue	4-Lane Major	13,871	0.41	C
Segments on Philadelphia Avenue					
28	Etiwanda Avenue to Country Village Road	2-Lane Major	14,393	0.84	D
Segments on Van Buren Boulevard-East Mission Boulevard					
29	Wineville Avenue to SR-60 WB On-Ramp	4-Lane Arterial	26,952	0.75	C
30	SR-60 WB On-Ramp to SR-60 EB Off-Ramp	4-Lane Arterial	44,856	1.25	F
31	SR-60 EB Off Ramp to Etiwanda Avenue	4-Lane Arterial	42,739	1.19	F
32	Etiwanda Avenue to Bellegrave Avenue	8-Lane Expressway	65,960	0.81	D
33	Bellegrave Avenue to Jurupa Road	8-Lane Expressway	86,873	1.06	F
34	Jurupa Road to Limonite Avenue	8-Lane Expressway	80,774	0.99	E
35	Limonite Avenue to Clay Street	8-Lane Expressway	87,216	1.07	F
Segments on Riverside Drive					
36	Wineville Avenue to Etiwanda Avenue	3-Lane Major	14,772	0.58	C
Segments on Cantu-Galleano Ranch Road					
37	I-15 SB Ramps to I-15 NB Ramps	6-Lane Urban Arterial	33,635	0.62	C
38	I-15 NB Ramps to Wineville Avenue	6-Lane Urban Arterial	29,177	0.54	C
39	Wineville Avenue to Etiwanda Avenue	6-Lane Urban Arterial	21,995	0.41	C
40	Etiwanda Avenue to Bellegrave Avenue	6-Lane Urban Arterial	16,344	0.30	C
Segments on Mission Boulevard					
41	SR-60 EB Ramps to Bellegrave Avenue	4-Lane Secondary	13,864	0.54	C
42	Bellegrave Avenue to Pedley Road	4-Lane Major	16,421	0.48	C
43	Pedley Road to Pyrite Street	4-Lane Secondary	13,730	0.53	C

Table 3.C: General Plan Build-out Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Build-out Conditions		
			Daily Volume	V/C	LOS
44	Pyrite Street to Camino Real	4-Lane Major	16,604	0.49	C
45	Camino Real to SR-60 EB Ramps	4-Lane Major	15,310	0.45	C
46	SR-60 EB Ramps to Valley Way	4-Lane Secondary	26,767	1.03	F
47	Valley Way to Riverview Drive	4-Lane Arterial	30,436	0.85	D
48	Riverview Drive to Rubidoux Boulevard	4-Lane Arterial	26,363	0.73	C
49	East of Rubidoux Boulevard	4-Lane Arterial	26,625	0.74	C
Segments on Bellegrave Avenue					
50	West of Wineville Avenue	4-Lane Major	27,589	0.81	D
51	Wineville Avenue to Etiwanda Avenue	4-Lane Major	30,666	0.90	D
52	Etiwanda Avenue to Cantu-Galleano Ranch Road	4-Lane Major	17,893	0.52	C
53	Cantu-Galleano Ranch Road to Van Buren Boulevard	6-Lane Urban Arterial	31,912	0.59	C
54	Van Buren Boulevard to Mission Boulevard	6-Lane Urban Arterial	30,994	0.58	C
Segments on Jurupa Road					
55	Bellegrave Avenue to Etiwanda Avenue	2-Lane Secondary	4,696	0.36	C
56	Etiwanda Avenue to Bain Street	2-Lane Collector	6,844	0.53	C
57	Bain Street to Van Buren Boulevard	2-Lane Collector	12,504	0.39	E
58	Van Buren Boulevard to Pedley Road	2-Lane Collector	14,536	1.12	F
59	Pedley Road to Camino Real	2-Lane Collector	11,871	0.91	E
60	Camino Real to Valley Way	2-Lane Collector	17,051	1.31	F
Segments on Valley Way-Armstrong Road					
61	Jurupa Road to Mission Boulevard	2-Lane Collector	13,165	1.01	F
62	Mission Boulevard to SR-60 EB On-Ramp	4-Lane Arterial	49,987	1.39	F
63	SR-60 EB On-Ramp to SR-60 WB Ramps	4-Lane Arterial	45,751	1.27	F
64	SR-60 WB Ramps to Sierra Avenue	4-Lane Major	42,653	1.25	F
65	North of Sierra Avenue	2-Lane Major	20,311	1.19	F
Segments on Limonite Avenue					
66	I-15 SB Ramps to I-15 NB Ramps	4-Lane Major	61,665	1.81	F
67	I-15 NB Ramps to Wineville Avenue	4-Lane Arterial	47,147	1.31	F
68	Wineville Avenue to Etiwanda Avenue	4-Lane Major	38,039	1.12	F

Table 3.C: General Plan Build-out Roadway Segment Levels of Service

	Roadway Segment	Functional Classification	Build-out Conditions		
			Daily Volume	V/C	LOS
69	Etiwanda Avenue to Bain Street	2-Lane Major	25,533	1.50	F
70	Bain Street to Collins Street	4-Lane Major	28,737	0.84	D
71	Collins Street to Van Buren Boulevard	4-Lane Major	33,732	0.99	E
72	Van Buren Boulevard to Pedley Road	4-Lane Major	26,947	0.79	C
73	Pedley Road to Clay Street	4-Lane Arterial	24,935	0.69	C
74	Clay Street to Riverview Drive	5-Lane Urban Arterial	33,075	0.97	C
75	Riverview Drive to Mission Boulevard	4-Lane Major	21,570	0.63	C
Segments on Rubidoux Boulevard					
76	Mission Boulevard to SR-60 EB Ramps	4-Lane Major	23,386	0.69	C
77	SR-60 EB Ramps to SR-60 WB Ramps	4-Lane Major	26,946	0.79	C
78	SR-60 WB Ramps to Market Street	4-Lane Major	29,685	0.87	D
79	North of Market Street	4-Lane Major	23,123	0.68	C
Segments on Holmes Avenue					
80	Wineville Avenue to Etiwanda Avenue	2-Lane Collector	4,520	0.35	C
Segments on Sierra Avenue					
81	West of Armstrong Road	4-Lane Secondary	29,489	1.14	F
Segments on Market Street					
82	East of Rubidoux Boulevard	2-Lane Major	25,930	1.52	F
Segments on Agua Mansa Road					
83	North of Market Street	3-Lane Secondary	23,420	1.21	F

LOS = Level of Service, V/C = Volume to Capacity
Capacity based on County of Riverside Link Volume Capacities, March 2001.
Shaded Rows Exceed LOS Standard

Table 3.D: General Plan Build-out Intersection Levels of Service

	Intersection	Control	Build-Out Conditions			
			A.M. Peak Hour		P.M. Peak Hour	
			Delay (sec.)	LOS	Delay (sec.)	LOS
1	I-15 SB Ramps/Cantu-Galleano Ranch Road	Signal	19.9	B	22.4	C
2	I-15 NB Ramps/Cantu-Galleano Ranch Road	Signal	11.9	B	11.9	B
3	I-15 SB Ramps/Limonite Avenue	Signal	39.0	D	48.9	D
4	I-15 NB Ramps/Limonite Avenue	Signal	51.5	D	>100	F
5	Wineville Road/E Mission Boulevard	TWSC	>100	F	>100	F
6	Wineville Road/Riverside Drive	AWSC	33.4	D	>100	F
7	Wineville Avenue/Road/Cantu-Galleano Ranch Road	Signal	43.2	D	55.4	E
8	Wineville Avenue/Bellegrave Avenue	Signal	47.9	D	48.1	D
9	Wineville Avenue/Limonite Avenue	Signal	43.2	D	46.4	D
10	Wineville Avenue/68th Street	AWSC	10.4	B	10.8	B
11	E Mission Boulevard/SR-60 Westbound On-Ramp	Signal	10.7	B	11.9	B
12	E Mission Boulevard/SR-60 Eastbound Off-Ramp	Signal	>100	F	>100	F
13	Etiwanda Avenue/Philadelphia Avenue	Signal	67.4	E	>100	F
14	Etiwanda Avenue/SR-60 Westbound Off-Ramp	Signal	50.7	D	37.6	D
15	Etiwanda Avenue/SR-60 Eastbound On-Ramp	TWSC	>100	F	>100	F
16	Etiwanda Avenue/Van Buren Boulevard	Signal	>100	F	>100	F
17	Etiwanda Avenue/Riverside Drive	Signal	40.9	D	48.4	D
18	Etiwanda Avenue/Cantu-Galleano Ranch Road	Signal	44.0	D	40.6	D
19	Etiwanda Avenue/Bellegrave Avenue	Signal	61.7	E	47.9	D
20	Etiwanda Avenue/Jurupa Road	Signal	30.7	C	31.6	C
21	Etiwanda Avenue/Limonite Avenue	Signal	>100	F	>100	F
22	Country Village Road/Philadelphia Avenue	Signal	21.0	C	90.3	F
23	Country Village Road/SR-60 Westbound Ramps	Signal	>100	F	>100	F
24	Mission Boulevard/SR-60 Eastbound Ramps	Signal	26.1	C	43.5	D
25	Bain Street/Bellegrave Avenue	Signal	33.7	C	53.6	D
26	Van Buren-Bellegrave Connector/Bellegrave Avenue	TWSC	>100	F	>100	F

Table 3.D: General Plan Build-out Intersection Levels of Service

	Intersection	Control	Build-Out Conditions			
			A.M. Peak Hour		P.M. Peak Hour	
			Delay (sec.)	LOS	Delay (sec.)	LOS
27	Van Buren Boulevard/Van Buren-Bellegrave Connector	TWSC	>100	F	>100	F
28	Bain Street/Jurupa Road	AWSC	13.0	B	13.9	B
29	Bain Street/Limonite Avenue	Signal	13.0	B	21.1	C
30	Pedley Road/SR-60 Westbound Ramps	TWSC	>100	F	>100	F
31	Pedley Road/SR-60 Eastbound Ramps	TWSC	37.5	E	38.6	E
32	Bellegrave Avenue/Mission Boulevard	Signal	28.6	C	50.6	D
33	Pedley Road/Mission Boulevard	Signal	39.9	D	41.9	D
34	Jurupa Road/Van Buren-Jurupa Connector	TWSC	>100	F	>100	F
35	Van Buren Boulevard/Van Buren-Jurupa Connector	TWSC	>100	F	>100	F
36	Pedley Road/Jurupa Road	AWSC	>100	F	>100	F
37	Collins Street/Limonite Avenue	Signal	29.9	C	38.3	D
38	Van Buren Boulevard/Limonite Avenue	Signal	37.6	D	37.5	D
39	Pedley Road-Morton Avenue/Limonite Avenue	Signal	55.3	E	99.7	F
40	Pyrite Street/SR-60 Westbound Ramps	TWSC	31.3	D	56.0	F
41	Pyrite Street/SR-60 Eastbound Ramps	TWSC	26.8	D	>100	F
42	Pyrite Street/Mission Boulevard	Signal	37.6	D	43.3	D
43	Clay Street/Limonite Avenue	Signal	58.8	E	61.3	E
44	Van Buren Boulevard/Clay Street	Signal	47.6	D	64.9	E
45	Camino Real/Mission Boulevard	Signal	46.7	D	45.3	D
46	Camino Real/Jurupa Road	Signal	56.8	E	72.0	E
47	Camino Real/Limonite Avenue	Signal	58.0	E	60.5	E
48	Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard	Signal	40.8	D	>100	F
49	Valley Way/Jurupa Road	AWSC	>100	F	82.0	F
50	Armstrong Road/Sierra Avenue	Signal	>100	F	>100	F
51	Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive	Signal	>100	F	>100	F
52	Valley Way/SR-60 Westbound On Ramp	TWSC	>100	F	>100	F

Table 3.D: General Plan Build-out Intersection Levels of Service

	Intersection	Control	Build-Out Conditions			
			A.M. Peak Hour		P.M. Peak Hour	
			Delay (sec.)	LOS	Delay (sec.)	LOS
53	Valley Way/Mission Boulevard	Signal	97.3	F	68.0	E
54	Pacific Avenue/Mission Boulevard	Signal	29.0	C	30.7	C
55	Pacific Avenue/Limonite Avenue	Signal	19.4	B	23.2	C
56	Riverview Drive/Mission Boulevard	Signal	97.2	F	89.7	F
57	Rubidoux Boulevard/Market Street	Signal	82.0	F	>100	F
58	Rubidoux Boulevard/SR-60 Westbound Off-Ramp-30th Street	Signal	20.8	C	48.9	D
59	Rubidoux Boulevard/SR-60 Westbound On-Ramp	TWSC	22.1	C	23.4	C
60	Rubidoux Boulevard/SR-60 Eastbound Ramps	Signal	86.2	F	>100	F
61	Rubidoux Boulevard/Mission Boulevard	Signal	67.4	E	76.0	E
62	Bellegrave Avenue/Cantu-Galleano Ranch Road	TWSC	>100	F	>100	F

AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
Delay = Average control delay in seconds (For TWSC intersections, reported delay is for worst-case movement).
LOS = Level of Service
Shaded Rows Exceed LOS Standard

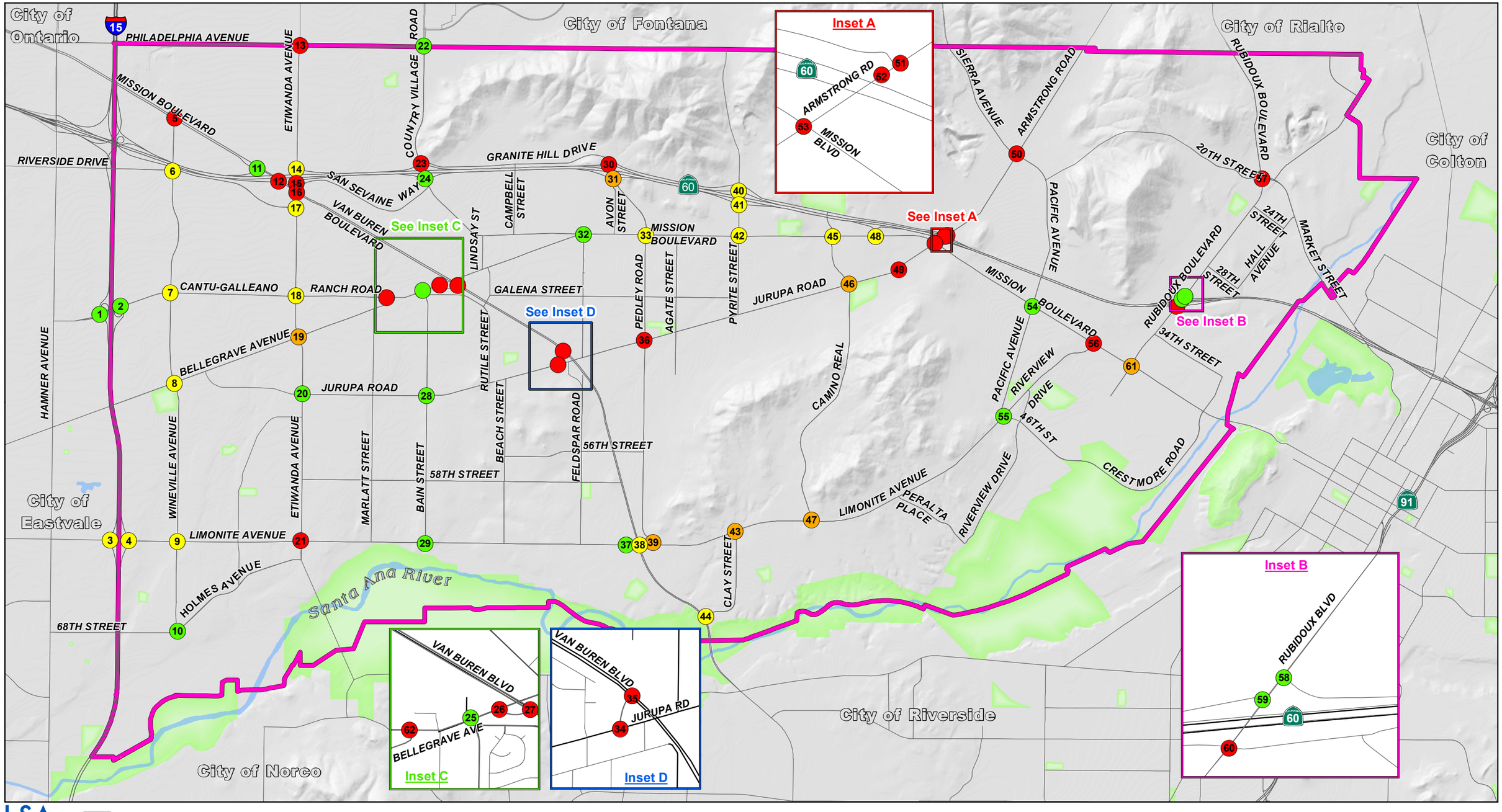
- Van Buren Boulevard/Clay Street (p.m. peak hour);
- Camino Real/Jurupa Road (a.m. and p.m. peak hours);
- Camino Real/Limonite Avenue (a.m. and p.m. peak hours);
- Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard (p.m. peak hour);
- Valley Way/Jurupa Road (a.m. and p.m. peak hours);
- Armstrong Road/Sierra Avenue (a.m. and p.m. peak hours);
- Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive (a.m. and p.m. peak hours);
- Valley Way/SR-60 Westbound On-Ramp (a.m. and p.m. peak hours);
- Valley Way/Mission Boulevard (a.m. and p.m. peak hours);
- Riverview Drive/Mission Boulevard (a.m. and p.m. peak hours);
- Rubidoux Boulevard/Market Street (a.m. and p.m. peak hours);
- Rubidoux Boulevard/SR-60 Eastbound Ramps (a.m. and p.m. peak hours);
- Rubidoux Boulevard/Mission Boulevard (a.m. and p.m. peak hours); and
- Bellegrave Avenue/Cantu-Galleano Ranch Road (a.m. and p.m. peak hours).

Figures 3.7-1 and 3.7-2 illustrate the locations of the study area intersections and corresponding a.m. and p.m. levels of service under General Plan Build-out conditions. LOS worksheets are in Appendix C.

Roadway Segment Levels of Service

A level of service analysis was conducted at study area roadway segments to determine the projected roadway segment performance under General Plan Build-out conditions. As shown in previously referenced Table 3.C, all roadway segments are projected to operate at satisfactory levels of service (D or better), with the exception of the following roadway segments:

- Etiwanda Avenue from Philadelphia Avenue to SR-60 Westbound Off-Ramp;
- Etiwanda Avenue from SR-60 Westbound Off-Ramp to SR-60 Eastbound On-Ramp;
- Etiwanda Avenue from SR-60 Eastbound On-Ramp to Van Buren Boulevard;
- Etiwanda Avenue from Van Buren Boulevard to Riverside Drive;
- Etiwanda Avenue from Limonite Avenue to Holmes Avenue;
- Etiwanda Avenue south of Holmes Avenue;
- Country Village Road from Philadelphia Avenue to SR-60 Westbound Ramps;
- Country Village Road from SR-60 Westbound Ramps to SR-60 Eastbound Ramps;
- Van Buren Boulevard from SR-60 Westbound On-Ramp to SR-60 Eastbound Off-Ramp;
- Van Buren Boulevard from Eastbound Off-Ramp to Etiwanda Avenue;
- Van Buren Boulevard from Bellegrave Avenue to Jurupa Road;
- Van Buren Boulevard from Jurupa Road to Limonite Avenue;
- Van Buren Boulevard from Limonite Avenue to Clay Street;
- Mission Boulevard from SR-60 Eastbound Ramps to Valley Way;
- Jurupa Road from Bain Street to Van Buren Boulevard;
- Jurupa Road from Van Buren Boulevard to Pedley Road;
- Jurupa Road from Pedley Road to Camino Real;



LSA

City of Jurupa Valley
Parks

Intersections

Level of Service A; B; C
Level of Service D
Level of Service E
Level of Service F

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 3.7-1
General Plan Build-Out A.M. Peak Hour Intersection Levels of Service

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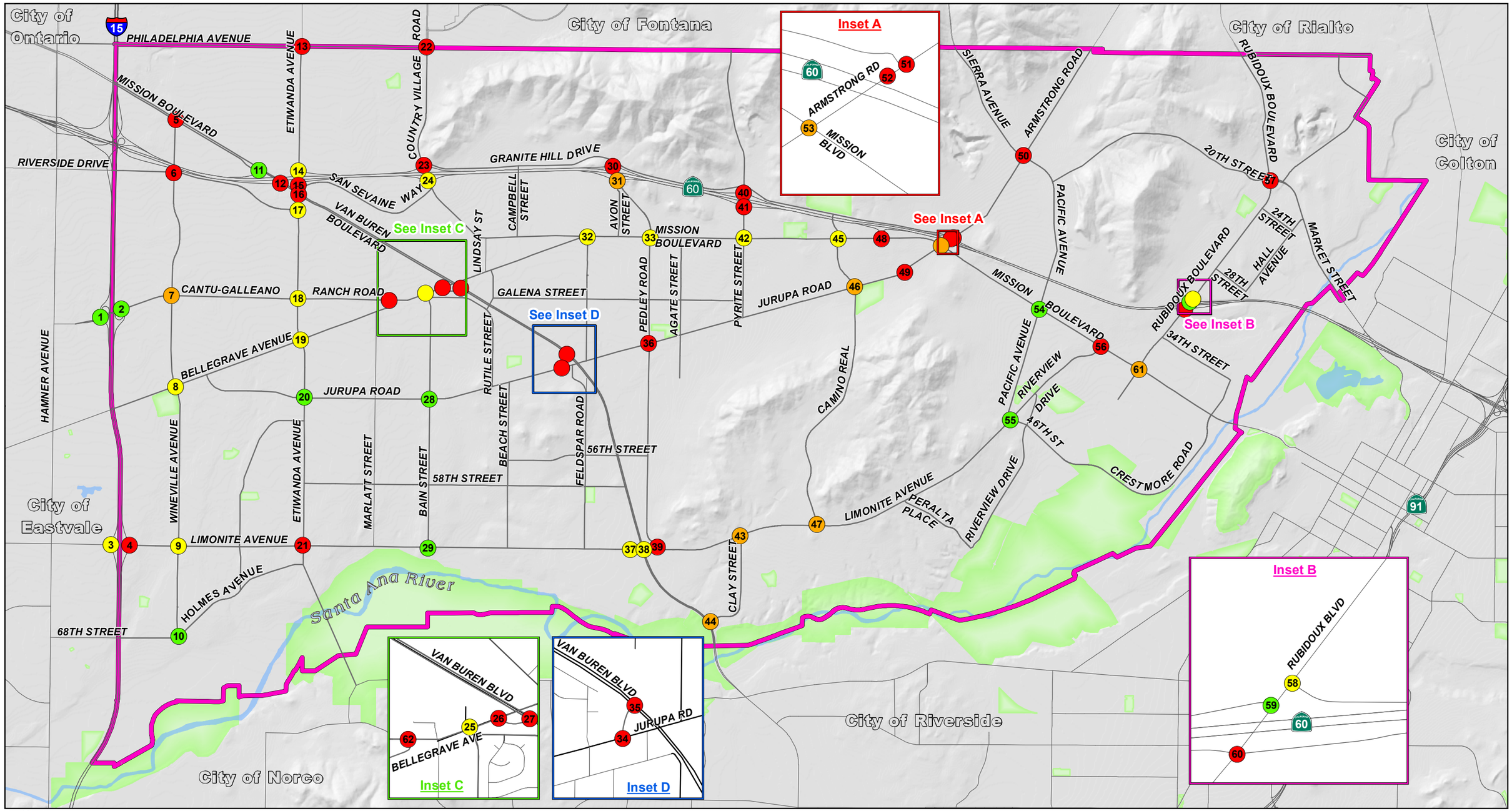

LSA

City of Jurupa Valley
Parks

Intersections

Level of Service A; B; C
Level of Service D
Level of Service E
Level of Service F

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 3.7-2
General Plan Build-Out P.M. Peak Hour Intersection Levels of Service

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- Jurupa Road from Camino Real to Valley Way;
- Valley Way from Jurupa Road to Mission Boulevard;
- Valley Way from Mission Boulevard to SR-60 Eastbound On-Ramp;
- Valley Way from SR-60 Eastbound On-Ramp to SR-60 Westbound Ramps;
- Valley Way from SR-60 Westbound Ramps to Sierra Avenue;
- Valley Way north of Sierra Avenue;
- Limonite Avenue from I-15 Southbound Ramps to I-15 Northbound Ramps;
- Limonite Avenue from I-15 Northbound Ramps to Wineville Avenue;
- Limonite Avenue from Wineville Avenue to Etiwanda Avenue;
- Limonite Avenue from Etiwanda Avenue to Bain Street;
- Limonite Avenue from Collins Street to Van Buren Boulevard;
- Sierra Avenue west of Armstrong Road;
- Market Street east of Rubidoux Boulevard; and
- Agua Mansa Road north of Market Street.

Figure 3.8 illustrates the locations of the roadway segments and corresponding levels of service under General Plan Build-out conditions.

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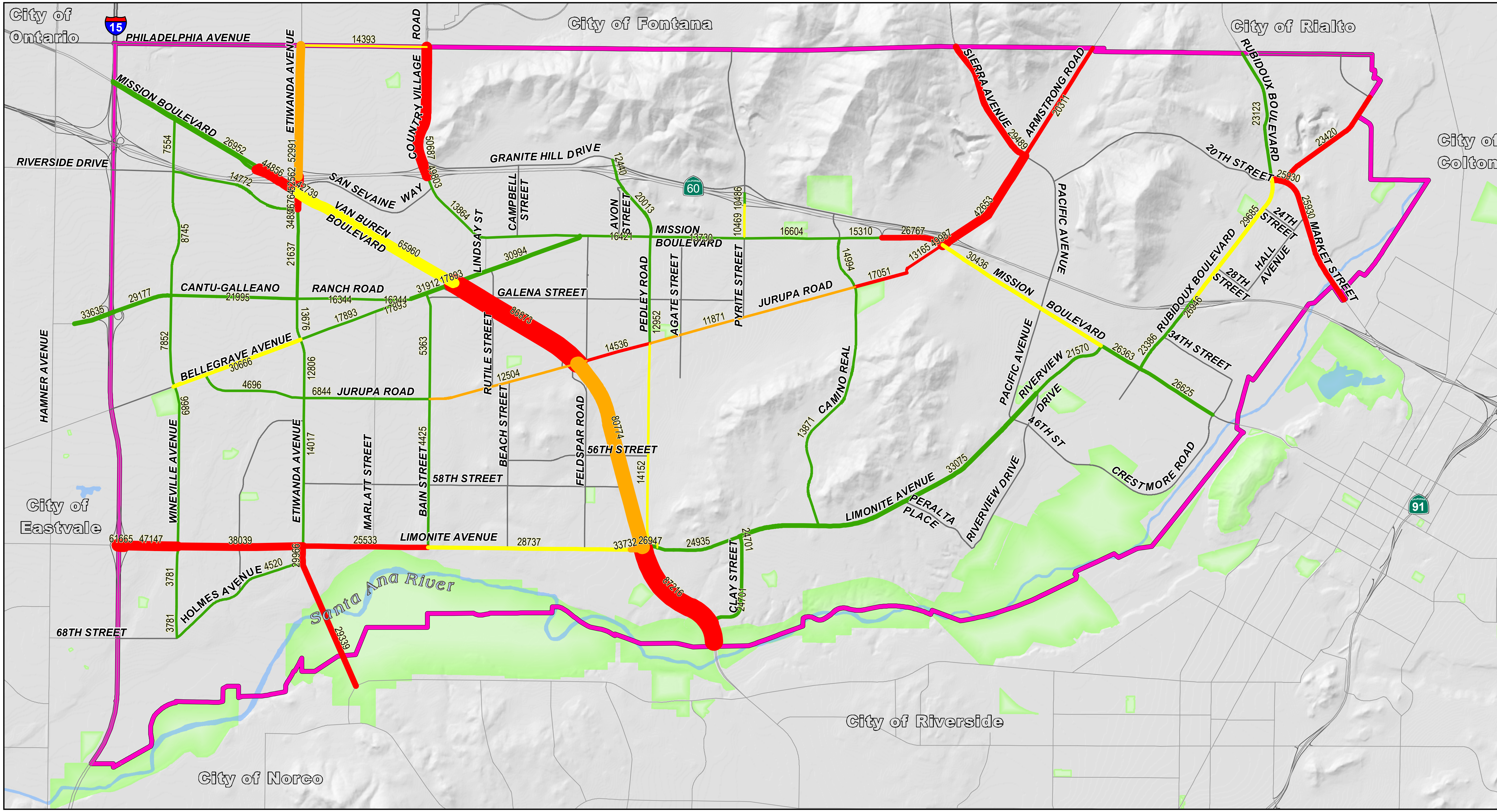

City of Ontario
City of Fontana
City of Rialto
City of Colton
City of Eastvale
City of Riverside
City of Norco
Santa Ana River
15
60
91
PHILADELPHIA AVENUE
MISSION BOULEVARD
RIVERSIDE DRIVE
ETIWANDA AVENUE
COUNTRY VILLAGE ROAD
SAN SEVAINE WAY
VAN BUREN BOULEVARD
GRANITE HILL DRIVE
CAMPBELL STREET
LINDSAY ST
AVON STREET
PEDLEY ROAD
AGATE STREET
PYRITE STREET
JURUPA ROAD
CANTU-GALLEANO RANCH ROAD
GALENA STREET
BELLEGRAVE AVENUE
HAMNER AVENUE
WINEVILLE AVENUE
MARLATT STREET
BAIN STREET
58TH STREET
RUTILE STREET
BEACH STREET
FELDSPAR ROAD
56TH STREET
LIMONITE AVENUE
HOLMES AVENUE
68TH STREET
CLAY STREET
CAMINO REAL
SIERRA AVENUE
ARMSTRONG ROAD
PACIFIC AVENUE
RUBIDOUX BOULEVARD
20TH STREET
24TH STREET
MARKET STREET
28TH STREET
HALL AVENUE
34TH STREET
RIVERVIEW DRIVE
46TH ST
CRESTMORE ROAD
PERALTA PLACE

LSA

City of Jurupa Valley
Parks
Future Road

Level of Service

- Level of Service A - C
- Level of Service D
- Level of Service E
- Level of Service F

Daily Volume

45,000 30,000 10,000

20,000 Daily Volume

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

Jurupa Valley General Plan Traffic Study

Figure 3.8
General Plan Build-Out Roadway Segment Levels of Service

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CHAPTER 4 – FUTURE CIRCULATION NETWORK STRATEGIES

One of the City of Jurupa Valley's primary mobility goals is "*To create a multi-modal mobility network which is attractive and provides all users with safe connections to homes, jobs, schools, commercial areas, public facilities and recreation areas, and which protects Jurupa Valley's semi-rural character and lifestyle, and reduces dependence on the use of single-occupant automobiles."* To achieve this goal, it is important to design and implement a multi-modal transportation system that will serve projected future travel demand, minimize congestion, minimize cut-through traffic, maintain the rural character of the City, and address future growth and development. Therefore, this section describes the proposed circulation network improvements and explores strategies that could help reduce the anticipated congestion while attempting to minimize cut-through traffic on main corridors throughout the City. It is recognized that these two objectives may mutually exclusive.

CHAPTER CONTENTS

Cut-Through Traffic Analysis

A significant portion of Jurupa Valley's motor vehicle traffic is "cut-through" traffic; that is, trips where the origin and destination are both outside of the City limits. The City of Jurupa Valley would like to minimize cut-through traffic on main corridors such as Van Buren Boulevard and Cantu-Galleano Ranch Road as much as feasibly possible. Table 4.A shows the percentage of the total traffic volume on selected local street segments with projected levels of service of D, E, or F under General Plan Build-out preferred alternative conditions. As shown in Table 4.A, 49 percent of traffic on major thoroughfares is cut-through, bypassing the main highways I-15, SR-60, and the Van Buren expressway.

Generally, strategies to reduce cut-through traffic involve capital improvements to slow, divert, or dissuade motorists from traveling along particular corridors. This has the initial effect of creating greater congestion until a new equilibrium is established. That new equilibrium may in fact create congestion on new routes. Road diets, chokers, speed tables, and other devices/strategies will affect vehicular traffic flow, decreasing speed and increasing congestion. Therefore, strategies to address cut-through traffic may be mutually exclusive and contradictory to a goal of mobility congestion relief. However, the objective of congestion relief and achieving LOS D conditions is sought in the subsequent analysis. If solely charged with LOS improvement, it may result in conflicts with cut-through traffic reduction or implementation of complete streets and multi-modal mobility systems.

Potential Transportation System Improvements to Reduce Congestion

As new land uses build out locally and regionally, additional traffic will be added to the local circulation network, resulting in more congestion and more roadways and intersections exceeding City LOS standards. As noted earlier, much of the existing and projected future congestion is the result of cut-through traffic from regional (i.e., non-City) sources, which will also increase in the future. The following improvements will reduce the anticipated traffic congestion.

Intersection Improvements

Based on the threshold of acceptability for levels of service within the City of Jurupa Valley, 38 intersections will not meet the minimum level

Table 4.A: Select Link Analysis for High Volume Roadway Corridors under General Plan Build-Out Conditions

	Roadway Segment	Functional Classification	% of Traffic Internal to the City	% of Traffic External to the City (Cut-through Traffic)
Segments on Etiwanda Avenue				
6	Philadelphia Avenue to SR-60 WB Off-Ramp	6-Lane Urban Arterial	57%	43%
Segments on Country Village Road				
16	Philadelphia Avenue to SR-60 WB Ramps	4-Lane Major	46%	54%
Segments on Van Buren Boulevard-East Mission Boulevard				
32	Bellegrave Avenue to Jurupa Road	8-Lane Expressway	21%	79%
Segments on Mission Boulevard				
46	Valley Way to Riverview Drive	4-Lane Arterial	81%	19%
Segments on Bellegrave Avenue				
50	Wineville Avenue to Etiwanda Avenue	4-Lane Major	60%	40%
Segments on Valley Way-Armstrong Road				
63	SR-60 WB Ramps to Sierra Avenue	4-Lane Major	66%	34%
Segments on Limonite Avenue				
67	Wineville Avenue to Etiwanda Avenue	4-Lane Major	58%	42%
Segments on Rubidoux Boulevard				
77	SR-60 WB Ramps to Market Street	4-Lane Major	80%	20%
Segments on Sierra Avenue				
80	West of Armstrong Road	4-Lane Secondary	42%	58%
Segments on Market Street				
81	East of Rubidoux Boulevard	2-Lane Major	50%	50%

of service standard. To support the current Land Use Element, the following improvements to the intersections are recommended:

- **I-15 Southbound Ramps/Limonite Avenue:** Optimize the signal timing.
- **I-15 Northbound Ramps/Limonite Avenue:** Optimize the signal timing.
- **Wineville Road/Mission Boulevard:** Install a traffic signal.
- **Wineville Road/Riverside Drive:** Install a traffic signal.
- **Wineville Avenue/Road/Cantu-Galleano Ranch Road:** Optimize the signal timing.
- **Mission Boulevard/SR-60 Eastbound Off-Ramp:** Optimization of the signal timing improves operations. No additional feasible mitigation is possible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient LOS in the a.m. and p.m. peak hours.
- **Etiwanda Avenue/Philadelphia Avenue:** Stripe eastbound right-turn lane and add overlap phasing. Add westbound right-turn lane with overlap phasing. Add second northbound left-turn lane. No additional feasible mitigation is possible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient LOS in the p.m. peak hour.
- **Etiwanda Avenue/SR-60 Eastbound On-Ramp:** Install a traffic signal. No additional feasible mitigation is possible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient LOS in the p.m. peak hour.
- **Etiwanda Avenue/Van Buren Boulevard:** Southbound right-turn lane with overlap phasing and optimization of signal timing improvements operations. No additional feasible mitigation is possible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient LOS in the a.m. and p.m. peak hours.
- **Etiwanda Avenue/Bellegrave Avenue:** Optimize the signal timing.
- **Etiwanda Avenue/Limonite Avenue:** Add an eastbound left-turn lane and westbound left-turn lane. Add protected phasing to the eastbound/westbound approaches.
- **Country Village Road/Philadelphia Avenue:** Optimize the signal timing.
- **Country Village Road/SR-60 Westbound Ramps:** Add a second westbound right-turn lane; this will require modification of the westbound off-ramp. Stripe a southbound right-turn lane, and restripe the southbound through lane to a through/right-turn lane.
- **Van Buren Boulevard-Bellegrave Connector/Bellegrave Avenue:** Install a traffic signal. Add a westbound left-turn lane and restripe the southbound approach to include a southbound left-turn lane and through/right-turn lane. Restripe the northbound approach to include a northbound left-turn lane and a through/right-turn lane.
- **Van Buren Boulevard/Van Buren-Bellegrave Connector:** Install a traffic signal, add two northbound left-turn lanes, a second eastbound right-turn lane, and a southbound right-turn lane.
- **Pedley Road/SR-60 Westbound Ramps:** Install a traffic signal.
- **Pedley Road/SR-60 Eastbound Ramps:** Install a traffic signal. Although this intersection operates satisfactorily, a signal has been added due to the addition of a signal at Pedley Road/SR-60 Westbound Ramps.
- **Jurupa Road/Van Buren-Jurupa Connector:** Install a traffic signal. Add an eastbound left-turn lane.
- **Van Buren Boulevard/Van Buren-Jurupa Connector:** Install a traffic signal. Add two northbound left-turn lanes.
- **Pedley Road/Jurupa Road:** Install a traffic signal.

- **Pedley Road-Morton Avenue/Limonite Avenue:** Optimize the signal timing.
- **Pyrite Street/SR-60 Westbound Ramps:** Install a traffic signal.
- **Pyrite Street/SR-60 Eastbound Ramps:** Install a traffic signal.
- **Clay Street/Limonite Avenue:** Add overlap phasing to the northbound right-turn lane.
- **Van Buren Boulevard/Clay Street:** Optimize the signal timing.
- **Camino Real/Jurupa Road:** Add a northbound right-turn lane with overlap phasing.
- **Camino Real/Limonite Avenue:** Add overlap phasing to the southbound right-turn lane.
- **Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard:** Add a southbound left-turn lane. This improvement will require modification to the off-ramp.
- **Valley Way/Jurupa Road:** Install a traffic signal. Add an eastbound left-turn lane.
- **Armstrong Road/Sierra Avenue:** Add overlap phasing to the eastbound right-turn lane. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient LOS in the a.m. and p.m. peak hours.
- **Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive:** Restripe the north leg to separate the southbound left-turn lane and right-turn lane. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient LOS in the a.m. and p.m. peak hours.
- **Valley Way/SR-60 Westbound On-Ramp:** This intersection may be combined with Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive as a five-legged intersection with one signal controller. This will require Caltrans review. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient LOS in the a.m. and p.m. peak hours.
- **Valley Way/Mission Boulevard:** Optimize the signal timing. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient LOS in the a.m. and p.m. peak hours.
- **Riverview Drive/Mission Boulevard:** Add a second northbound right-turn lane and add overlap phasing to the northbound right-turn lane and eastbound right-turn lane. Restripe the north leg approach to the southbound left-turn lane and through/right-turn lane. Change the northbound/southbound signal phasing from split-phasing to protected phasing. No other improvements are feasible due to right-of-way constraints.
- **Rubidoux Boulevard/Market Street:** Add overlap phasing to the northbound right-turn lane, reduce the median on the east leg to accommodate a separate westbound left-turn lane. Restripe the westbound through/left-turn lane to a through lane. Change the eastbound/westbound signal phasing from split phase to protected phasing. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient LOS in the p.m. peak hour.
- **Rubidoux Boulevard/SR-60 Eastbound Ramps:** Add a northbound right-turn lane and an eastbound left-turn lane. The eastbound left-turn lane will require widening of the eastbound off-ramp and will require Caltrans review.
- **Rubidoux Boulevard/Mission Boulevard:** Restripe the south leg to accommodate separate northbound left-turn lane and through/right-turn lane. Change the northbound/southbound signal phasing from split phase to protected phasing. Add overlap phasing to the southbound and westbound right-turn lane.

- **Bellegrave Avenue/Cantu-Galleano Ranch Road:** Install a traffic signal. Add a westbound left-turn lane and overlap phasing to the northbound right-turn lane.

Table 4.B illustrates the General Plan Build-out conditions with the recommended intersection improvements. Level of service worksheets are included in Appendix C. Figures 4.1-1 and 4.1-2 illustrate the resulting intersection geometrics. With implementation of the above improvements, 9 intersections will continue to operate at deficient LOS.

Roadway Segment Improvements

Based on the threshold of acceptability for levels of service within the City of Jurupa Valley, nine roadway segments will not meet the minimum level of service standard. Based on discussion with City staff, no additional improvements are recommended other than the ones listed in chapter 3 under General Plan Build-out conditions. This is due to right-of-way constraints and the City's endeavor to maintain its rural character as well as to discourage cut-through traffic on local streets.

Traffic Calming Measures

The City has expressed a goal of reducing cut-through volume and calming traffic on many corridors throughout the City. Traffic calming is defined as a "combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users." The goals of traffic calming may include creating safe and attractive streets, helping to reduce the negative effects of motor vehicles on the environment, incorporating the preferences and requirements of the people using the streets/ intersections, and promoting pedestrian, bicycle, and transit use. Traffic calming can slow speeds for motor vehicles, reduce collision frequency, reduce cut-through motor vehicle traffic, and increase access for all modes of transportation. These traffic calming measures can be physical, such as bulbouts or speed bumps, or can they can be programs to warn, guide, or inform. Some basic measures include:

- Safety Education Programs;
- High-Visibility Crosswalks;
- Pavement Striping;
- Gateways;
- High-Visibility Signs; and
- Bulbouts.

It is noted that implementation of these strategies and devices can slow speeds and increase congestion. Therefore, a balance needs to be determined by corridor on the primary objective; congestion reduction versus traffic calming.

Safety Education Programs

Safety education programs are an important component of a traffic calming program because they include efforts to make the public more aware of its own driving behavior and the impact it has on others. Pedestrian and bicycle safety programs alert and educate pedestrians and bicyclists on road safety. Driver safety information and education can help improve driver behavior.

Table 4.B: General Plan Build-out With Improvements Intersection Levels of Service

	Intersection	Control	Build-out Conditions			
			A.M. Peak Hour		P.M. Peak Hour	
			Delay (sec.)	LOS	Delay (sec.)	LOS
1	I-15 SB Ramps/Cantu-Galleano Ranch Road	Signal	19.9	B	22.4	C
2	I-15 NB Ramps/Cantu-Galleano Ranch Road	Signal	11.9	B	11.9	B
3	I-15 SB Ramps/Limonite Avenue	Signal	39.0	D	24.2	C
4	I-15 NB Ramps/Limonite Avenue	Signal	34.8	C	36.0	D
5	Wineville Avenue/E Mission Boulevard	Signal	11.9	B	25.5	C
6	Wineville Avenue/Riverside Drive	Signal	18.3	B	24.8	C
7	Wineville Avenue/Cantu-Galleano Ranch Road	Signal	43.2	D	30.4	C
8	Wineville Avenue/Bellegrave Avenue	Signal	47.9	D	48.1	D
9	Wineville Avenue/Limonite Avenue	Signal	43.2	D	46.4	D
10	Wineville Avenue/68th Street	AWSC	10.4	B	10.8	B
11	E Mission Boulevard/SR-60 Westbound On-Ramp	Signal	10.7	B	11.9	B
12	E Mission Boulevard/SR-60 Eastbound Off-Ramp	Signal	>100	F	>100	F
13	Etiwanda Avenue/Philadelphia Avenue	Signal	49.6	D	79.3	E
14	Etiwanda Avenue/SR-60 Westbound Off-Ramp	Signal	50.7	D	37.6	D
15	Etiwanda Avenue/SR-60 Eastbound On-Ramp	Signal	28.2	C	92.3	F
16	Etiwanda Avenue/Van Buren Boulevard	Signal	88.3	F	>100	F
17	Etiwanda Avenue/Riverside Drive	Signal	40.9	D	48.4	D
18	Etiwanda Avenue/Cantu-Galleano Ranch Road	Signal	44.0	D	40.6	D
19	Etiwanda Avenue/Bellegrave Avenue	Signal	48.0	D	47.9	D
20	Etiwanda Avenue/Jurupa Road	Signal	30.7	C	31.6	C
21	Etiwanda Avenue/Limonite Avenue	Signal	54.6	D	50.4	D
22	Country Village Road/Philadelphia Avenue	Signal	21.0	C	47.2	D
23	Country Village Road/SR-60 Westbound Ramps	Signal	42.6	D	39.0	D
24	Mission Boulevard/SR-60 Eastbound Ramps	Signal	24.2	C	40.3	D
25	Bain Street/Bellegrave Avenue	Signal	33.7	C	53.6	D
26	Van Buren-Bellegrave Connector/Bellegrave Avenue	Signal	45.3	D	53.0	D

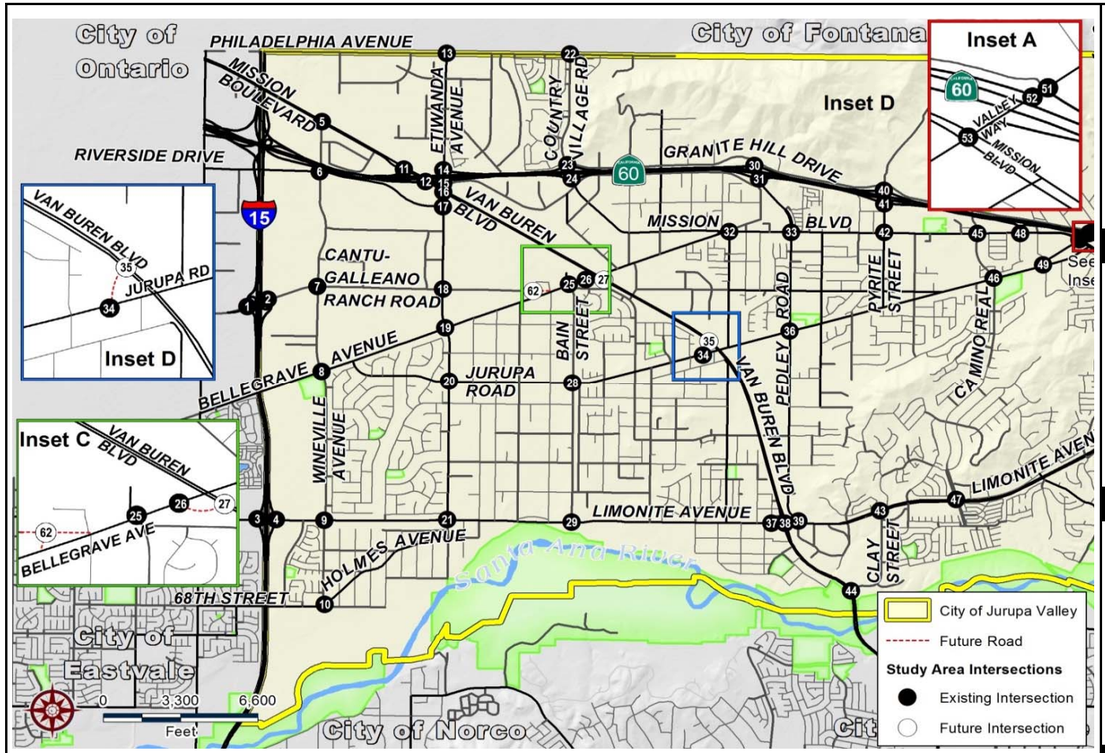
Table 4.B: General Plan Build-out With Improvements Intersection Levels of Service

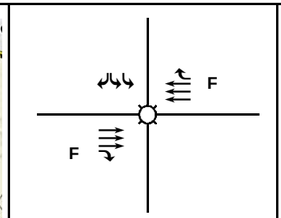
	Intersection	Control	Build-out Conditions			
			A.M. Peak Hour		P.M. Peak Hour	
			Delay (sec.)	LOS	Delay (sec.)	LOS
27	Van Buren Boulevard/Van Buren-Bellegrave Connector	Signal	31.4	C	38.6	D
28	Bain Street/Jurupa Road	AWSC	13.0	B	13.9	B
29	Bain Street/Limonite Avenue	Signal	13.0	B	21.1	C
30	Pedley Road/SR-60 Westbound Ramps	Signal	30.3	C	27.6	C
31	Pedley Road/SR-60 Eastbound Ramps	Signal	14.4	B	19.3	B
32	Bellegrave Avenue/Mission Boulevard	Signal	28.6	C	50.6	D
33	Pedley Road/Mission Boulevard	Signal	39.9	D	41.9	D
34	Jurupa Road/Van Buren-Jurupa Connector	Signal	27.5	C	26.1	C
35	Van Buren Boulevard/Van Buren-Jurupa Connector	Signal	19.3	B	26.9	C
36	Pedley Road/Jurupa Road	Signal	10.8	B	9.9	A
37	Collins Street/Limonite Avenue	Signal	29.9	C	38.3	D
38	Van Buren Boulevard /Limonite Avenue	Signal	37.6	D	37.5	D
39	Pedley Road-Morton Avenue/Limonite Avenue	Signal	42.4	D	54.0	D
40	Pyrite Street/SR-60 Westbound Ramps	Signal	20.6	C	17.0	B
41	Pyrite Street/SR-60 Eastbound Ramps	Signal	17.2	B	25.3	C
42	Pyrite Street/Mission Boulevard	Signal	37.6	D	43.3	D
43	Clay Street/Limonite Avenue	Signal	54.7	D	52.1	D
44	Van Buren Boulevard /Clay Street	Signal	46.7	D	48.5	D
45	Camino Real/Mission Boulevard	Signal	46.7	D	45.3	D
46	Camino Real/Jurupa Road	Signal	37.1	D	48.1	D
47	Camino Real/Limonite Avenue	Signal	49.9	D	49.9	D
48	Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard	Signal	34.0	C	43.7	D
49	Valley Way/Jurupa Road	Signal	21.3	C	22.1	C
50	Armstrong Road/Sierra Avenue	Signal	71.1	E	>100	F
51	Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive	Signal	>100	F	88.1	F
52	Valley Way/SR-60 Westbound On Ramp	TWSC	>100	F	>100	F

Table 4.B: General Plan Build-out With Improvements Intersection Levels of Service

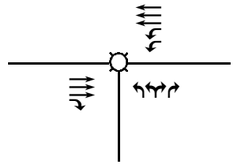
	Intersection	Control	Build-out Conditions			
			A.M. Peak Hour		P.M. Peak Hour	
			Delay (sec.)	LOS	Delay (sec.)	LOS
53	Valley Way/Mission Boulevard	Signal	97.2	F	49.8	D
54	Pacific Avenue/Mission Boulevard	Signal	29.0	C	30.7	C
55	Pacific Avenue/Limonite Avenue	Signal	19.4	B	23.2	C
56	Riverview Drive/Mission Boulevard	Signal	53.4	D	54.0	D
57	Rubidoux Boulevard/Market Street	Signal	40.3	D	66.6	E
58	Rubidoux Boulevard/SR-60 Westbound Off-Ramp-30th Street	Signal	20.8	C	48.9	D
59	Rubidoux Boulevard/SR-60 Westbound On-Ramp	TWSC	22.1	C	23.4	C
60	Rubidoux Boulevard/SR-60 Eastbound Ramps	Signal	41.3	D	35.7	D
61	Rubidoux Boulevard/Mission Boulevard	Signal	55.0	D	54.3	D
62	Bellegrave Avenue/Cantu-Galleano Ranch Road	Signal	20.2	C	43.2	D

AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
Delay = Average control delay in seconds (For TWSC intersections, reported delay is for worst-case movement).
LOS = Level of Service
Shaded Rows Exceed LOS Standard

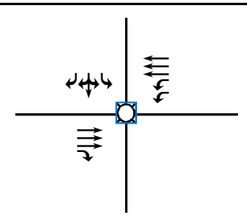




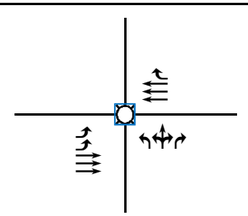
1 I-15 SB Ramps/Cantu-Galleano Ranch Rd



2 I-15 NB Ramps/Cantu-Galleano Ranch Rd



3 I-15 SB Ramps/Limonite Avenue



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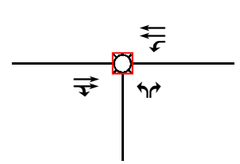

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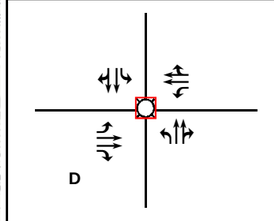

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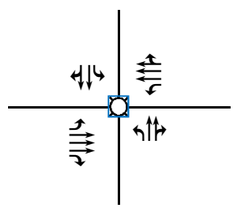

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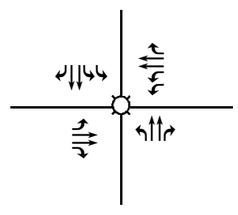

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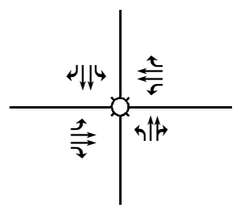

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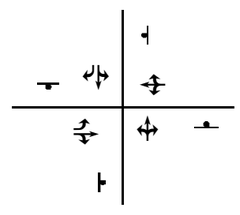

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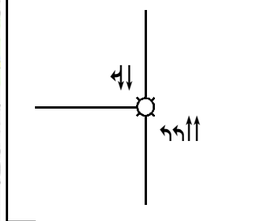
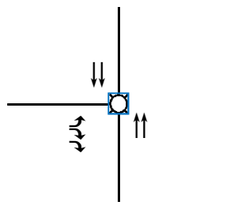
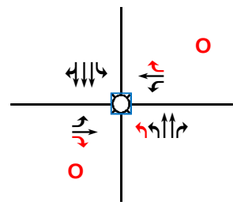


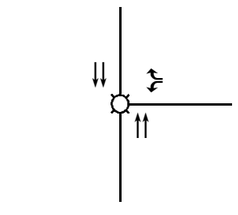
11 E Mission Boulevard/SR-60 Westbound On-Ram



12 E Mission Boulevard/SR-60 Eastbound Off-Ramp



13 Etiwanda Avenue/Philadelphia Avenue



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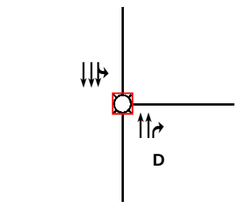

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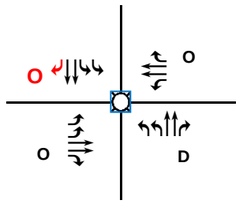

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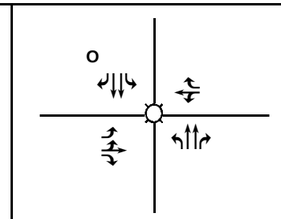

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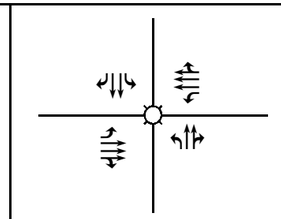
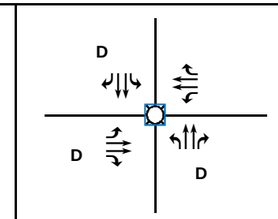


18 Etiwanda Avenue/Cantu-Galleano Ranch Rd



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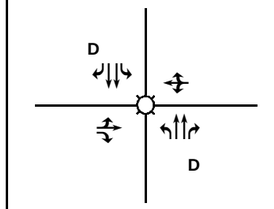

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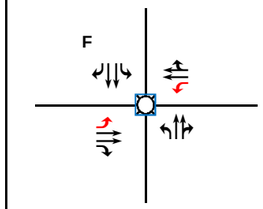

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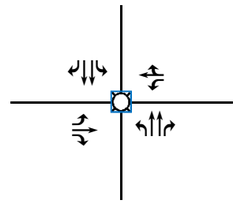
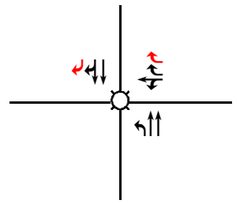
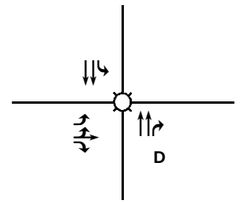


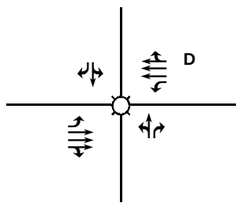
22 Country Village Road/Philadelphia Avenue



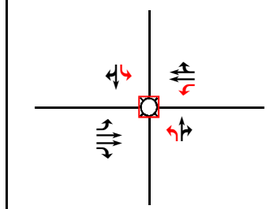
23 Country Village Road/SR-60 Westbound Ramps



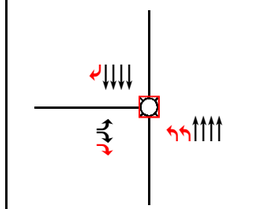
24 Mission Boulevard/SR-60 Eastbound Ramps



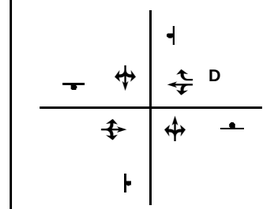
25 Bain Street/Bellegrave Avenue



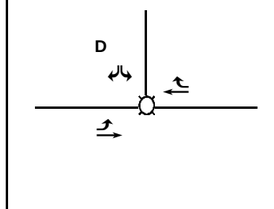
26 Van Buren Boulevard /Bellegrave Avenue



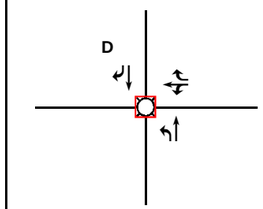
27 Future Bellegrave Ave Intersection @ Van Buren Boulevard



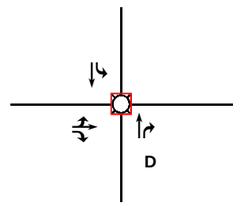
28 Bain Street/Jurupa Road



29 Bain Street/Limonite Avenue



30 Pedley Road/SR-60 Westbound Ramps



31 Pedley Road/SR-60 Eastbound Ramps

LSA

Legend

- Signal
- Stop Sign
- **D** De-Facto Right-Turn Lane
- **F** Free Right-Turn Lane
- **O** Right-Turn Overlap
- Install a traffic signal
- Optimize/Modify signal phasing
- Recommended Improvement

Jurupa Valley General Plan
Traffic Study

Figure 4.1-1
General Plan Build-Out With Improvements Intersection Geometrics & Stop Control

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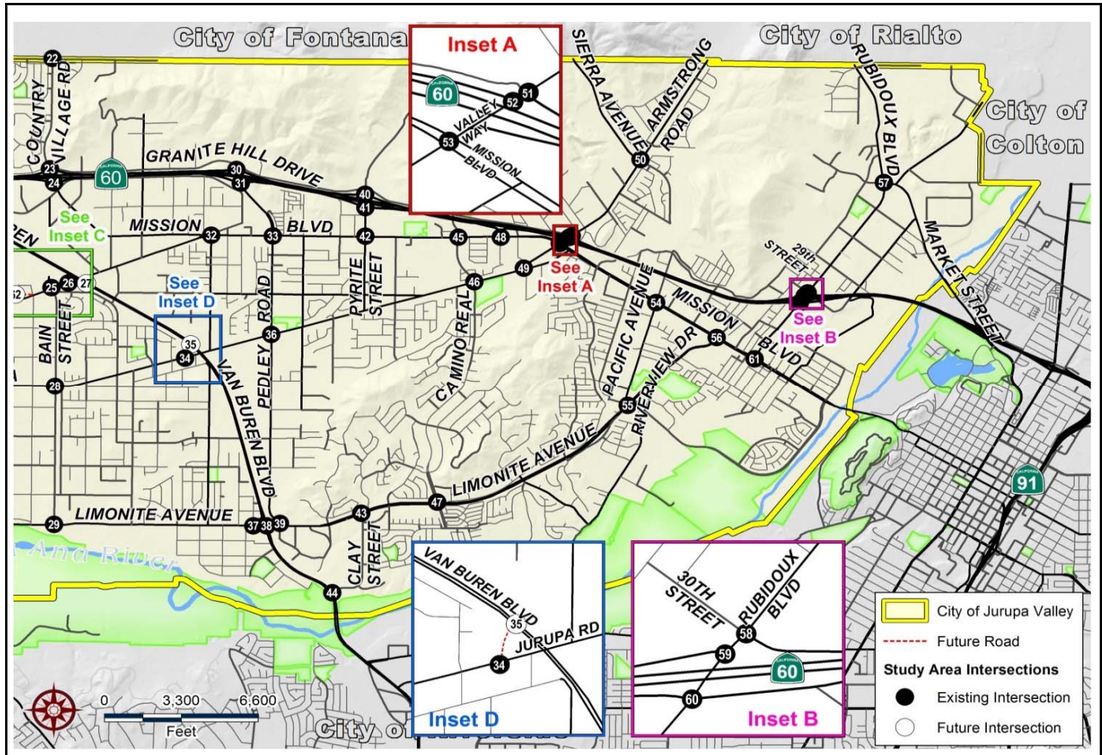

32 Bellegrave Avenue/Mission Boulevard

33 Pedley Road/Mission Boulevard

34 Van Buren Boulevard /Jurupa Road

35 Future Jurupa Rd Intersection @ Van Buren Boulevard

36 Pedley Road/Jurupa Road

37 Collins Street/Limonite Avenue

38 Van Buren Boulevard /Limonite Avenue

39 Pedley Road-Morton Avenue/Limonite Avenue

40 Pyrite Street/SR-60 Westbound Ramps

41 Pyrite Street/SR-60 Eastbound Ramps

42 Pyrite Street/Mission Boulevard

43 Clay Street/Limonite Avenue

44 Van Buren Boulevard /Clay Street

45 Camino Real /Mission Boulevard

46 Camino Real /Jurupa Road

47 Camino Real /Limonite Avenue

48 Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard

49 Valley Way/Jurupa Road

50 Armstrong Road/Sierra Avenue

51 Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive

52 Valley Way/SR-60 Westbound On Ramp

53 Valley Way/Mission Boulevard

54 Pacific Avenue/Mission Boulevard

55 Pacific Avenue/Limonite Avenue

56 Riverview Drive/Mission Boulevard

57 Rubidoux Boulevard/Market Street

58 Rubidoux Boulevard/SR-60 Westbound Off-Ramp-30th Street

59 Rubidoux Boulevard/SR-60 Westbound On-Ramp

60 Rubidoux Boulevard/SR-60 Eastbound Ramps

61 Rubidoux Boulevard/Mission Boulevard

62 Bellegrave Avenue/Cantu-Galleano Ranch Rd

LSA

Legend

Signal

Stop Sign

D De-Facto Right-Turn Lane

F Free Right-Turn Lane

O Right-Turn Overlap

Install a traffic signal

Optimize/Modify signal phasing

Recommended Improvement

Jurupa Valley General Plan
Traffic Study

Figure 4.1-2

General Plan Build-Out With Improvements Intersection Geometrics & Stop Control

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High Visibility Crosswalks

High Visibility Crosswalks include striped patterns, pavement lights, improved signing, and/or advance flashing beacons to improve the visibility of the crosswalk. These crosswalks are applicable on local streets where speed control and pedestrian crossing designation is desired. The benefits can include discouraging cut-through traffic since they may slow traffic and increase driver awareness of crosswalks; they also require minimal maintenance.

Pavement Striping

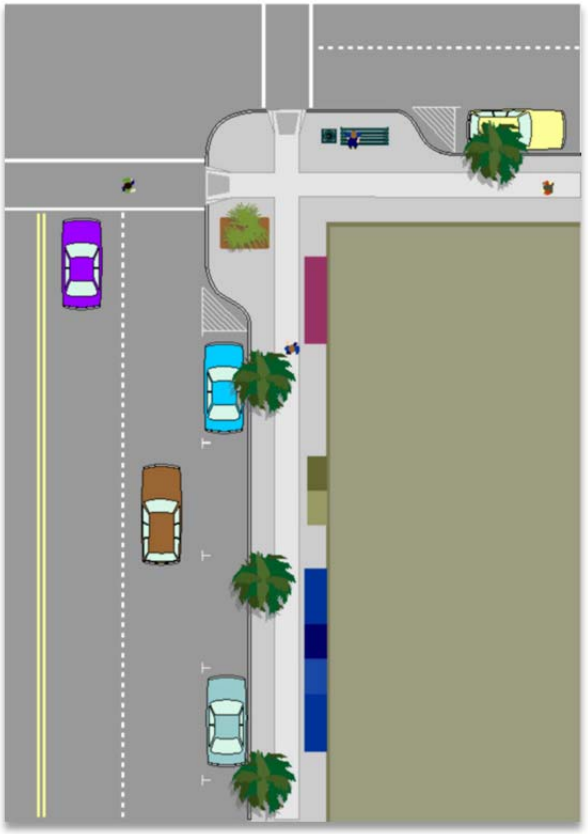
Pavement Striping is used to create narrow lanes, which gives the impression of a narrow street. This makes motorists feel restricted, which helps reduce speeds. Striping can be at curb end or in the middle of the street to create a median. It is most applicable to long, wide residential streets where speeding traffic could occur. Pavement striping is easy to install and modify with relatively low cost implementation.

Gateways

Gateways are special entrances that reduce the width of the travel way through the use of islands and are usually placed on roadways to narrow each direction of travel and interrupt the path along the center of the roadway. Gateways tend to be highly visible to motorists to notify a change in the roadway, may discourage cut-through traffic, and can help slow traffic.

High Visibility Signs

High visibility signs may include larger speed limit signs on the streets to ensure visibility to motorists. This measure is a basic method aimed at slowing traffic through visual reminders of the speed limits or other regulations. They can be applied to most streets that may have speeding issues and provide context for enforcement efforts.



Bulbouts

Bulbouts can reduce traffic speed and improve pedestrian safety. Bulbouts are simply intersection curb extensions that extend past the parking lanes, but not into the bicycle or through lanes. Bulbouts provide an entry or gateway statement into activity areas or where high volumes of pedestrians are present. Entering an area where a bulbout is present provides a clear difference between the arterial function and a local pedestrian activity area.

Bulbouts also enhance the visibility of the pedestrian because they physically permit the pedestrian closer to the travel lanes, especially where parking is permitted, and allow the pedestrian to be seen more easily by the driver. They also constrict traffic flow through reduced lateral clearance. This reduction affects travel speed along the corridors and improves safety for both pedestrians and vehicles.

Bulbouts change the turning radius at the intersection, which reduces turning speed and vehicle and pedestrian conflicts. They also reduce the time it takes pedestrians to cross from curb to curb. This reduction in pedestrian crossing time consequently reduces the time the pedestrian is exposed to moving vehicles.

Bulbouts can be an extremely positive visual and aesthetic enhancement. Features such as pedestrian lighting, planters, and benches create a focal point for pedestrian activity and change the character of the intersection from automobile to pedestrian. It should be noted that care must be taken when aesthetically enhancing bulbouts so that the enhancements do not block sight distances and create accident problems.

Speed Reduction Measures

Speed Reduction measures are traffic control devices and roadway design features primarily designed to slow traffic. They are employed when the use of basic measures cannot effectively address speeding issues. Speed reduction measures are often used in conjunction with basic measures, and may have a limited effect on traffic volume as well.

Some speed reductions measures include:

- Speed Humps;
- Raised Crosswalks;
- Raised Intersections;
- Roundabouts;
- Mid-Block Chokers;
- Medians;
- Major Bulbouts; and
- Chicanes.

Speed Humps

Speed Humps are areas of pavement raised 3–4 inches in height over a minimum of 12 feet in length. The combination of different heights, lengths, and approach ramps will affect the speed a vehicle can comfortably go over the hump. Speed humps are marked with signs and pavement markings. Speed humps are applicable on local streets where speed control is desired or where cut-through traffic is to be discouraged and can help slow traffic. Speed humps are not recommended for use on streets designated as primary response routes for emergency vehicles.

Raised Crosswalks

Raised crosswalks are flat-topped speed humps, built as pedestrian crosswalks, with vehicle ramps on the approaches. This type of crosswalk is applicable to local streets where speed control and pedestrian crossing designation are desired. It can be an effective safety tool near schools and recreation facilities and can also be used to discourage cut-through traffic. Raise crosswalks are well-marked and may contain special paving or textures.

Raised Intersections

Raised intersections are flat-topped speed humps built over the entire area of intersecting streets at curb height, creating a flat surface over the entire intersection area. Raised intersections are constructed with ramps on all vehicle approaches. They are often constructed with textured materials on the flat sections and approach ramps are commonly used in area-wide traffic calming installations. Raised intersections can be applicable to arterial and collector streets where speed control and pedestrian crossing designation are desired. They can be an effective safety tool near schools and recreation facilities and can also be used to discourage cut-through traffic.

Roundabouts

The use of roundabouts as an alternative to conventional stop and signal control intersections is becoming increasingly popular in the United States. Studies conducted by the insurance industry have determined that these types of intersections result not only in a significant decrease in automobile traffic at an intersection, but also a reduction in pedestrian accidents as well.

At a conventional intersection, the pedestrian faces four potential vehicle conflicts:

- Crossing movements on red (typically high-speed, illegal);
- Right turns on green (legal);
- Left turns on green (legal for protected-permitted or permitted left-turn phasing); and
- Right turns on red (typically legal).

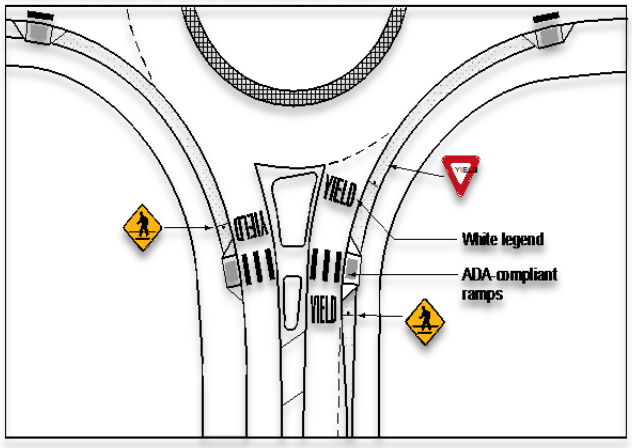
Pedestrians at roundabouts, on the other hand, face two conflicting movements on each approach:

- Conflict with entering vehicle; and
- Conflict with exiting vehicle.

The crossing of the roundabout is relatively simple. The pedestrian waits for a gap in traffic and crosses from the curb to the splitter island that provides protection, and then crosses from the splitter island to the far curb when another gap in traffic occurs. Crossing in two steps halves the vehicle exposure for each segment. In addition, safety is improved because the vehicles are forced to go slower through the roundabout than at a conventional intersection. The modern roundabout pedestrian crosswalk treatment consists of:

- ADA Compliant Ramps;
- Conventional Crosswalk Striping;
- Raised Splitter Island Pedestrian Pass Through and Refuge;
- Pedestrian Crossing Sign;
- Yield Street Markings; and
- Yield Signs.

Modern Roundabout Pedestrian Crosswalk Treatment



Typically, the crosswalk is placed approximately one car length from the yield bar to permit the pedestrian to safety walk behind a vehicle that is awaiting a merge into the roundabout when traffic permits.

Mid-Block Chokers

Chokers are raised islands in the parking zone that can be detached from the curb line to allow for drainage. Mid-block chokers narrow the roadway and are most applicable on wide streets with speeding and cut-through traffic concerns.

Medians

Medians are raised islands in the center of the roadway that separate traffic directions. Medians are used on wide streets to narrow the travel lanes and slow vehicle speeds, interrupt sight distances down the center of the roadway, and ease pedestrian crossings.

Chicanes

Chicanes are curb extensions that alternate from one side of the street to the other, forming S-shaped curves. To prevent drivers from taking a straight line through the feature, it is recommended to shift the alignment of at least one lane width and to have deflection angles of at least 45 degrees. This type of alignment can be applied to any street where speed control is desire, provided the street is wide enough to accommodate the curvilinear design.

Volume Control Measures

Volume Control Measures are traffic control devices and roadway design features primarily designed to discourage residential street cut-through traffic. They are used when it has been found that traffic volumes exceed established thresholds. Volume reduction devices can be used by themselves or in conjunction with basic and/or speed measures. Some common volume reduction measures include:

- Diverters;
- Partial Closures; and
- Full Street Closures.

Diverters

Diverters are raised barriers placed diagonally across an intersection blocking through movement. They are usually staggered to create circuitous routes through neighborhoods. Diverters are most applicable to local streets where cut-through traffic is a major concern.

Partial Closures

Partial closures are barriers that block travel in one direction for a short distance on otherwise two-way streets. They are used in sets to make

travel through neighborhoods with gridded streets circuitous rather than direct. That is, they are not lined up along a border that would preclude through movement, but instead are staggered, which leaves through movement possible but less attractive than alternative routes.

Full Street Closures

Full street closures are barriers to close the street completely to through traffic, with access limited to pedestrians and bicyclists. They are usually called cul-de-sacs or dead ends and can consist of landscaped islands, walls, gates, or other obstructions that leave an opening smaller than the width of a car. Street closures are most commonly used for eliminating cut-through traffic, but can have an adverse effect on emergency response.

Intelligent Transportation Systems (ITS)

ITS are technology improvements that improve traffic flow and minimize disruptions to travel. ITS type projects can include sophisticated traffic signal systems designed to manage speed, dynamic message signs, incident management cameras, weather stations, highway advisory radio, transit automatic vehicle location, and video surveillance.

Adaptive Traffic Control Systems (ATCS)

Improving traffic operations on major thoroughfares within the City of Jurupa Valley through implementation of ITS could help alleviate traffic congestion. ATCS attempts to modify the coordination of many traffic signals to prevailing traffic conditions in real-time. All techniques rely on traffic-detection equipment and a central computer monitoring station that uses the collected data to optimize traffic signal coordination and timings to provide more efficient cycle-lengths and green-times.

Several jurisdictions nationwide have implemented their own ATCS in recent years. The most notable implementation in Southern California is the system developed by Los Angeles Department of Transportation (LADOT) for the City of Los Angeles. The ATCS automatically adjusts traffic signal timing at 375 intersections within the City of Los Angeles in

response to real-time traffic demands. The evaluation results published by LADOT show that the ATCS reduced travel time by 12.7 percent, decreased average stops by 31 percent, and lowered average delay by 21.4 percent (*Preliminary Evaluation Study of Adaptive Traffic Control System, Banerjee, Frances T, City of Los Angeles Department of Transportation, July 2001*). ATCS can be used by the City of Jurupa Valley for improvement of traffic congestion along major thoroughfares within the City.

Transportation Demand Management

Transportation Demand Management (TDM) is a strategy to increase the efficiency of a transportation system by encouraging a shift from single-occupant vehicle (SOV) trips to non-SOV modes, or shifting auto trips out of peak periods. The goal of TDM is to reduce auto trips by increasing travel options through incentives to encourage individuals to modify their travel behavior. The cumulative impact of TDM strategies can have an impact on travel behavior, system efficiency, and SOV rates. TDM programs can be implemented by employers or public agencies. Employer based TDM strategies can reduce vehicle trips by providing employees with incentives, information, and additional transportation options to commute through other modes than SOV, to commute during off-peak times of day, or eliminate certain work trips altogether. Employer based strategies may include:

- Instituting parking charges;
- Unbundling free or subsidized parking from employee benefits;
- Providing free days of parking for employees who carpool/vanpool;
- Transit Subsidies: Provision of subsidized transit passes/vanpool fares, or shuttle services;
- Bike/Walk Facilities: Secure workplace parking for bikes, and shower and locker facilities;
- Preferred Parking for Carpools: Provision of preferred parking spaces for Carpool/Vanpool vehicles;
- Vanpools, Shuttles, and Car-sharing: Provision of free vanpool vehicles, shuttle services, or car sharing programs for employees to reduce private vehicles;
- Telecommuting: Allow employees to work from home or a non-office location one or more days a week;
- Compressed Workweek: Enabling employees to compress regularly scheduled hours into fewer work days per week; and
- Flexible Schedule: Allowing employees to offset work hours from the typical 9–5 standard and shift commute travel to off-peak hours.

Establishment of a trip reduction ordinance by the City could encourage non-SOV modes such as public transit, vanpools, carpools, and bicycles, rather than SOV. Also, a trip reduction ordinance could encourage alternate work hours that serve to reduce the typical peak demand upon the street network, parking facilities, and transit systems. The trip reduction ordinance could apply to non-residential development projects, which would be required to reserve and designate preferential parking spaces for carpool vehicles, provide employees with commuter-matching services and trip reduction information, and provide bicycle parking facilities and other non-automobile enhancements.

Transit Pass Programs

A growing number of transit agencies have been teaming with employers, universities, developers, and residential neighborhoods to provide universal transit passes. These passes provide unlimited rides on local or regional transit providers for low monthly fees, often absorbed by employers, schools, or developers. This strategy could increase the number of transit ridership and reduce SOV and congestion.

Safe Routes to School

The Safe Routes to School program focuses the development of safe, convenient, and fun opportunities for children to bicycle and walk to and from schools, thereby reducing vehicle traffic during the peak pick-up/drop-off times throughout the City. The City can work with local school districts to identify potential safe routes to schools and establish safe drop-off/pick-up zones. The City could also inform and involve local residents to aid in researching the most viable routes and inventorying existing facilities to identify deficiencies and safety problems. The result is the identification of public improvements to enhance safe and effective walking and bicycling activity to and from each school and can include the maps for each school that shows the preferred routes.

Complete Streets

A complete street is one that works for all travel modes, including motorists, transit, bicyclists, and pedestrians. A complete street policy ensures that the entire right-of-way is routinely designed and operated to enable safe access for all users. While the definition of a complete street is universally applicable, the design of complete streets is variable. Each street has unique characteristics that make it distinctive from another. Therefore, a complete street in a rural area will look quite different from a complete street in a highly urban area. However, both streets are designed to balance safety and convenience for everyone using the road.

Elements that may be found on a complete street include sidewalks, bike lanes, crosswalks, wide shoulders, medians, bus pullouts, special bus lanes, raised crosswalks, audible pedestrian signals, sidewalk bulbouts, and more. The following outlines the characteristics of "typical" complete streets in an urban and rural setting.

- **Rural.** Rural roadways provide unique design challenges to develop complete streets. Rural streets typically have low traffic volume and the traffic lanes serve as multi-modal pathways often accommodating pedestrians, bicyclists, and motorists. These types of streets typically lack sidewalks and few pedestrians use these routes. Streets may be striped in order to provide the best use of the right-of-way and not limit mobility. Rural complete streets provide adequate shoulders (at least 5 feet) for use by bicyclists. Ideally, the shoulder should be 8 feet wide to allow a vehicle to pull off the roadway in an emergency.

- **Urban.** Urban streets are utilized to access mixed use and commercial areas. These streets typically carry a higher volume of traffic and have more pedestrians and bicyclists present. Transit is an active component of these areas and intermodal connections are prioritized.

  There are many different types of streets found in urban settings. Recommended standards for different types of urban streets are outlined below. These standards include provisions for narrow street widths where low speeds are appropriate, detached sidewalks, bicycle facilities, and shorter block lengths.

Local Streets

- The maximum width of local residential streets is 30–32 feet (two 7-foot parking lanes and two 8–9 foot travel lanes) depending on the expected travel volume.
- Landscape strips, separating curb from the sidewalk, are required on local residential streets.
- Maximum block length is 600 feet for low-volume residential streets and 800 feet for medium-volume residential streets.
- Six-inch vertical curbs are required.

Collector Streets

- Landscape strips, separating curb from the sidewalk, would be required on most new streets.
- Maximum block length is 1,000 feet for collector streets.
- On streets with on-street parking, bulbouts are encouraged at intersections to reduce the crossing distance for pedestrians and discourage speeding through intersections.
- Roundabouts should be considered where residential streets intersect and ultimate combined volume will exceed 1,000 vehicles daily or where the unimpeded distance on any of the approaches not subject to stop control exceeds 600 feet.
- Bicycle lanes should be provided on all collector streets.

Arterial Streets

- Bulbouts would be encouraged at some intersections to reduce the crossing distance for pedestrians and discourage speeding through intersections.
- Maximum block length is 1,320 feet (four intersections per mile). This could be lengthened if bike/pedestrian paths shorten the effective block length for non-auto users.
- Raised medians with turn pockets should be provided.
- Bicycle lanes should be provided on all arterial streets.

Street designs should also take into account the context of the street, that is, the adjacent land uses. Some basic designations include:

- **Commercial Streets:** These streets are typically dominated by autos maneuvering into and out of parking lot driveways in conflict with other flows. The design goal should be to keep these movements orderly by separating the flows using detached sidewalks and marked crosswalks, bicycle lanes and medians with turn pockets.
- **Mixed-Use Streets:** These slower streets have wider sidewalks and parking lanes.
- **Main Streets:** The design goal of these streets is to make pedestrians comfortable so as to encourage them to make use of adjacent land uses.
- **Residential Streets:** The design goal is to allow people to feel comfortable in their neighborhoods. This means keeping speeds low while allowing motorists to get to and from their houses without undue delay.
- **Industrial Streets:** These streets are designed for the movement of trucks and so require wider travel lanes than residential or other roads.

Transit Strategies

One of the City of Jurupa Valley's goals is to provide an integrated land use and multi-modal transportation system that meets sustainable regional growth expectations, supports economic vitality, and improves quality of life. To achieve this goal, transit must play a much greater role in providing travel choice within the City. It is recognized that transit service per capita must increase as the region's population increases. Future transit goals within the City should address needs such as increased service frequency and expanded coverage.

The frequency of transit service (the time between buses) is often referred to as headway. The headway for most current transit service in the City is approximately 45 minutes to one hour. With one hour headways, there are very few options for those people who choose to take transit over driving a car. Instead, current transit service primarily serves only the transit dependent, those who do not have any other means of travel. To capture choice riders, the frequency of service must increase to a minimum of half hour headways during peak periods, and preferably 15 minute headways for high demand corridors. If service is direct and available every 15 minutes, then shifts in mode from automobile to transit are likely to occur.

Extended Service Hours

Currently, transit service is available from 6:30 a.m. to 8:00 p.m. on Route 21 and from 5:30 a.m. to 8:30 p.m. on Route 29 during weekdays. Many jobs in the region begin at 6:00 a.m. or earlier. These workers do not have the option to take transit on specific routes. Furthermore, transit-dependent workers may not be able to accept jobs that start early in the morning. Conversely, there are many who work and need transit service after 8:00 p.m. A person may be asked to stay late and not be able to because of the transit schedule. Based on transit service in other cities, extended hours of service from 5:00 a.m. to 10:00 p.m. would be desirable for weekdays. Extending hours to midnight on Friday would also be desirable.

Equestrian/Multi-Purpose Trails

Due to need for a citywide, regionally-integrated trails system, the City intends to prepare a Master Trails Plan following General Plan adoption. This effort will involve a broad cross-section of the community, including other key agencies, such as Riverside County, Jurupa Area Recreation and Parks District (JARPD), Riverside County Flood Control, and the National Park Service. It will build upon an existing vision for a citywide trails system.

A vision has been developed for a Jurupa Valley Multi-Purpose Community Trails System. The system is anticipated to be a network of pedestrian, equestrian and bicycle trails that link Jurupa Valley's eight distinct communities and its many neighborhoods with open space areas, schools, recreation facilities, regional trail connections and local landmarks (e.g., The Discovery Center, Mt. Rubidoux). This vision has been shaped by many community groups and individuals, including the GPAC, Jurupa Valley residents and property owners, the City of Jurupa Valley decision-makers and staff, JARPD, Riverside County Regional Park and Open-Space District, Riverside County Flood Control and Water Conservation District, Inland Empire Resource Conservation District, and others. This vision was initially described by the JARPD, as shown in Appendix 16.0 and includes the following general goals as identified by the JARPD:

a. Review, maintain, and expand community multi-purpose trails system;

b. Develop a safe and interconnected area-wide network of trails that link together destinations and people both locally and regionally;

c. Develop a trails network that provides facilities and programs designed to expand and encourage active recreation and alternative transportation;

d. Enhance, protect, and preserve the environmental quality of open space, waterways, and wildlife habitats;

e. Conserve and tell the story of local culture, history, and heritage through interpretive signage;

f. Stimulate economic growth through increased tourism and real property value by developing a region-wide trails network;

g. Promote agency coordination among JARPD and the Cities of Jurupa Valley and Eastvale;

h. Identify street intersections where vehicular traffic and trail user (equestrian/hiking/trail biking) conflicts are present;

i. Coordinate safety solutions for trail street crossings with City of Jurupa Valley Traffic Engineering and Planning Departments;

j. Create an "equestrian friendly" environment the maintains Jurupa Valley's "equestrian lifestyle;"

k. Identify residential neighborhoods where streets are narrow with equestrian trails, and designate them as "equestrian routes" where horses have priority and utilize the street as a trail;

l. Designate trails as two types: Recreational Use trails owned by public agencies and Equestrian Routes that are not developed trails but have been historically used as such;

m. Establish public trail designation through on-site signage program that identifies trail alignments throughout the community by posting signs for all multi-purpose trails, as appropriate;

n. Establish natural trails interpretive signage program;

o. Adopt a Community Multi-Purpose Trails Development Ordinance;

p. Create a trail maintenance and operations program; and

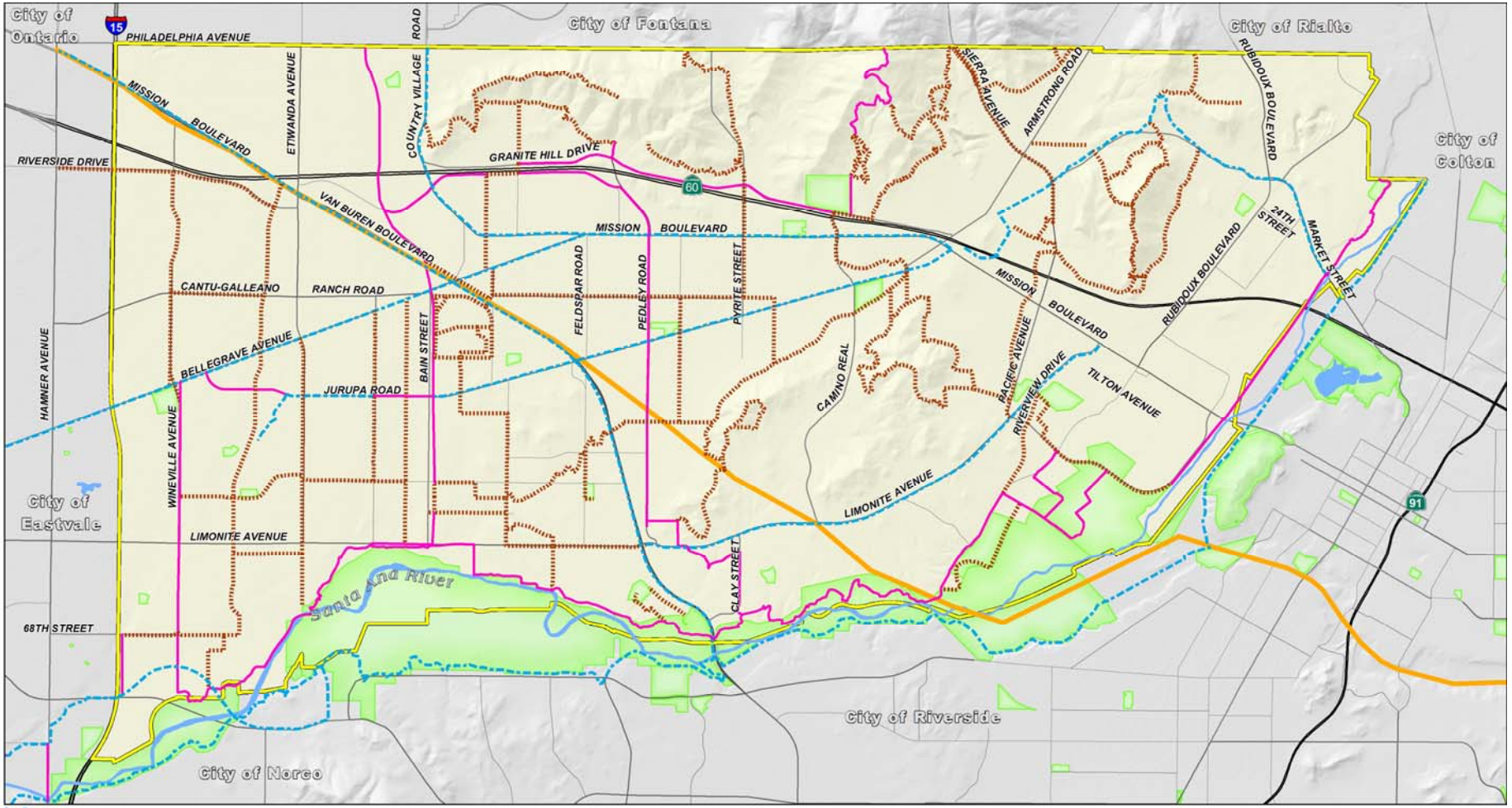
q. Establish a separate funding account for Multi-Purpose Community Trails development.

Figure 4.2 illustrates the Equestrian Trails Plan.

Truck Traffic

Due to its location relative to major highways and urban centers, Jurupa Valley serves as a major logistics shipping and receiving center for Southern California. Along with that regional role comes significant commercial truck traffic using highway off-ramps and City streets.

Figure 4.3 illustrates the existing daily truck traffic on major corridors within the City and shows most of the truck traffic within the City is located in the northern and eastern areas of the City, near the SR-60 corridor. It is anticipated that this trend will likely continue into General Plan Build-out conditions due to the Land Use Element's continued support of heavy industrial areas in the northwestern part of the City. The City is responsible for maintaining an extensive network of low-volume streets and roads in industrial and semi-rural areas to accommodate the transport and delivery of goods.



Jurupa Valley General Plan
Figure 4.2
Generalized Equestrian Trails Plan

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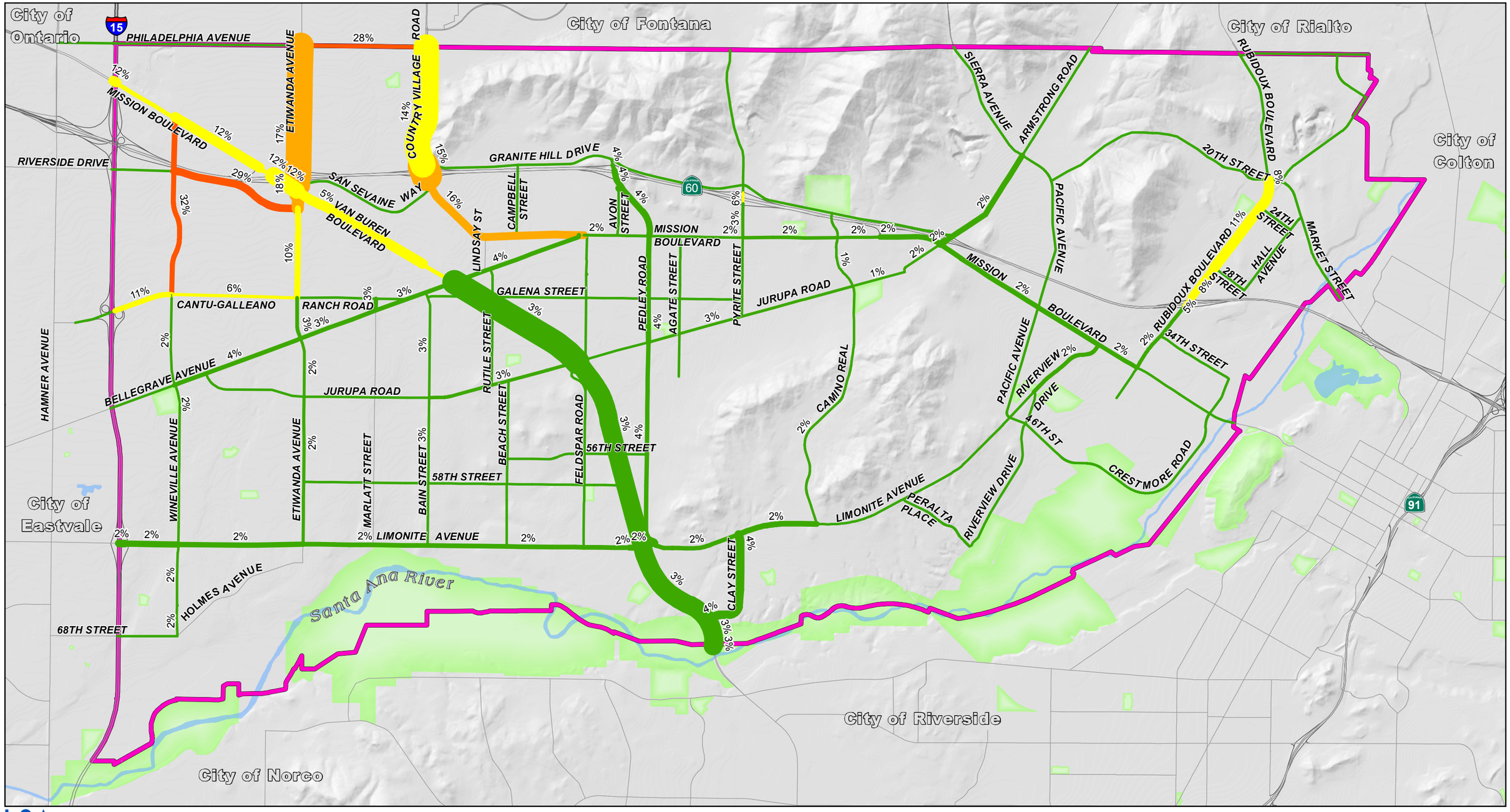

Jurupa Valley General Plan
Traffic Study

Figure 4.3
Existing Roadway Segment Truck Percentage

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CHAPTER 5 – CIRCULATION SYSTEM STRATEGIES

CHAPTER CONTENTS

The proposed Jurupa Valley General Plan Build-out roadway network includes the infrastructure that is feasible to accommodate the vision of the Land Use Element. Figure 5.1 illustrates the City's recommended General Plan Build-out Circulation System based on the General Plan Build-out Traffic Study. Due to constraints that have been identified earlier in this report, improvement to the roadway network has been limited to five major roads as described below.

General Plan Build-out Recommended Roadway Improvements

The General Plan Build-out scenario includes roadway modifications to the existing roadway network based on input from the City of Jurupa Valley to reflect the Jurupa Valley Mobility goals. Following are recommended improvements to the City's roadway network:

- **Etiwanda Avenue:** The roadway segment south of Limonite Avenue is proposed to include a two-lane Secondary roadway bridge extension from 66th Street over the Santa Ana River to Arlington Avenue.
- **Van Buren Boulevard:** The roadway segments from Etiwanda Avenue to Clay Street are proposed to be widened from a four-lane Urban Arterial to an eight-lane Expressway. The intersection of Van Buren Boulevard/Bellegrave Avenue is proposed to realign to the south with a new connector at Van Buren Boulevard/Van Buren Connector. Also, the intersection of Van Buren Boulevard/Jurupa Road is proposed to realign to the north with a new connector at Van Buren Boulevard/Van Buren Connector.
- **Cantu-Galleano Ranch Road:** The roadway segments between Etiwanda Avenue and Van Buren Boulevard are proposed to be widened from four-lane Major roadways to six-lane Urban Arterials. The roadway segment east of Etiwanda Avenue is proposed to align with Bellegrave Avenue and create a new intersection at Bellegrave Avenue/Cantu-Galleano Ranch Road.
- **Bellegrave Avenue:** The roadway segment between Marlatt Street and Dodd Street is proposed to realign with Cantu-Galleano Road and end at the new intersection of Bellegrave Avenue/Cantu-Galleano Ranch Road. A new intersection west of Bain Street is proposed to connect at Van Buren Connector/Bellegrave Avenue.
- **Market Street:** The roadway segment east of Rubidoux Boulevard is proposed to be widened from a two-lane Arterial to a three-lane Major Roadway.

Based on discussion with City staff, no additional improvements are recommended other than the ones listed in Chapter 3 under General Plan Build-out conditions. This is due to right-of-way constraints and the City's endeavor to maintain its rural character as well as to discourage cut-through traffic on local streets.

Recommended General Plan Build-Out Circulation

Roadway Segments

Figure 5.1 illustrates the City's recommended General Plan Build-out Circulation System based on the General Plan Build-out Traffic Study. Following is a description of recommended roadway configuration under General Plan Build-out conditions for all major roadways within the City:

Wineville Avenue/Road is oriented in a north-south direction. Wineville Road from Mission Boulevard to Riverside Drive is a four-lane Major roadway and from Riverside Drive to Bellegrave Avenue is a four-lane Secondary roadway. From Bellegrave to Limonite Avenue, Wineville Avenue is a four-lane Major roadway and from Limonite Avenue to 68th Street it is a three-lane Major roadway.

CHAPTER 5 – CIRCULATION SYSTEM STRATEGIES

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City of Ontario
City of Fontana
City of Rialto
City of Colton
City of Eastvale
City of Norco
City of Riverside
Santa Ana River

PHILADELPHIA AVENUE
MISSION BOULEVARD
RIVERSIDE DRIVE
ETIWANDA AVENUE
COUNTRY VILLAGE ROAD
GRANITE HILL DRIVE
SAN SEVAINE WAY
VAN BUREN BOULEVARD
CAMPBELL STREET
AVON STREET
MISSION BOULEVARD
SIERRA AVENUE
ARMSTRONG ROAD
PACIFIC AVENUE
RUBIDOUX BOULEVARD
20TH STREET
24TH STREET
28TH STREET
HALL AVENUE
MARKET STREET
CANTU-GALLEANO RANCH ROAD
GALENA STREET
JURUPA ROAD
PEDLEY ROAD
AGATE STREET
PYRITE STREET
CAMINO REAL
MISSION BOULEVARD
34TH STREET
RIVERVIEW DRIVE
46TH ST
CRESTMORE ROAD
BELLEGRAVE AVENUE
JURUPA ROAD
RUTILE STREET
BEACH STREET
FELDSPAR ROAD
56TH STREET
58TH STREET
BAIN STREET
HAMNER AVENUE
WINEVILLE AVENUE
ETIWANDA AVENUE
LIMONITE AVENUE
LIMONITE AVENUE
PERALTA PLACE
RIVERVIEW DRIVE
CLAY STREET
HOLMES AVENUE
68TH STREET

LSA

City of Jurupa Valley
Parks
Expressway (Up to 220' ROW)
Urban Arterial (Up to 152' ROW)
Arterial (Up to 128' ROW)
Major (Up to 118' ROW)
Secondary (Up to 100' ROW)
Collector (Up to 74' ROW)
4 Number of Lanes

SOURCE: Riverside County 7/2015

0 2,000 4,000
Feet

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Jurupa Valley General Plan
Traffic Study

Figure 5.1
General Plan Build-Out Circulation System

CHAPTER 5 – CIRCULATION SYSTEM STRATEGIES

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Etiwanda Avenue is oriented in a north-south direction and is a six-lane Urban Arterial from the northern City limits to SR-60, from SR-60 to Van Buren Boulevard is a four-lane Arterial roadway, from Van Buren Boulevard to Bellegrave Avenue is a four-lane Major roadway, from Bellegrave Avenue to Limonite Avenue is a four-lane Arterial roadway, and from Limonite Avenue to Holmes Avenue is a two-lane Secondary roadway.

Bain Street is oriented in a north-south direction and is a two-lane Collector roadway from Bellegrave Avenue to Limonite Avenue.

Country Village Road is oriented in a north-south direction and is a four-lane Major roadway from Philadelphia Avenue to SR-60.

Pedley Road is oriented in a north-south direction and is a two-lane Major roadway from SR-60 Westbound Ramps to SR-60 Eastbound Ramps, from SR-60 Eastbound Ramps to Mission Boulevard is a four-lane Major roadway, from Mission Boulevard to Jurupa Road is a three-lane Major roadway, and from Jurupa Road to Limonite Avenue is a two-lane Major roadway.

Pyrite Street is oriented in a north-south direction and is a two-lane Major roadway from SR-60 Westbound Ramps to SR-60 Eastbound Ramps, from SR-60 Eastbound Ramps to Mission Boulevard is a four-lane Major roadway, from Mission Boulevard to Jurupa Road is a three-lane Major roadway, and from Jurupa Road to Limonite Avenue is a two-lane Major roadway.

Clay Street is oriented in a north-south direction from Limonite Avenue to General Road and transitions to an east-west direction from General Road to Van Buren Boulevard. Clay Street is a four-lane Major roadway.

Camino Real is oriented in a north-south direction and is a four-lane Arterial roadway from Mission Boulevard to Jurupa Road, and from Jurupa Road to Limonite Avenue is a four-lane Major roadway.

Philadelphia Avenue is oriented in an east-west roadway and is a two-lane Major roadway from Etiwanda Avenue to Country Village Road.

Van Buren Boulevard is oriented in a north-south direction and is a four-lane Arterial roadway from Wineville Avenue to Etiwanda Avenue, and from Etiwanda Avenue to Clay Street is an eight-lane Expressway.

Riverside Drive is oriented in an east-west direction and is a three-lane Major roadway from Wineville Road to Etiwanda Avenue.

Cantu-Galleano Ranch Road is oriented in an east-west direction and is a six-lane Urban Arterial from the I-15 Northbound Ramps to Bellegrave Avenue.

Mission Boulevard is oriented an east-west direction and is a four-lane Secondary roadway from SR-60 Eastbound Ramps to Bellegrave Avenue, from Bellegrave Avenue to Pedley Road is a four-lane Major roadway, from Pedley Road to Pyrite street is a four-lane Secondary roadway, from Pyrite Street to SR-60 Eastbound Ramps is a four-lane Major roadway, from SR-60 Eastbound Ramps to Valley Way is a four-lane Secondary roadway, and from Valley Way to Rubidoux Boulevard is a four-lane Arterial roadway.

Bellegrave Avenue is oriented in an east-west direction and is a four-lane Major roadway from west of Wineville Avenue to Cantu-Galleano Ranch Road, and from Cantu-Galleano Ranch Road to Mission Boulevard is a six-lane Urban Arterial roadway.

Jurupa Road is oriented in an east-west direction and is two-lane Secondary roadway from Bellegrave Avenue to Etiwanda Avenue, and from Etiwanda Avenue to Valley Way is a two-lane Collector roadway.

Valley Way is oriented in a north-south direction and is two-lane Collector roadway from Jurupa Road to Mission Boulevard, from Mission Boulevard to SR-60 is a four-lane Arterial roadway, from SR-60

Westbound Ramps to Sierra Avenue is a four-lane Major roadway, and north of Sierra Avenue is a two-lane Major roadway.

Limonite Avenue is oriented in an east-west direction and is a four-lane Major roadway from I-15 Southbound Ramps to I-15 Northbound Ramps, from I-15 Northbound Ramps to Wineville Avenue is a four-lane Arterial roadway, from Wineville Avenue to Etiwanda Avenue is a four-lane Major roadway, from Etiwanda Avenue to Bain Street is a two-lane Major roadway, from Bain Street to Pedley Road is a four-lane Major roadway, from Pedley Road to Clay Street is a four-lane Arterial roadway, from Clay Street to Riverview Drive is a five-lane Urban Arterial roadway, and from Riverview Drive to Mission Boulevard is a four-lane Major roadway.

Rubidoux Boulevard is oriented in a north-south direction and is a four-lane Major roadway from Mission Boulevard to Market Street.

Intersections

As discussed in Chapter 4, the following improvements to the intersections are recommended to support the City's General Plan Land Use Element:

- **I-15 Southbound Ramps/Limonite Avenue:** Optimize the signal timing.
- **I-15 Northbound Ramps/Limonite Avenue:** Optimize the signal timing.
- **Wineville Road/Mission Boulevard:** Install a traffic signal.
- **Wineville Road/Riverside Drive:** Install a traffic signal.
- **Wineville Road/Cantu-Galleano Ranch Road:** Optimize the signal timing.
- **Mission Boulevard/SR-60 Eastbound Off-Ramp:** Optimization of the signal timing improves operations. No additional feasible mitigation is possible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient Level of Service in the a.m. and p.m. peak hours.
- **Etiwanda Avenue/Philadelphia Avenue:** Stripe eastbound right-turn lane and add overlap phasing. Add westbound right-turn lane with overlap phasing. Add a second northbound left-turn lane. No additional feasible mitigation is possible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient Level of Service in the p.m. peak hour.
- **Etiwanda Avenue/SR-60 Eastbound On-Ramp:** Install a traffic signal. No additional feasible mitigation is possible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient Level of Service in the p.m. peak hour.
- **Etiwanda Avenue/Van Buren Boulevard:** Southbound right-turn lane with overlap phasing and optimization of signal timing improvements operations. No additional feasible mitigation is possible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient Level of Service in the a.m. and p.m. peak hours.
- **Etiwanda Avenue/Bellegrave Avenue:** Optimize the signal timing.
- **Etiwanda Avenue/Limonite Avenue:** Add an eastbound left-turn lane and westbound left-turn lane. Add protected phasing to the eastbound/westbound approaches.
- **Country Village Road/Philadelphia Avenue:** Optimize the signal timing.
- **Country Village Road/SR-60 Westbound Ramps:** Add a second westbound right-turn lane; this will require modification of the westbound off-ramp. Stripe a southbound right-turn lane, and restripe the southbound through lane to a through/right-turn lane.
- **Van Buren Boulevard-Bellegrave Connector/Bellegrave Avenue:** Install a traffic signal. Add a westbound left-turn lane and restripe the southbound approach to include a southbound left-turn lane

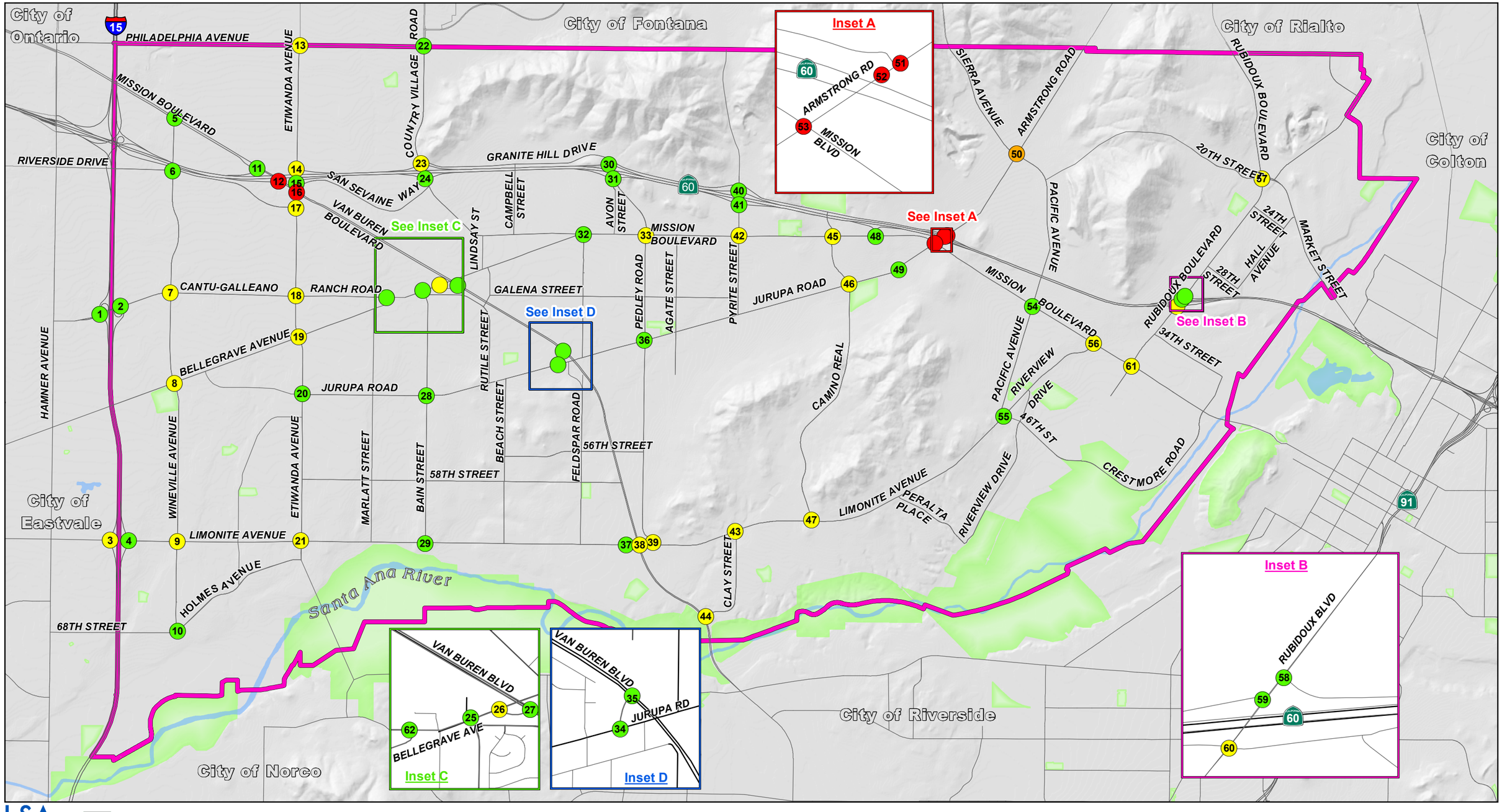
and through/right-turn lane. Restripe the northbound approach to include a northbound left-turn lane and a through/right-turn lane.

- **Van Buren Boulevard/Van Buren-Bellegrave Connector:** Install a traffic signal, add two northbound left-turn lanes, a second eastbound right-turn lane, and a southbound right-turn lane.
- **Pedley Road/SR-60 Westbound Ramps:** Install a traffic signal.
- **Pedley Road/SR-60 Eastbound Ramps:** Install a traffic signal. Although this intersection operates satisfactorily, a signal has been added due to the addition of a signal at Pedley Road/SR-60 Westbound Ramps.
- **Jurupa Road/Van Buren-Jurupa Connector:** Install a traffic signal. Add an eastbound left-turn lane.
- **Van Buren Boulevard/Van Buren-Jurupa Connector:** Install a traffic signal. Add two northbound left-turn lanes.
- **Pedley Road/Jurupa Road:** Install a traffic signal.
- **Pedley Road-Morton Avenue/Limonite Avenue:** Optimize the signal timing.
- **Pyrite Street/SR-60 Westbound Ramps:** Install a traffic signal.
- **Pyrite Street/SR-60 Eastbound Ramps:** Install a traffic signal.
- **Clay Street/Limonite Avenue:** Add overlap phasing to the northbound right-turn lane.
- **Van Buren Boulevard/Clay Street:** Optimize the signal timing.
- **Camino Real/Jurupa Road:** Add a northbound right-turn lane with overlap phasing.
- **Camino Real/Limonite Avenue:** Add overlap phasing to the southbound right-turn lane.
- **Byrne Road-SR-60 Eastbound Ramps/Mission Boulevard:** Add a southbound left-turn lane. This improvement will require modification to the off-ramp.
- **Valley Way/Jurupa Road:** Install a traffic signal. Add an eastbound left-turn lane.
- **Armstrong Road/Sierra Avenue:** Add overlap phasing to the eastbound right-turn lane. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient Level of Service in the a.m. and p.m. peak hours.
- **Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive:** Restripe the north leg to separate the southbound left-turn lane and right-turn lane. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient Level of Service in the a.m. and p.m. peak hours.
- **Valley Way/SR-60 Westbound On-Ramp:** This intersection may be combined with Valley Way/SR-60 Westbound Off-Ramp-Granite Hill Drive as a five-legged intersection with one signal controller. This will require Caltrans review. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient Level of Service in the a.m. and p.m. peak hours.
- **Valley Way/Mission Boulevard:** Optimize the signal timing. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient Level of Service in the a.m. and p.m. peak hours.
- **Riverview Drive/Mission Boulevard:** Add a second northbound right-turn lane and add overlap phasing to the northbound right-turn lane and eastbound right-turn lane. Restripe the north leg approach to the southbound left-turn lane and through/right-turn lane. Change the northbound/southbound signal phasing from split-

phasing to protected phasing. No other improvements are feasible due to right-of-way constraints.

- **Rubidoux Boulevard/Market Street:** Add overlap phasing to the northbound right-turn lane and reduce the median on the east leg to accommodate a separate westbound left-turn lane. Restripe the westbound through/left-turn lane to a through lane. Change the eastbound/westbound signal phasing from split phase to protected phasing. No other improvements are feasible due to right-of-way constraints. Therefore, this intersection is forecast to continue operating at a deficient Level of Service in the p.m. peak hour.
- **Rubidoux Boulevard/SR-60 Eastbound Ramps:** Add a northbound right-turn lane and an eastbound left-turn lane. The eastbound left-turn lane will require widening of the eastbound off-ramp and will require Caltrans review.
- **Rubidoux Boulevard/Mission Boulevard:** Restripe the south leg to accommodate separate northbound left-turn lane and through-right-turn lane. Change the northbound/southbound signal phasing from split phase to protected phasing. Add overlap phasing to the southbound and westbound right-turn lane.
- **Bellegrave Avenue/Cantu-Galleano Ranch Road:** Install a traffic signal. Add a westbound left-turn lane and overlap phasing to the northbound right-turn lane.

Previously referenced Table 4.B illustrates the General Plan Build-Out conditions with the recommended intersection improvements. Previously referenced Figures 4.1-1 and 4.1-2 illustrate the resulting intersection geometrics. Figure 5.2-1 and 5.2-2 illustrate the resulting intersection levels of service with the addition of the above listed improvements at study intersections. With implementation of the above improvements, 9 intersections will continue to operate at deficient LOS.



LSA

City of Jurupa Valley
Parks

Intersections

Level of Service A - C
Level of Service D
Level of Service E
Level of Service F

SOURCE: Riverside County 7/2015

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Feet

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Jurupa Valley General Plan
Traffic Study

Figure 5.2-1

General Plan Build-Out With Improvements A.M. Peak Hour Intersection Levels of Service

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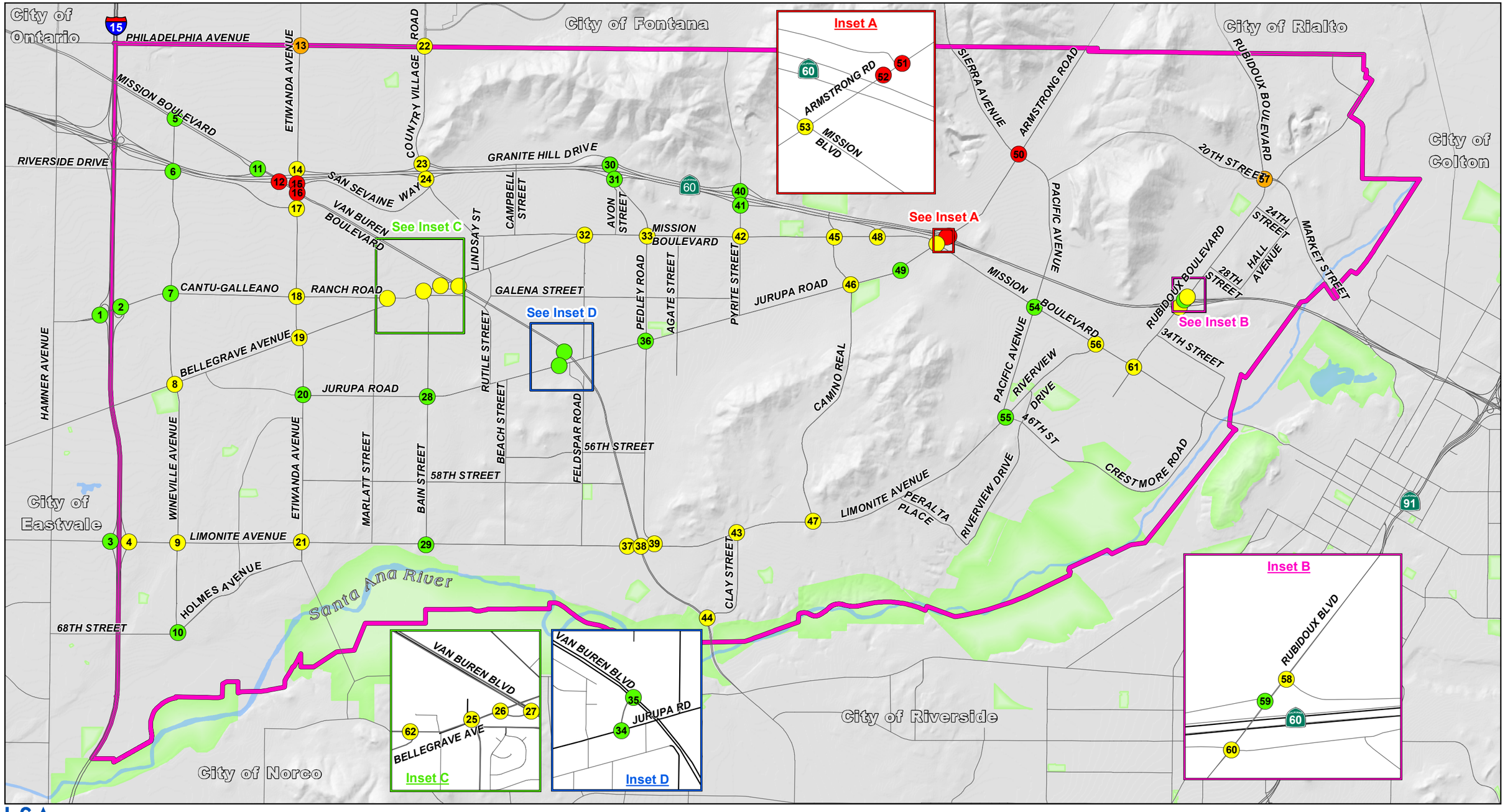

LSA

City of Jurupa Valley
Parks

Intersections

Level of Service A - C
Level of Service D
Level of Service E
Level of Service

SOURCE: Riverside County 7/2015

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Jurupa Valley General Plan
Traffic Study

Figure 5.2-2

General Plan Build-Out With Improvements P.M. Peak Hour Intersection Levels of Service

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