4.15 TRANSPORTATION AND TRAFFIC

INTRODUCTION

This section of the EIR addresses the potential for the Plan to impact the existing transportation and circulation system. Existing traffic conditions and circulation patterns in the area are addressed, along with regulatory framework and methodology for analysis of the potential impact of the Plan on traffic and transportation. This section incorporates information from the following sources, which are incorporated by reference herein and included in **Appendix K: Traffic Study** to this Draft EIR.

- *Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study* (Traffic Study), prepared by Fehr and Peers, Inc, April 2019.
- *Vehicles Miles Traveled (VMT) Assessment for Etiwanda Heights Neighborhood and Conservation Plan*, prepared by Fehr and Peers, April 2019.

ENVIRONMENTAL SETTING

Regulatory Framework

a. State

Congestion Management Program

To address public concern that traffic congestion was impacting the quality of life and economic vitality of the State, in 1990, Section 65089 of the California Government Code was adopted to require each county to prepare and adopt a Congestion Management Program (CMP). The intent of the CMP is to provide the analytical basis for transportation decisions. The CMP meets federal requirements for a Congestion Management System (CMS) as required by the Intermodal Surface Transportation Efficiency Act of 1991 and continued in the Transportation Equity Act for the 21st Century in 1998 and SAFE, Accountable, Flexible, and Efficient Transportation Equity ACT—A Legacy for Users. Information regarding the San Bernardino County CMP is provided below

Complete Streets Act

The Complete Streets Act[1] was signed into law in 2008. This law requires cities and counties, when updating the part of a local general plan that addresses roadways and traffic flows, to ensure that those plans account for the needs of all roadway users. Specifically, the legislation requires cities and counties

1 Assembly Bill 1358; Government Code Sections 65040.2 and 65302.

to ensure that local roads and streets adequately accommodate the needs of bicyclists, pedestrians, and transit riders, as well as motorists.

Senate Bill 743

Senate Bill (SB) 743 (Steinberg) addresses transit-oriented infill projects, judicial review streamlining for environmental leadership development projects, and entertainment and sports center in the City of Sacramento, and was signed into law in 2013.[2] SB 743 directs the Office of Planning and Research (OPR) to develop revisions to the CEQA Guidelines that would establish new criteria for determining the significance of transportation impacts. These changes include elimination of auto delay and similar measures of traffic congestion as a basis for determining significant impacts. In addition, SB 743 is intended to redefine the transportation impacts of projects located close to transit.

In January 2016, OPR issued proposed changes to the CEQA Guidelines.[3] These changes state that projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor generally may be considered to have a less than significant transportation impact. In addition, the proposed guidelines advise that Transit Oriented Development (TOD) projects; development projects that result in net decreases in Vehicle Miles Traveled (VMT), compared to existing conditions; and land use plans consistent with an SCS or that achieve similar reductions in VMT as projected to result from the SCS generally may be considered to have a less than significant impact.[4] In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the Guidelines section implementing Senate Bill 743. Specifically, Section 15064.3 Determining the Significance of Transportation Impacts was added which identifies vehicle miles traveled (VMT) as the most appropriate measure of the transportation impacts of a project. The provisions of this section apply statewide on July 1, 2020, and thus are not applicable to this project.

California Manual of Uniform Traffic Control Devices

The California MUTCD,[5] issued by Caltrans, provides uniform standards and specifications for all official traffic control devices in California, pursuant to the provisions of CVC Section 21400. Part 7 of the

2 California Legislative Information, Senate Bill No. 743 (September 27, 2013), https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743.

3 California Office of Planning and Research (OPR), *Revised Proposal on Updates to CEQA Guidelines on Evaluating Transportation Impacts in CEQA* (January 20, 2016), http://www.opr.ca.gov/docs/Revised_VMT_CEQA_Guidelines_Proposal_January_20_2016.pdf.

4 OPR, "Transportation Impacts (SB 743)," http://www.opr.ca.gov/ceqa/updates/sb-743/.

5 Caltrans, *California Manual on Uniform Traffic Control Devices* (2014, rev. March 9, 2018), available at http://www.dot.ca.gov/trafficops/camutcd/.

California MUTCD sets standards for traffic control for school areas, including standards for signs, road markings, and crossing supervision.

Effective March 29, 2019, Caltrans has made edits to the 2014 MUTCD, referred to as Revision 4, to provide uniform standards and specifications for all official traffic control devices in California. This action was taken pursuant to the provisions of California Vehicle Code Section 21400 and the recommendations of the California Traffic Control Devices Committee.

Official Traffic Control Devices

Division 11, Chapter 2, Article 2, Section 21400, Official Traffic Control Devices, authorizes Caltrans to "adopt rules and regulations for uniform standards and specifications for all official traffic control devices, including, but not limited to, stop signs, yield right-of-way signs, speed restriction signs, railroad warning approach signs, street name signs, and lines and markings on the roadway."

Transportation Concept Report

System Planning is the long-range transportation planning process for Caltrans. The System Planning process fulfills Caltrans' statutory responsibility as owner/operator of the State Highway System (SHS) by evaluating conditions and proposing enhancements to the SHS. Through System Planning, Caltrans focuses on its mission to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.[6]

The Level of Service (LOS) "D" concept, which is explained further below, will be achieved through the implementation of financially projects in the SCAG's 2012 RTP. Segment 1 of State Route 210, through Upland and Rancho Cucamonga, will operate at LOS "F" by 2035. There are no planned projects in the SCAG 2012 RTP to increase the existing capacity (which consists of 6 mixed flow lanes and 2 HOV lanes). The 2035 forecast data shows the need to increase capacity on Segment 1 in order to maintain a minimum LOS 'D.'

b. Regional

SCAG Regional Transportation Plan/Sustainable Communities Strategy

SCAG adopted its most recent Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) in April 2016.[7] The RTP/SCS represents SCAG's long-term vision for the region's transportation system.

6 Caltrans, Transportation Concept Report, *State Route 210, District 8*, May 2016, accessed April 2019, http://www.dot.ca.gov/hq/tpp/corridor-mobility/D8_docs/TCRs/sr-210.pdf.

7 Southern California Association of Governments, "Final 2016 RTP/SCS," accessed March 2019, scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

The RTP/SCS emphasizes mobility, accessibility, safety, reliability, and sustainability and creates a framework for capital investment in transportation infrastructure.

The 2016–2040 2016 RTP/SCS is an update to the 2012–2035 RTP/SCS that reflects changes in economic, policy, and demographic conditions.[8] The goals of the 2016 RTP/SCS have remained unchanged from the goals presented in the 2012–2035 RTP/SCS. However, since the adoption of the 2012–2035 RTP/SCS, the development of the 2016 RTP/SCS has been influenced by (1) a surface and transportation funding and authorization bill known as the Moving Ahead for Progress in the 21st Century Act, which was signed into law by President Obama on July 6, 2012; (2) the rapid advancement of new technologies that encourage more efficient transportation choices, such as multimodal transportation systems; and (3) the continuing emphasis on the reduction of greenhouse gas (GHG) emissions in accordance with the provisions of SB 32, which establishes a Statewide GHG reduction target of 40 percent (below 1990 levels) by 2030.[9]

County of San Bernardino

Congestion Management Program

San Bernardino Association of Governments, (SANBAG) is San Bernardino County's CMA. SANBAG prepares, monitors, and periodically updates the San Bernardino County CMP to meet federal Congestion Management Process requirements and the County's Measure I program.

The San Bernardino County CMP defines a network of state highways and arterials; level of service standards and related procedures; the process for mitigation of impacts of new development on the transportation system; and technical justification for the approach. The CMP sets the level of service (LOS) standard for the County's CMP-designated highway system at LOS E for roadway intersections and freeway interchanges in the County's CMP-designated highway system and implements an enhanced transportation management program to ensure that the designated roadways and intersections meet the set standard.

Measure I Strategic Plan

Measure I authorizes a half-cent sales tax in San Bernardino County until March 2040 for use exclusively on transportation improvement and traffic management programs. Measure I includes language mandating development to pay its fair share for transportation improvements in San Bernardino County. The Measure I Strategic Plan is the official guide for the allocation and administration of the combination

8 Southern California Association of Governments, "Sustainability Planning Grant," accessed March 2019, http://sustain.scag.ca.gov/Pages/Grants%20and%20Local%20Assistance/GrantsLocalAssistance.aspx.

9 Senate Bill 32 (Pavley), Chapter 249, Statutes of 2016), California Global Warming Solutions Act of 2006: emissions limit (September 8, 2016).

of local transportation sales tax, State and Federal transportation revenues, and private fair-share contributions to regional transportation facilities to fund the Measure I 2010–2040 transportation programs. The Strategic Plan identifies funding categories and allocations and planned transportation improvement projects in the County for freeways, major and local arterials, bus and rail transit, and traffic management systems.[10] The City has adopted a development impact fee (DIF) program that is consistent with Measure I requirements.

c. Local

City of Rancho Cucamonga General Plan

The City's existing General Plan was adopted in May 2010. The Community Mobility Chapter of the City's General Plan sets forth the plan for all means of mobility in Rancho Cucamonga, supporting the City's vision to enhance mobility, provide transportation choices, and promote a healthy community. In addition, the Community Mobility Chapter provides the framework for creating a comprehensive and efficient "Complete Streets" system. These policy directives aim to increase transportation choices, and to more closely tie transportation and land use decisions. Furthermore, this chapter defines a multimodal, safe, and efficient circulation system that will support healthy objectives, minimize local traffic congestion, encourage increased transit use, respond to local business needs, and facilitate coordination toward achieving regional mobility goals.[11]

City of Rancho Cucamonga Development Code

Citywide System Fees for Transportation Development

Chapter 3.28 of the City's Municipal Code contains the ordinance that implements the City's General Plan Circulation Element and sets the DIF program for mitigating the traffic impacts of new development and redevelopment. This regulation establishes the fair-share costs to finance the construction of public improvements needed to mitigate traffic impacts of each development project.

The City Council is required, in a City Council resolution, to set forth the specific amount of the fee; describe the benefit and impact area on which the development fee is imposed; list the Nexus Improvement Program and its components specifying the public improvements to be financed; describe the estimated cost of the facilities; describe the reasonable relationship between this fee and the various types of new developments; and set forth time of payment. This DIF is required to be paid by each

10 San Bernardino Associated Governments, Measure I 2010-2040 Strategic Plan (revised September 2017), accessed March 2019, https://www.gosbcta.com/plans-projects/funding/MeasureI/MeasureIStrategicPlan-Part1-rev0917.pdf

11 City of Rancho Cucamonga, Rancho Cucamonga General Plan, Chapter 3: Community Mobility (May 2010), accessed March 2019, https://www.cityofrc.us/civicax/filebank/blobdload.aspx?BlobID=6814.

developer prior to issuance of building permits. On an annual basis, the City Council reviews this fee to determine whether the fee amounts are reasonably related to the impacts of developments and whether the described public facilities are still needed.

The revenues raised by payment of the citywide development transportation fees for the Nexus Improvement Program are required to be used solely to:

- Pay for the City's future construction of facilities described in the City Council resolution or to reimburse the City for those described or listed facilities it constructs with funds advanced by the City from other sources or
- Reimburse developers who have been required or permitted to install listed facilities on the Nexus Improvement Program.

Truck Routes and Restrictions

Chapter 10.56, Truck Routes and Restrictions, of the City's Municipal Code identifies unrestricted truck routes, restricted truck routes, and terminal access routes in the City of Rancho Cucamonga. Relevant to the Plan, and as described in Section 10.56.10 of the City's Municipal Code, in the vicinity of the Plan Area, 4th Street from the west City limits to the east City limits (including the segment adjacent to the Plan Area) and all streets in the area defined by the Industrial Area Specific Plan (IASP) as the industrial district (including 6th Street) are identified as unrestricted truck routes. It should be noted that nothing in this section prohibits the ingress and egress from a designated unrestricted truck route by vehicles and vehicle combinations onto a city street when necessary for the purpose of making pickups or deliveries of goods; wares and merchandise from or to any building or structure located on a city street; or for the purpose of delivering materials to be used in the repair, alteration, remodeling or construction of any building or structure upon a city street for which a building permit has previously been obtained.

Streets, Sidewalks, and Public Places

Title 12 of the Rancho Cucamonga Municipal Code regulates activities on streets, sidewalks and other public places. Chapter 12.03 requires that an encroachment permit be obtained prior to construction on public rights-of-way to protect public improvements and reduce hazards to the public. Chapter 12.08 requires the improvement of the one-half of the street abutting a parcel as part of the development or improvement of the parcel, along with the dedication of the street right-of-way to the City upon completion of improvements. Street improvements (including sidewalks curbs, gutters, street trees, street lighting, street paving, and drainage structures) should be made to meet City standards. Chapter 12.20 calls for the construction of complete street infrastructure (e.g., bicycle lanes, sidewalks, street crossings, and planting strips) in public and private street projects or the improvement of streets by pavement

resurfacing, restriping, or signalization operations to increase the safety and convenience of pedestrians and other users.

Transportation Demand Management Ordinance

Chapter 17.78, Transportation Demand Management, of the City's Development Code encourages employers to implement programs to help reduce the use of single-occupancy vehicles. Developments subject to the TDM Ordinance include:

- Office uses (excluding medical) with 80,000 square feet (sf) of floor area or more
- Industrial Office Parks (MP) with 200,000 sf or more
- Hospital and Medical Offices with 100,000 sf or more
- Commercial uses with 150,000 sf or more
- Light Industrial (M-1) uses with 250,000 sf or more
- Heavy Industrial (M-2) uses with 350,000 sf or more
- Hotels/Motels with 150 rooms or more
- Mixed or Multiple Uses (based on the proportional square footage of areas devoted to each type of use)

The ordinance requires the provision of passenger loading areas; preferential parking for carpool and vanpool vehicles; shower and locker facilities; video conferencing; and any two of the following: ridesharing program, leasing of vans, company fleet cars, subsidized transit passes and modified work hours. The Plan is subject to this ordinance due to having more than 150,000 sf of commercial uses and mixed uses.

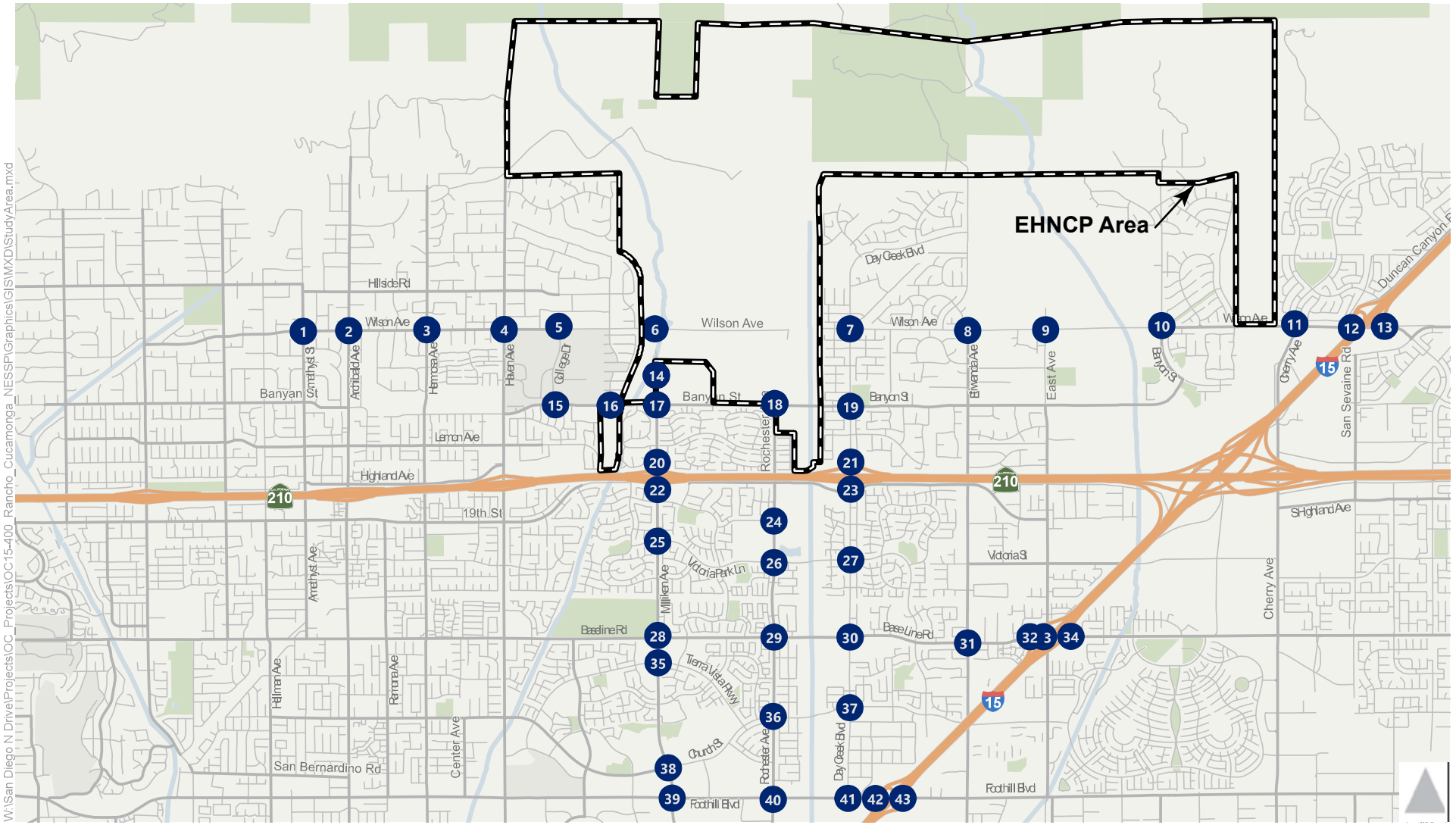
Existing Conditions

a. Study Area

The study area and analyzed intersections were determined based on preliminary trip generation, trip distribution, trip assignment estimates developed for the Plan, knowledge of the study area, and input from staff at the City of Rancho Cucamonga and Caltrans. The study area is consistent with the San Bernardino County CMP study area guidelines and includes, within a five-mile radius, all freeway links that the Plan is anticipated to add 100 or more peak-hour Plan trips to and arterial roadways that the Plan is anticipated to add 50 or more peak-hour Plan trips to. The City of Rancho Cucamonga approved the study area intersections in May 2017.

The following 43 study intersections were ultimately identified and are included as part of this analysis, with locations shown in **Figure 4.15-1: Study Intersections**:

1. Wilson Avenue and Amethyst Avenue
2. Wilson Avenue and Archibald Avenue
3. Wilson Avenue and Hermosa Avenue
4. Wilson Avenue and Haven Avenue
5. Wilson Avenue and College Drive
6. Wilson Avenue and Milliken Avenue
7. Wilson Avenue and Day Creek Boulevard
8. Wilson Avenue and Etiwanda Avenue
9. Wilson Avenue and East Avenue
10. Wilson Avenue and Wardman Bullock Road
11. Wilson Avenue and Cherry Avenue
12. Beech Avenue and I-15 Southbound Ramps
13. Beech Avenue and I-15 Northbound Ramps
14. Los Osos High School and Milliken Avenue
15. Banyan Street and Cabernet Place
16. Banyan Street and Fredericksburg Avenue
17. Banyan Street and Milliken Avenue
18. Banyan Street and Rochester Avenue
19. Banyan Street and Day Creek Boulevard
20. Milliken Avenue and SR-210 Westbound Ramps
21. Day Creek Boulevard and SR-210 Westbound Ramps
22. Milliken Avenue and SR-210 Eastbound Ramps
23. Day Creek Boulevard and SR-210 Eastbound Ramps
24. Lark Drive and Rochester Avenue
25. Victoria Park Lane and Milliken Avenue
26. Victoria Park Lane and Rochester Avenue
27. Victoria Park Lane and Day Creek Boulevard
28. Base Line Road and Milliken Avenue
29. Base Line Road and Rochester Avenue
30. Base Line Road and Day Creek Boulevard
31. Base Line Road and Etiwanda Ave
32. Base Line Road and I-15 Southbound Ramps
33. Base Line Road and East Ave
34. Base Line Ave and I-15 Northbound Ramps
35. Terra Vista Parkway and Milliken Avenue
36. Church Street and Rochester Avenue
37. Church Street and Day Creek Boulevard
38. Church Street and Milliken Avenue
39. Foothill Boulevard and Milliken Avenue
40. Foothill Boulevard and Rochester Avenue
41. Foothill Boulevard and Day Creek Boulevard
42. Foothill Boulevard and I-15 Southbound Ramps
43. Foothill Boulevard and I-15 Northbound Ramps



1 Study Intersection

SOURCE: Fehrs and Peers, March 2019

FIGURE **4.15-1**

Meridian Consultants

Study Intersections

072-004-18

The following freeway segments were studied along Interstate 15 (I-15) and State Route 210 (SR-210):

1. I-15 Southbound from Duncan Canyon Road to 4th Street
2. I-15 Northbound from 4th Street to Duncan Canyon Road
3. SR-210 Eastbound from Carnelian Avenue Off-Ramp to Citrus Avenue On-Ramp
4. SR-210 Westbound from Carnelian Avenue On-Ramp to Citrus Avenue Off-Ramp

b. Congestion Management Program Facilities

As discussed above, the CMP is a State-mandated program that serves as the monitoring and analytical basis for transportation funding decisions in the County made through the Regional Transportation Improvement Program and State Transportation Improvement Program processes. The following CMP-designated highways and streets are in the study area:

- I-15
- I-210
- Base Line Road
- Milliken Avenue
- Etiwanda Avenue
- Foothill Boulevard

The CMP intersections in the study area are listed below.

City of Rancho Cucamonga

- Base Line Road and Milliken Avenue
- Base Line Road and Etiwanda Ave
- Foothill Boulevard and Milliken Avenue

Caltrans

- Milliken Avenue and SR-210 Westbound Ramps
- Base Line Road and I-15 Southbound Ramps
- Baseline Ave and I-15 Northbound Ramps
- Foothill Boulevard and I-15 Southbound Ramps
- Foothill Boulevard and I-15 Northbound Ramps

c. Road Network

The existing street system within the vicinity of the Plan Area consists of freeways, major highways, secondary highways, collectors, and local streets. These include the following:

- Interstate 15 Freeway (I-15) is the main north-south facility through San Bernardino County. It extends the entire length of San Bernardino County, from its southern border with Riverside County to the California-Nevada State Line. I-15 is a twelve-lane divided freeway near the Plan.
- State Road 210 (SR-210) provides the main east-west regional access to the Plan. From the interchange with I-15 through the City of Rancho Cucamonga SR-210, it is an eight-lane divided freeway with three lanes of mixed use, and one High Occupancy Vehicle (HOV) lane in each direction.
- Banyan Street provides east-west access near the Plan Area. Banyan Street is designated as a Tertiary Travel Corridor by the City of Rancho Cucamonga General Plan and carries between 10,000 and 15,000 vehicles per day. Banyan Street is classified as two-lane Collector in the City's General Plan circulation element between its origin at Wardman Bullock Road to its termination at the west edge of the Rancho Cucamonga city limits.
- Base Line Road is a six-lane east-west road. Base Line Road is designated as a Secondary Travel Corridor by the City of Rancho Cucamonga General Plan, which provides service to between 20,000 and 30,000 vehicles per day. East of Haven Avenue, Base Line Road is classified as a six-lane major divide arterial that narrows to five-lanes near Victoria Park Lane. East of Etiwanda Avenue, Base Line Road is classified as a five-lane major divided highway. West of Haven Avenue, Base Line Road is classified as a four-lane major arterial.
- Church Street is a four-lane road that narrows to two lanes West of Haven Avenue. Church Street is designated as a Tertiary Travel Corridor by the City of Rancho Cucamonga General Plan and carries between 10,000 and 15,000 vehicles per day. East of Archibald Avenue, Church Street is classified as a Collector by the City's General Plan. Church Street is classified as Secondary between Archibald Avenue and Haven Avenue, and between Rochester Avenue and Etiwanda Avenue.
- Day Creek Road is a six-lane, north-south road near the SR-210 interchange, but narrows to a four-lane road north of the interchange. Day Creek Road is designated as a Secondary Travel Corridor by the City of Rancho Cucamonga General Plan, which provides service to between 20,000 and 30,000 vehicles per day. Day Creek Road provides service to the area north of SR-210 until ending at Etiwanda Avenue. Day Creek Road is classified as a Collector south of Foothill Boulevard and north of Wilson Avenue. Between Foothill Boulevard and SR-210, Day Creek Road is classified as a major divided highway arterial, and a modified major with median between SR-210 and Wilson Avenue.
- Foothill Boulevard is classified as a six lane, east-west road near Vineyard Avenue, narrows to four-lane road near Hellman Avenue, and increases to a six-lane road near Haven Avenue. Foothill Boulevard is designated as a Principal Travel Corridor by the City of Rancho Cucamonga General Plan, which provides service to between 30,000 and 40,000 vehicles per day.
- Milliken Avenue is a six-lane, north-south road that provides users with access to the Plan Area from SR-210. Milliken Avenue is designated as a Principal Travel Corridor and provides service to between 30,000 and 40,000 vehicles per day. Milliken Avenue is a six-lane road from south of SR-210 to Banyan Street, where it narrows to two lanes of northbound traffic and three lanes of southbound traffic. It eventually narrows to a two-lane road where it ends near the Plan at Wilson Avenue.

- Wilson Avenue provides east-west access near the Plan. Wilson Avenue is designated as a Tertiary Travel Corridor by the City of Rancho Cucamonga General Plan and carries between 10,000 and 15,000 vehicles per day. Wilson Avenue begins at Cherry Avenue as the continuation of Beech Avenue. It then ends at Wardman Bullock Road, then begins again at Etiwanda Avenue. It again terminates just past Day Creek Boulevard and picks backup at Milliken Avenue. From Milliken Avenue it continues to its final termination at Carnelian Street.

d. Vehicle Access and Circulation

The I-15 and SR-210 provide regional access to the Plan Area. The primary access to the Plan Area is provided by Banyan Street, Milliken Avenue, Day Creek Boulevard, and Wilson Avenue. Secondary access to the Plan Area is provided by Foothill Boulevard and Base Line Road. Vehicular access to the existing Plan Area, more specifically the NA, is currently available from Banyan Street, Milliken Avenue, Haven Avenue, and Day Creek Boulevard.

e. Pedestrian Access

The City's General Plan provides pedestrian facilities to reduce auto travel and provide an opportunity for healthy exercise. The major streets that provide access to the Plan Area including Banyan Street, Milliken Avenue, Haven Avenue, and Day Creek Boulevard, all have well connected and maintained sidewalk networks. These facilities currently provide access for pedestrians to the Plan Area from bus stops nearby, as well as several grocery stores.

f. Bicycle Facilities

Bicyclists are also important users of the local roadway network. Bicycle networks include series of interconnected streets and pathways on which bicycling is encouraged. Pursuant to the California Vehicle Code, bicycles are allowed on any street in the local street system. The four classes of bikeways per the City are described below.

- Class I Bikeway (Bike Paths) are bicycle trails or paths that are off-street and separated from automobiles. They are a minimum of eight feet in width for two-way travel and include bike lane signage and designated street crossings where needed. A Class I Bike Path may parallel a roadway (within the parkway) or may be a completely separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.
- Class II Bikeway (Bike Lanes) are striped lanes that provide bike travel and can be either located next to a curb or parking lane. If located next to a curb, a minimum width of five feet is recommended. However, a bike lane adjacent to a parking lane can be four feet in width. Bike lanes are exclusively for the use of bicycles and include bike lane signage, special lane lines, and pavement markings.
- Class III Bikeway (Bike Routes) are streets providing for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage both by the side of the street and stenciled

on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route.

- Class IV Bikeway (Cycle Tracks) provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic via separations (e.g. grade separation, flexible posts, inflexible physical barriers, on-street parking). California Assembly Bill 1193 (AB 1193) established design standards for Class IV bikeways in 2015.

Within the Plan Area vicinity, existing bicycle lanes are available on the following roadways:

- Base Line Road
- Banyan Street
- Day Creek Boulevard
- Etiwanda Avenue
- Milliken Avenue
- Wilson Avenue
- Beech Avenue
- Church Street
- East Avenue
- Haven Avenue
- Rochester Avenue
- Foothill Boulevard

Most major streets in Rancho Cucamonga provide Class II or Class III facilities along the street running as far north as Wilson Avenue, with planned facilities that will provide service to the northern City limits. Although the streets listed above are currently designated as bicycle facilities, there are several missing gaps that exist along each roadway. With implementation of the City's Final Circulation Master Plan for Bicyclist and Pedestrians, adopted in May 2015, the bicycle network gaps are planned to be eliminated as Base Line Road, Haven Avenue, and Milliken Avenue are all planned to have Class II Bike Lanes. The City's Master Plan recommends that parts of Banyan Street, Church Street, East Avenue, Rochester Avenue, and Wilson Avenue are classified as Class IV Protected Bike Lanes, some of which would fall within the Plan Area.[12]

g. Public Transit

The study area is served by multiple transit operators, with networks connecting different communities within and outside of City boundaries. The primary transit operator is Metrolink, which operates six commuter rail lines throughout Southern California. The Omnitrans Transit Agency provides local transit service throughout San Bernardino County, including within the City boundaries. The bus routes run on major roadways, including Haven Avenue, Day Creek Boulevard, Milliken Avenue Line Road, Foothill Boulevard, and segments of Banyan Street and Victoria Park Lane.

12 City of Rancho Cucamonga, Rancho Cucamonga Circulation Master Plan for Bicyclists and Pedestrians (April 2015), accessed March 2019, https://www.cityofrc.us/civicax/filebank/blobdload.aspx?blobid=20267.

The Rancho Cucamonga Metrolink Station is located west of Milliken Avenue, where passenger trains run daily from downtown Los Angeles to downtown San Bernardino. Rancho Cucamonga is served by the San Bernardino Line, which links San Bernardino to Union Station in downtown Los Angeles. The Metrolink railroad runs east-west through the southern section of the city, with grade separations at Milliken and Haven Avenues. This same rail line is occasionally used by freight trains when the Union Pacific Railroad line (running east-west south of the I-10 freeway) is closed or restricted for limited periods. Local freight train traffic in the city includes switches on various spur lines serving the industrial areas at the southern section of the city.

Bus routes that run through the city connect to the neighboring cities of Fontana, Upland, Ontario, Montclair, and Chino. The routes serve major destinations in the region, including Chaffey College, the Rancho Cucamonga Metrolink Station, the Fontana Metrolink Station, the Ontario Mills Mall, the LA/Ontario Airport, the Ontario Civic Center, the Pomona TransCenter, the Montclair TransCenter, the Chino Civic Center and Transit Center, and the Rancho Cucamonga Civic Center. Within Rancho Cucamonga, bus routes run on major roadways, including Haven Avenue, Day Creek Boulevard, Milliken Avenue Line Road, Foothill Boulevard, and segments of Banyan Street and Victoria Park Lane. These bus routes are described more in detail below.

- Route 67 (Chaffey College-Baseline-Fontana) runs from the Montclair Transit Center east to the Metrolink Station in Fontana. It serves Base Line Road through Rancho Cucamonga and operates Monday thru Friday from about 5:30 AM to almost 8:30 PM, with about 50-minute headways.
- Route 80 (Ontario-Vineyard Ave -Chaffey College) runs from the Ontario International Airport to the Ontario Convention Center, then north to Chaffey College. In Rancho Cucamonga, this route provides service along Vineyard Avenue, 19th Street, and Haven Avenue. This route operates between 4:30 AM and 9:30 PM Monday thru Friday, and between 6:30 AM and 7:30 PM Saturday with one-hour headways.
- Route 81 (Chino-Haven-Chaffey College) runs from the Chino Transit Center to Ontario Mills Mall, then to Chaffey College. In Rancho Cucamonga, service is provided mostly along Milliken Avenue, Foothill Boulevard, Day Creek Road, and Haven Avenue. This route operates from about 4:00 AM until 10:30 PM with one-hour headways Monday thru Friday. There is no service on Saturday and Sunday.
- Route 85 (Chino-Montclair-Chaffey College) runs from the Chino Transit Center north through Ontario, Montclair, Upland, and Rancho Cucamonga, ending at Chaffey College in Rancho Cucamonga. This route provides service mostly along Arrow Route and Haven Avenue in Rancho Cucamonga. The route operates from 4:40 AM to 11:00 PM with 30-minute headways Monday thru Friday and 6:00 AM to 7:30 PM on Saturdays with one-hour headways. This route does not operate on Sundays.

h. Existing Traffic Volumes

Intersection Operations

The existing traffic volumes were used in conjunction with the LOS and current intersection lane geometric characteristics to determine existing operating conditions at the analyzed intersections. **Table 4.15-1: 2017 Existing Intersection Peak-Hour Levels of Service** summarizes the results of the intersection LOS analysis for existing conditions at each of the 43 intersections for the Plan Area. 2017 was used to be consistent with the NOP for the Plan, and traffic counts are typically considered valid within 2 years of the traffic study date, and there have been no changes in the study area—since traffic count collection that would impact the 2017 counts. As shown in **Table 4.15-1**, intersection 18 for the AM peak hour (7:00 AM to 9:00 AM) and intersection 41 for the PM peak hour (4:00 PM to 6:00 PM) currently operate at LOS F and LOS E, respectively. All other intersections operate at LOS D or better.

Table 4.15-1
2017 Existing Intersection Peak-Hour Levels of Service

No.	Intersection	Existing		
		Peak Hour	Delay (sec/veh)[1]	LOS[2]
1	Wilson Avenue and Amethyst Avenue	AM	10.1	B
		PM	8.4	A
2	Wilson Avenue and Archibald Avenue	AM	11.7	B
		PM	9.9	A
3	Wilson Avenue and Hermosa Avenue	AM	14.2	B
		PM	9.8	A
4	Wilson Avenue and Haven Avenue	AM	22.0	C
		PM	16.5	B
5	Wilson Avenue and College Drive	AM	16.0	C
		PM	11.8	B
6	Wilson Avenue and Milliken Avenue[3]	AM	N/A	N/A
		PM	N/A	N/A
7	Wilson Avenue and Day Creek Boulevard	AM	19.8	B
		PM	10.0	A
8	Wilson Avenue and Etiwanda Avenue[4]	AM	N/A	N/A
		PM	N/A	N/A
9	Wilson Avenue and East Avenue[4]	AM	N/A	N/A
		PM	N/A	N/A
10	Wilson Avenue and Wardman Bullock Road	AM	24.5	C
		PM	16.3	B

No.	Intersection	Existing		
		Peak Hour	Delay (sec/veh)[1]	LOS[2]
11	Wilson Avenue and Cherry Avenue	AM	34.4	D
		PM	21.9	C
12	Beech Avenue and I-15 Southbound Ramps	AM	49.1	D
		PM	9.8	A
13	Beech Avenue and I-15 Northbound Ramps	AM	14.7	B
		PM	26.2	C
14	Los Osos High School and Milliken Avenue	AM	15.5	B
		PM	6.6	A
15	Banyan Street and Cabernet Place	AM	11.9	B
		PM	10.9	B
16	Banyan Street and Fredericksburg Avenue	AM	6.0	A
		PM	4.3	A
17	Banyan Street and Milliken Avenue	AM	36.9	D
		PM	16.7	B
18	Banyan Street and Rochester Avenue	AM	74.2	F
		PM	17.2	C
19	Banyan Street and Day Creek Boulevard	AM	34.0	C
		PM	15.1	B
20	Milliken Avenue and SR-210 Westbound Ramps	AM	28.9	C
		PM	28.0	C
21	Day Creek Boulevard and SR-210 Westbound Ramps	AM	26.2	C
		PM	27.4	C
22	Milliken Avenue and SR-210 Eastbound Ramps	AM	25.8	C
		PM	17.9	B
23	Day Creek Boulevard and SR-210 Eastbound Ramps	AM	16.8	B
		PM	15.2	B
24	Lark Drive and Rochester Avenue	AM	10.5	B
		PM	4.4	A
25	Victoria Park Lane and Milliken Avenue	AM	9.5	A
		PM	7.9	A
26	Victoria Park Lane and Rochester Avenue	AM	28.1	C
		PM	8.8	A
27	Victoria Park Lane and Day Creek Boulevard	AM	28.4	C
		PM	25.0	C
28	Base Line Road and Milliken Avenue	AM	32.8	C
		PM	33.2	C

No.	Intersection	Existing		
		Peak Hour	Delay (sec/veh)[1]	LOS[2]
29	Base Line Road and Rochester Avenue	AM	24.3	C
		PM	21.5	C
30	Base Line Road and Day Creek Boulevard	AM	31.3	C
		PM	31.6	C
31	Base Line Road and Etiwanda Ave	AM	36.9	D
		PM	27.8	C
32	Base Line Road and I-15 Southbound Ramps	AM	11.1	B
		PM	10.5	B
33	Base Line Road and East Ave	AM	49.6	D
		PM	29.3	C
34	Baseline Ave and I-15 Northbound Ramps	AM	14.4	B
		PM	19.3	B
35	Terra Vista Parkway and Milliken Avenue	AM	16.9	B
		PM	17	B
36	Church Street and Rochester Avenue	AM	17.5	B
		PM	20.6	C
37	Church Street and Day Creek Boulevard	AM	16.8	B
		PM	20.5	C
38	Church Street and Milliken Avenue	AM	27.9	C
		PM	34.6	C
39	Foothill Boulevard and Milliken Avenue	AM	39.5	D
		PM	43.5	D
40	Foothill Boulevard and Rochester Avenue	AM	33.4	C
		PM	35.1	D
41	Foothill Boulevard and Day Creek Boulevard	AM	26.7	C
		PM	70.5	E
42	Foothill Boulevard and I-15 Southbound Ramps	AM	25.4	C
		PM	23.5	C
43	Foothill Boulevard and I-15 Northbound Ramps	AM	21.7	C
		PM	22.8	C

*Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in **Appendix K**.*

Notes:

[1] Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way stop-controlled (AWSC) intersections. Worst movement delay reported for side-street-stop-controlled (SSSC) intersections

[2] LOS calculations performed using the Highway Capacity Manual (HCM) 6th Edition method

[3] Intersection becomes a roundabout-controlled intersection in the Existing Plus Project scenario.

[4] Intersection becomes a roundabout-controlled intersection in the Cumulative (2040) scenario.

Freeway Facility Operations

Table 4.15-2: 2017 Existing Freeway LOS Conditions presents the results of the freeway basic, merge, and diverge assessment for the I-15 and I-210 freeways. Please note that existing freeway mainline volumes were obtained from Caltrans Performance Measurement System (PEMs) data and were balanced through the corridor using intersection volumes at the ramp terminal intersections. Bus/truck percentages are assumed to be 10-11 percent (based on the most recent Caltrans Traffic Census for truck traffic),[13] the terrain was assumed to be level, free-flow speed is assumed to be 70 miles per hour, and a peak-hour factor was calculated from the existing traffic counts for each peak hour.

Table 4.15-2
2017 Existing Freeway LOS Conditions

Segment	Type	AM Peak Hour				PM Peak Hour			
		Density	V/C	LOS	MPH	Density	V/C	LOS	MPH
I-15 Northbound									
4th St to Foothill Boulevard	Basic	23.1	0.6	C	64	37.7	0.9	E	43
Foothill Boulevard Loop On Ramp	Merge	12.0	0.6	B	64	19.4	0.8	B	43
Foothill Boulevard Slip On Ramp	Merge	17.7	0.4	B	64	31.5	0.8	D	43
Foothill Boulevard to Baseline	Basic	17.2	0.5	B	64	37.3	0.9	E	43
Baseline Off Ramp	Diverge	22.0	0.5	C	64	39.2	0.9	E	56
Baseline to SR-210 WB	Weave	44.3	0.7	E	64	-	1.3	F	56
SR-210 EB Off Ramp	Diverge	9.6	0.3	A	65	19.8	0.5	C	69
SR-210 to Beech	Weave	4.0	0.3	A	65	13.7	0.6	B	69
Beech On Ramp	Merge	7.0	0.2	A	65	17.0	0.5	B	69
Beech to Duncan Canyon	Basic	10.1	0.3	A	65	21.3	0.6	C	69

13 Caltrans, Traffic Census Program, accessed March 2019, http://www.dot.ca.gov/trafficops/census/

Segment	Type	AM Peak Hour				PM Peak Hour			
		Density	V/C	LOS	MPH	Density	V/C	LOS	MPH
I-15 Southbound									
Duncan Canyon to Beech	Basic	26.4	0.7	D	63	15.9	0.4	B	60
Beech Off Ramp	Diverge	28.4	0.7	D	63	18.5	0.4	B	60
Beech On Ramp	Merge	21.7	0.7	C	63	10.8	0.4	B	60
Beech to SR-210	Basic	22.0	0.6	C	65	12.9	0.3	B	67
SR-210 Off Ramp	Diverge	19.8	0.5	B	65	11.6	0.3	B	67
SR-210 On Ramp	Merge	-	1.3	F	65	22.4	0.7	C	67
SR-210 to Baseline	Basic	30.9	0.8	D	65	16.5	0.4	B	67
Baseline Off Ramp	Diverge	34.4	0.8	D	65	23.5	0.5	C	67
Baseline Loop On Ramp	Merge	-	1.0	F	40	21.4	0.5	C	66
Baseline Slip On Ramp	Merge	-	1.1	F	40	19.1	0.5	B	66
Baseline to Foothill Boulevard	Basic	-	1.1	F	40	20.5	0.5	C	66
Foothill Boulevard Off Ramp	Diverge	-	1.1	F	40	14.1	0.6	B	66
Foothill Boulevard Loop On Ramp	Merge	-	1.1	F	65	20.7	0.5	C	63
Foothill Boulevard Slip On Ramp	Merge	-	1.3	F	65	24.8	0.7	C	63
Foothill Boulevard to 4th	Basic	-	1.2	F	65	24.1	0.6	C	63
SR-210 Eastbound									
Carnelian to Archibald	Basic	33.5	0.9	D	62	31.5	0.8	D	30
Archibald Off Ramp	Diverge	34.9	0.9	D	62	31.5	0.8	D	30

Segment	Type	AM Peak Hour				PM Peak Hour			
		Density	V/C	LOS	MPH	Density	V/C	LOS	MPH
Archibald On Ramp	Merge	-	1.2	F	60	31.2	0.8	D	30
Haven Off Ramp	Diverge	37.0	0.9	E	60	34.2	0.8	D	30
Haven On Ramp to Milliken Off Ramp	Weave	27.8	0.8	C	65	33.2	0.9	D	32
Milliken On Ramp	Merge	31.9	0.8	D	65	34.8	0.9	D	32
Milliken to Day Creek	Basic	29.6	0.8	D	63	32.8	0.8	D	48
Day Creek Off Ramp	Diverge	33.4	0.8	D	63	35.1	0.8	E	48
Day Creek On Ramp	Merge	30.5	0.8	D	63	30.8	0.8	D	48
Day Creek On to Lane Add	Basic	22.9	0.6	C	67	23.3	0.6	C	58
Lane Add to I-15	Basic	18.3	0.5	C	67	18.6	0.5	C	58
I-15 Off Ramp	Diverge	-	1.5	F	67	-	1.5	F	58
I-15 to Cherry	Basic	11.5	0.3	B	70	15.9	0.4	B	63
Cherry Off Ramp	Diverge	16.7	0.4	B	70	21.1	0.5	C	63
Cherry On Ramp	Merge	16.6	0.3	B	70	19.7	0.4	B	63
I-15 On Ramp	Basic	-	0.6	F	70	-	0.7	F	33
I-15 On Ramp to Lane Drop	Basic	22.1	0.6	C	70	22.3	0.6	C	33
SR-210 Westbound									
Citrus to I-15	Basic	26.1	0.7	D	56	23.2	0.6	C	65
I-15 Off Ramp	Diverge	26.8	0.7	C	56	23.9	0.7	C	65
Cherry Off Ramp	Diverge	32.0	0.8	D	56	30.1	0.7	D	65

Segment	Type	AM Peak Hour				PM Peak Hour			
		Density	V/C	LOS	MPH	Density	V/C	LOS	MPH
Cherry On Ramp	Merge	25.9	0.7	C	56	29.2	0.7	D	65
I-15 NB On Ramp	Merge	29.1	0.7	D	56	31.3	0.8	D	65
I-15 SB On Ramp	Basic	-	1.0	F	40	27.3	0.7	D	66
I-15 SB to Lane Drop	Basic	28.2	0.7	D	40	24.4	0.7	C	66
Lane Drop to Day Creek	Basic	44.3	1.0	E	40	34.7	0.9	D	63
Day Creek Off Ramp	Diverge	39.9	1.0	E	40	36.3	0.9	E	63
Day Creek On Ramp	Merge	-	1.3	F	40	31.4	0.8	D	63
Day Creek to Milliken	Basic	-	1.0	F	40	33.6	0.9	D	62
Milliken Off Ramp	Diverge	-	1.0	F	40	25.8	0.9	C	62
Milliken On Ramp	Merge	-	1.2	F	40	30.8	0.8	D	62
Haven Off Ramp	Diverge	39.7	1.0	E	30	35.3	0.9	E	60
Haven On Ramp to Archibald Off Ramp	Weave	36.2	0.9	E	30	35.3	1.0	E	63
Archibald On Ramp	Merge	35.4	1.0	E	30	31.4	0.8	D	63
Archibald to Carnelians	Basic	40.4	1.0	E	40	32.9	0.8	D	66

*Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in **Appendix K**.*

Notes: Calculated using methodologies consistent with the Highway Capacity Manual.

Density reported as passenger cars per mile per lane.

"-" LOS F segments with V/Cs higher than 1 the HCM calculation doesn't really work and so we don't report a density for those values.

As shown in **Table 4.15-2**, 12 study freeway segments on I-15 and 16 intersections on SR-210 currently operate below acceptable LOS D during at least one peak hour.

ENVIRONMENTAL IMPACTS

Methodology

The traffic impact analyses in the Traffic Study[14] were conducted using the procedures shown below. The following contains a detailed analysis of the Existing (Year 2017) and Cumulative (Year 2040) AM and PM peak-hour traffic conditions at a total of 43 intersections adjacent to or near the Plan Area. In the case of the Plan, since there are amendments to the existing General Plan and Specific Plan, and adoption of a new Specific Plan being proposed, the CEQA Guidelines envision dual analysis as to existing physical conditions and as to these existing Plans. These will be further shown below under the Project Impact section.

Intersection Analysis

Intersection operating conditions in the study area were evaluated using the Highway Capacity Manual (HCM) 6th Edition Transportation Research Board (TRB) methodology, which is considered the state-of-the-practice methodology for evaluating intersection operations and is consistent with the City requirements, Caltrans requirements, and the County of San Bernardino requirements.

The HCM 6th Edition Methodology estimates a quantitative delay at intersections. After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. Descriptions of these LOS letter grades for signalized and unsignalized intersections are provided in **Table 4.15-3: Intersection LOS Criteria**.

Trafficware Synchro 10 software package was used to facilitate the HCM 6th Edition calculations. The analysis assumes parameters from the San Bernardino County Congestion Management Program (CMP), as directed by the City of Rancho Cucamonga staff. The delay, calculated in seconds, was compared to the LOS thresholds outlined in the HCM 6th Edition. For signalized and all-way stop-controlled intersections, intersection level of service is determined based on average delay per the standard HCM 6th Edition methodology. For side-street stop-controlled intersections, intersection level of service is determined based on worst-case approach delay.

For roundabout assessment, delay was calculated using Sidra Intersection 6 software and is similarly compared to the LOS thresholds outlined in the HCM. The software was programmed with gap acceptance

14 Fehr and Peers Inc, *Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study* (March 2019).

parameters set for typical United States applications. To be consistent with HCM 6th Edition, the unsignalized criteria for delay (50 seconds or more is LOS F) was used.

There were existing saturation flow rates in the study area that exceeded 2,000 vehicles at the study intersections. Therefore, the intersection analysis applied the following factors of the CMP rates to provide a consistent yet conservative assessment:

- Peak-hour Factor (PHF) was based on traffic counts collected in the field for all Existing Conditions analysis
- PHF for all future analysis was set to 0.95
- Heavy vehicle percentage was to set to 2 percent for all analysis scenarios
- For the Existing and Existing Plus Project conditions analysis, current signal timing plans were referenced
- For the Future conditions analysis, uncoordinated signal timing cycle lengths were optimized under the Future No Project conditions and signal timing along coordinated corridors were optimized at the corridor level under Future No Project conditions. The same signal timing is assumed in Future No Project and Future Plus Project conditions.
- For Existing Scenarios, saturated flow rates were set to:
    - Exclusive thru: 1,800 vehicles per hour green per lane (vphgpl)
    - Exclusive left: 1,700 vphgpl
    - Exclusive right: 1,800 vphgpl
    - Exclusive double left: 1,600 vphgpl
- For Future Scenarios, saturated flow rates were set to:
    - Exclusive thru: 1,900 vphgpl
    - Exclusive left: 1,800 vphgpl
    - Exclusive right: 1,900 vphgpl
    - Exclusive double right: 1,800 vphgpl
    - Exclusive double left: 1,700 vphgpl

Table 4.15-3
Intersection LOS Criteria

LOS	Description	Signalized Delay (seconds)	Unsignalized Delay (seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	< 10.0	< 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0	>10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0	>15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and individual cycle failures are noticeable.	> 35.0 to 55.0	>25.0 to 35.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0	>35.0 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	> 80.0	>50.0

Source: Highway Capacity Manual *(Transportation Research Board, 2017)*.

Freeway Analysis

Freeway mainline and ramps were evaluated using a Highway Capacity Software (HCS) equivalent tool, which applies methodologies contained in the HCM 6th Edition. The LOS was calculated for each study facility based on density in number of vehicles per hour per lane. **Table 4.15-4: Freeway Segment LOS Threshold** below describes the LOS thresholds for freeway sections identified in the HCM 6th Edition. Similar to the intersection analysis above, the following factors were used in the freeway analysis to provide a consistent yet conservative assessment:

- PHF for Existing Conditions were determined based on existing traffic volumes collected from Caltrans Performance Measurement System (PeMS)
- PHF of 0.98 for congested areas and 0.95 for less congested areas were used for all future analysis
- Heavy vehicle percentage was determined using Caltrans average daily traffic (ADT) information
- Capacity of 2,200 vehicles/hour/lane (1,600/hr/lane/HOV)

Table 4.15-4
Freeway Segment LOS Threshold

LOS	Description	Density (vplpm)[1]	
		Mainline (Basic)	Ramp/Weave
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11	≤ 10
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11 to 18	> 10 to 20
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18 to 26	> 20 to 28
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 26 to 35	> 28 to 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35 to 45	> 35 to 45[2]
F	Represents a breakdown in flow.	> 45	> 45[2]

Source: Transportation Research Board, Highway Capacity Manual (2017).

[1] *Density is reported in vehicles per lane per mile*

[2] *The maximum density for ramp junctions and weaving sections under LOS E is not defined in the HCM.* The maximum density for basic segments of 45 vplpm was assumed to apply to ramp junctions and weaving sections

Project Trip Generation

The Plan will generate new vehicle trips in the study area. However, given the mixed-use nature of the Plan, it will not generate traffic in a similar manner as to what is typically evaluated for most traffic studies. As such, the analysis evaluates the combined effects of the Plan's mixed uses, regional location, demographics, and development scale that contribute to a reduction (when compared to national homogeneous development projects) in off-site average weekday vehicle "trips" (e.g., one vehicle trip is when a person drives from their home to school, shopping, or their job and their return drive home is another trip). This reduction is due largely to the Plan's ability to "internally capture" these trips. That is, most of the reduction in total daily vehicle off-site trips generated by the Plan is attributable to those trips beginning and ending within the Plan Area.

Traditionally, traffic engineers and transportation planners have estimated internalization of the Plan's trips using one of two methods. First, they would estimate it based on professional judgment. Alternatively, professionals relied on the Institute of Transportation Engineers' (ITE) internalization

methodology presented in the ITE Trip Generation Handbook. Although this has been applied in thousands of studies in California, the methodology was limited as it was based on only six surveys in Florida. Additionally, the ITE internalization methodology only accounts for the land use types on the mixed-use site. Given the limited input information (land use amount and type) and the limited range of data (six surveys), the accuracy of the internalization estimates has recently been found to generally under-estimate internalization of trips from mixed-use projects.

Seeing the limited data set and simplified methodology applied in the ITE handbook, the United States Environmental Protection Agency (USEPA) commissioned a study to develop a more substantial, statistically superior methodology. This methodology, identified as mixed-use development (MXD) trip generation, begins with ITE rates and develops trip internalization estimates based on a series of factors tied to numerous site attributes. The MXD methodology is described in greater detail below.

MXD Trip Internalization Methodology

The internal capture percentage reported is not an "assumed" number, but rather is a number that was derived using a best practices trip generation model designed specifically for development projects with multiple land use types. The MXD model was developed through collaboration between consultants, the USEPA, and an academic research team. The model estimates trip generation and internal capture by adjusting trip generation rates to account for the influence of built environment variables. A variety of research studies have demonstrated that these variables influence vehicle trip generation, most of which are summarized on the EPA's website.[15]

Variables used in the MXD model include general site information such as geographic factors, the land use of the surrounding area, and site/surrounding area demographics. Geographic factors such as the site of the developed area and intersection density influence internalization from a spatial standpoint – the denser the area the more likely certain types of trips can be completed within the development and without the need to travel externally. Land use factors and demographics such as employment, average household size, and vehicle ownership influence how people in the development might decide to travel. Accessibility to transit vastly increases transportation choices for those seeking to travel. This feature is also included in the MXD trip generation methodology as applied in this study, as it accounts for the total employment located along the transit corridors and estimates the probability of a mode shift toward transit if development occurs within the site, which includes 3,000 residential units, 162,000 sf of retail, and 18,000 sf of office.

15 USEPA, Smart Growth, accessed April 2019, https://www.epa.gov/smartgrowth.

The MXD model used was developed based on household travel survey data obtained from 239 existing developments in six metropolitan regions throughout the U.S. All of the developments contained multiple land uses on site. The internal capture percentage calculated for the Plan is reflective of the varied land uses that would be developed as part of the Plan, including the 3,000 residential units and 180,000 sf of nonresidential use, which would reduce the need to travel beyond the Plan Area, and is also consistent with the percentage found for other developments of similar size and scope.

A set of 16 independent development sites that were not included in the initial model were tested to help validate the model. Among the validation sites, use of the MXD model produced superior statistical performance when comparing the model results to observed data. Specifically, the MXD model had a significantly lower root mean squared error (RMSE) and higher pseudo-R squared than traditional methods when comparing estimated to observed external vehicle trips. Estimates from the ITE Trip Generation Manual had an RMSE of 40 percent and pseudo-R squared of 0.58 (i.e., the ITE method only explains about 58 percent of the variability in external vehicle trips). Modified estimates using ITE's traditional trip internalization techniques had an RMSE of 32 percent and pseudo-R squared of 0.73, whereas modified estimates using the MXD model had an RMSE of 26 percent and pseudo-R squared of 0.82.

It should also be noted that the MXD model has been developed in cooperation with the USEPA and ITE. Given the statistical robustness of the MXD model, it was deemed the most appropriate approach for estimating internalization of project trips.

MXD Model Inputs and Trip Generation Estimates

To determine the number of trips that would be internal to the Plan Area, an MXD trip generation estimate was prepared. The MXD analysis first begins with gross trip rates identified in the Institute of Transportation Engineers' Trip Generation (9th Edition, 2012). It then incorporates the MXD methodology for "matching" trips to estimate the amount of internalization within the Plan Area.

Internal capture represents the percentage of Plan tripends for trips that would remain internal to the Plan Area, which differs from the overall percentage of the net number of Plan trips that remain internal to the Plan Area. Since each trip has two tripends (i.e., the beginning of the trip and the end of the trip), if a Plan generates 100 internalized tripends, this represents 50 trips that are internal to the Plan Area (i.e., 100 tripends/2 tripends per trip = 50 trips). As such, when the number of trips is applied to the tripends component of the Plan, the total internal capture is roughly twice that which would otherwise be accounted for in the trip's component. **Table 4.15-5: Estimated Project Trip Generation** summarizes the anticipated daily, AM, and PM peak hour of adjacent street traffic trips generated by the Plan. Raw ITE trips are presented, and internalization and pass-by reductions are applied.

Table 4.15-5
Estimated Project Trip Generation

Time Period	Gross Tripends	Net External Trips	Vehicle Tripend Internalization	Vehicle Trip Internalization
Daily	35,446	31,182	12%	10%
AM Peak Hour	2,663	2,242	16%	13%
PM Peak Hour	3,708	3,080	17%	14%

Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in ***Appendix K****.*
Note: Gross tripends are the total of all trips generated by the Plan land uses and net external trips are trips that have either an origin or destination within the Plan Area boundaries, but not both.

Project Trip Distribution

The Plan distribution reflects the likely approach and departure routes to the Plan Area, as determined through multiple sources. Three key sources of data were analyzed and synthesized to develop the Plan trip distribution. First, the San Bernardino Transportation Analysis Model was used identify regional travel behavior. A select zone analysis was performed for a transportation analysis zone (TAZ) in the immediate vicinity of the proposed Plan location that had a similar land use mix to determine where trips in this area originate from and are destined to. Second, the 2010 Census Longitudinal Employer-Household Dynamics Origin Destination Employment Statistics were analyzed for the study area, which provide insight into local travel patterns. Finally, the existing traffic counts and local knowledge of the study area was used along with our professional judgement. The Plan trip distribution was reviewed and approved by City staff prior to initiating the technical analysis.

Project Traffic Projections

San Bernardino Transportation Analysis Model (SBTAM)

The San Bernardino Transportation Analysis Model (SBTAM) was utilized to develop forecasts in the study area. SBTAM is a San Bernardino County model that began as the Southern California Association of Governments (SCAG) regional travel demand model (which is utilized for the SCAG Regional Transportation Plan [RTP] and forecasts traffic volumes on roadway segments for the entire six-county SCAG region). The SCAG model was refined to provide additional detail for San Bernardino County and was calibrated for use in San Bernardino County by ensuring that the model is able to replicate existing traffic volumes on county roadways after refinement. SBTAM is considered the most appropriate tool for testing changes in land use and roadway network in San Bernardino County. When SBTAM was developed, extensive model documentation was prepared which outlined the model.

For use in the Plan, SBTAM was updated to be consistent with the 2016 SCAG Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) with updated 2012 base year and 2040 future year land use assumptions. The base year roadway network was also updated to assume built projects between 2008 and 2012, and the future year roadway network was updated to assume all funded 2016 SCAG RTP/SCS projects.

The Base Year and Future Year models are able to produce link and intersection turning movement volumes. National Cooperative Highway Research Program (NCHRP) Report 255 prescribes a variety of methods for developing intersection turning movement volume forecasts from travel demand model outputs. For typical applications, the Base Year and Future Year model outputs are compared to one another and are used in conjunction with existing traffic counts to develop future traffic forecasts. In this study, the absolute difference between the Base Year and Future Year model outputs were utilized to interpolate the 2040 volume forecasts. This method is known as the difference method, and is a state of the practice approach consistent with NCHRP Report 255.

Traffic Analysis Scenarios and Assumptions

Existing Year (2017) Plus Project Conditions

Existing Year (2017) Plus Project traffic forecasts were developed using a four-step process:

- First, the base year model roadway network was modified to account for regional traffic redistribution in conjunction with the extension of Wilson Avenue through the Plan Area. The differences between the base year and modified base year (with Wilson Avenue Extension) were applied to the existing counts to create a base to apply the Plan trip assignment.
- Second, trip generation estimates were developed for the specific plan using mixed-use trip generation methodology due to the unique land use mix on site.
- Third, model runs were used to estimate the regional Plan trip distribution through select zone analysis.
- Lastly, Plan trips were manually assigned to the study roadway network based on the trip generation and distribution pattern described above.

Cumulative Year (2040) Conditions

Cumulative Year (2040) forecasts were developed using a three-step process:

- First, the 2040 SCAG land use dataset was reviewed to ensure that all pending and approved development projects within the City of Rancho Cucamonga were included in the 2040 forecasts, if they were not already assumed in the land use growth assumptions.

- Second, the local roadway network was reviewed for consistency with Rancho Cucamonga General Plan. Wilson Avenue link speeds and attributes were reduced based on city objectives.
- Third, the future year model was ran and the difference method was applied to the existing counts based on the proportional growth between the base year model and future year model, accounting for 23 years of growth from 2017 to 2040. To provide a conservative analysis, if the model predicted negative growth (representing a decrease in trips along a roadway segment either due to revised land use estimates or an increase in parallel infrastructure capacity), existing counts were used (e.g. no negative growth was applied).

Cumulative Year (2040) plus Project Conditions

Cumulative Year (2040) forecasts were developed by applying the Plan only trip assignment on top of the Cumulative Year (2040) forecasts. The Plan only trip assignment varies only slightly in the future conditions due to the assumed completion of the extension of Wilson Avenue from Etiwanda Avenue to East Avenue.

Thresholds of Significance

The Plan would have a significant impact related to transportation and traffic if it would:

Threshold TRAF-1: **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Threshold TRAF-2: **Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Threshold TRAF-3: **Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

Threshold TRAF-4: **Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

Threshold TRAF-5: **Result in inadequate emergency access?**

Threshold TRAF-6: Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

In addition, a new threshold regarding VMT has been added to the discussion per the latest 2019 CEQA Guidelines. Although the new threshold will not be adopted until July 1, 2020, the City has opted to add for informational purposes only. Any determinations regarding significance of impacts will be based solely on Thresholds TRAF-1 through TRAF-6 above.

Threshold TRAF-7: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), Criteria for Analyzing Transportation Impacts?

City of Rancho Cucamonga Level of Service Criteria

The City, the City of Ontario, SANBAG (as part of the CMP), and Caltrans have established explicit performance criteria for roadway intersection and freeway operations within their jurisdictions. The Level of Service performance criteria and thresholds of significance that were used to determine project impacts include:

- Cities of Rancho Cucamonga and Ontario: The cities have adopted LOS D as the minimum acceptable standard. A significant traffic impact occurs if the addition of project- generated trips causes an intersection to change from an acceptable LOS (LOS D or better) to a deficient LOS or if project traffic increases the delay at any intersection already operating at an unacceptable LOS.
- Caltrans: Caltrans has adopted LOS C as the minimum acceptable standard for state facilities. A project causes a significant impact if it causes the LOS to change from an acceptable LOS (LOS C or better) to a deficient LOS (LOS D or worse) or if it causes an increase in delay/density on a facility operating at an unacceptable level.
- CMP: SANBAG, as the congestion management agency, has set LOS E as the minimum acceptable threshold for CMP facilities. However, the CMP states that local agency thresholds should be applied as long as they provide improved service levels compared to the CMP requirements. Given that the Caltrans LOS standard and adopted LOS standards from the Cities of Rancho Cucamonga and Ontario exceed the CMP thresholds, the local thresholds were applied for the impact assessment.

Project Design Features

The following Project Design Feature (PDF) is being proposed as part of the Plan:

PDF TRAF-1 **Roadway Network Improvements.** The Plan includes the proposed extension of Wilson Avenue from Milliken Avenue to Day Creek Boulevard and the extension of Rochester Avenue, and the planning areas of Existing Year (2017) Plus Project intersection lane

configurations are assumed to include the same lane geometries as Existing Year (2017) Conditions with the exception of the following project design features at the Plan locations:

- Intersection 6: Wilson Avenue and Milliken Avenue: Multilane roundabout intersection, new southbound approach.
- Intersection 16: Fredericksburg Avenue and Banyan Street: New northbound approach.
- Intersection 18: Rochester Avenue and Banyan Street: Multilane roundabout intersection, new southbound approach.

Project Impact Analysis

Threshold TRAF-1: Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Project Traffic Volumes

Intersection Operations

Based on the trip generation and trip distribution estimates developed and described above, Plan trips were assigned to the study area roadway network. Utilizing the net Plan-only traffic estimates developed for the peak hour, traffic forecasts for the Existing (Year 2017) Baseline plus Project conditions were developed. The Existing (Year 2017) Baseline traffic volumes were combined with the net Project-only traffic volumes to obtain the Existing (Year 2017) Baseline plus Project traffic volume forecasts. The Existing (Year 2017) Baseline plus Project peak-hour traffic volumes were analyzed at each of the study intersections to determine the LOS. In addition, PDF TRAF-1 was incorporated as part of the existing plus Project scenario.

Table 4.15-6: 2017 Existing plus Project Intersection Peak-Hour Levels of Service presents the results of the Existing (Year 2017) plus Project traffic analysis. As shown, 39 of the study intersections are projected to continue to operate at LOS D or better during the peak hours. However, as shown in **Table 4.15-6**, significant impacts are forecast to occur at the following intersections:

- Intersection 7: Wilson Avenue and Day Creek Boulevard—AM Peak Hour (LOS F), PM Peak Hour (LOS F)
- Intersection 17: Banyan Street and Milliken Avenue—AM Peak Hour (LOS E)
- Intersection 19: Banyan Street and Day Creek Boulevard—AM Peak Hour (LOS E)
- Intersection 41: Foothill Boulevard and Day Creek Boulevard—PM Peak Hour (LOS E)

Table 4.15-6
2017 Existing plus Project Intersection Peak-Hour Levels of Service

No.	Intersection	Existing plus Project		
		Peak Hour	Delay (sec/veh)[1]	LOS[2]
1	Wilson Avenue and Amethyst Avenue	AM	10.4	B
		PM	8.6	A
2	Wilson Avenue and Archibald Avenue	AM	12.4	B
		PM	10.4	B
3	Wilson Avenue and Hermosa Avenue	AM	16.6	C
		PM	11.0	B
4	Wilson Avenue and Haven Avenue	AM	26.0	C
		PM	18.8	B
5	Wilson Avenue and College Drive	AM	17.0	C
		PM	14.3	B
6	Wilson Avenue and Milliken Avenue[3]	AM	9.3	A
		PM	5.9	A
7	Wilson Avenue and Day Creek Boulevard	AM	88.7	F
		PM	106	F
8	Wilson Avenue and Etiwanda Avenue[4]	AM	N/A	N/A
		PM	N/A	N/A
9	Wilson Avenue and East Avenue[4]	AM	N/A	N/A
		PM	N/A	N/A
10	Wilson Avenue and Wardman Bullock Road	AM	27.5	C
		PM	16.9	B
11	Wilson Avenue and Cherry Avenue	AM	34.8	C
		PM	22.1	C

No.	Intersection	Existing plus Project		
		Peak Hour	Delay (sec/veh)[1]	LOS[2]
12	Beech Avenue and I-15 Southbound Ramps	AM	49.8	D
		PM	16.8	B
13	Beech Avenue and I-15 Northbound Ramps	AM	14.9	B
		PM	26.6	C
14	Los Osos High School and Milliken Avenue	AM	16.2	B
		PM	7.8	A
15	Banyan Street and Cabernet Place	AM	12.3	B
		PM	11.6	B
16	Banyan Street and Fredericksburg Avenue	AM	6.2	A
		PM	4.4	A
17	Banyan Street and Milliken Avenue	AM	55.6	E
		PM	21.1	C
18	Banyan Street and Rochester Avenue[3]	AM	10.3	B
		PM	10.9	B
19	Banyan Street and Day Creek Boulevard	AM	75.9	E
		PM	24.1	C
20	Milliken Avenue and SR-210 Westbound Ramps	AM	36.5	D
		PM	26.5	C
21	Day Creek Boulevard and SR-210 Westbound Ramps	AM	28.9	C
		PM	27.6	C
22	Milliken Avenue and SR-210 Eastbound Ramps	AM	27.6	C
		PM	21.2	C
23	Day Creek Boulevard and SR-210 Eastbound Ramps	AM	51.2	D
		PM	26.5	C
24	Lark Drive and Rochester Avenue	AM	11.7	B
		PM	4.8	A
25	Victoria Park Lane and Milliken Avenue	AM	9.4	A
		PM	8.6	A
26	Victoria Park Lane and Rochester Avenue	AM	36.8	D
		PM	9.2	A
27	Victoria Park Lane and Day Creek Boulevard	AM	52.1	D
		PM	36.4	D
28	Base Line Road and Milliken Avenue	AM	32.9	C
		PM	33.4	C
29	Base Line Road and Rochester Avenue	AM	26.9	C
		PM	23.7	C

No.	Intersection	Existing plus Project		
		Peak Hour	Delay (sec/veh)[1]	LOS[2]
30	Base Line Road and Day Creek Boulevard	AM	30.5	C
		PM	30.3	C
31	Base Line Road and Etiwanda Ave	AM	38.1	D
		PM	29.1	C
32	Base Line Road and I-15 Southbound Ramps	AM	10.9	B
		PM	10.3	B
33	Base Line Road and East Ave	AM	51.0	D
		PM	32.8	C
34	Baseline Ave and I-15 Northbound Ramps	AM	14.4	B
		PM	19.3	B
35	Terra Vista Parkway and Milliken Avenue	AM	16.9	B
		PM	17.9	B
36	Church Street and Rochester Avenue	AM	18.7	B
		PM	22.8	C
37	Church Street and Day Creek Boulevard	AM	18.1	B
		PM	25.4	C
38	Church Street and Milliken Avenue	AM	28.0	C
		PM	34.8	C
39	Foothill Boulevard and Milliken Avenue	AM	40.0	D
		PM	53.2	D
40	Foothill Boulevard and Rochester Avenue	AM	35.4	D
		PM	38.8	D
41	Foothill Boulevard and Day Creek Boulevard	AM	30.2	C
		PM	77.6	E
42	Foothill Boulevard and I-15 Southbound Ramps	AM	16.1	B
		PM	14.8	B
43	Foothill Boulevard and I-15 Northbound Ramps	AM	20.6	C
		PM	23.0	C

*Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in **Appendix K**.*

Notes:

[1] Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way stop-controlled (AWSC) intersections. Worst movement delay reported for side-street-stop-controlled (SSSC) intersections

[2] LOS calculations performed using the Highway Capacity Manual (HCM) 6th Edition method

[3] Intersection becomes a roundabout-controlled intersection in the Existing Plus Project scenario, Cumulative (2040) scenario and Cumulative (2040) Plus Project Scenario

[4] Intersection becomes a roundabout-controlled intersection in the Cumulative (2040) scenario and Cumulative (2040) Plus Project Scenario

As such, intersection improvements are needed to mitigate these impacts to improve the LOS at these intersections. With incorporation of Mitigation Measure **MM TRAF-1**, impacts would be reduced to less than significant.

Freeway Impacts

Table 4.15-7: 2017 Existing plus Project Freeway LOS Conditions present the results of the freeway basic, merge, and diverge assessment for the I-15 and I-210 freeways.

Table 4.15-7
2017 Existing plus Project Freeway LOS Conditions

Segment	Type	AM Peak Hour				PM Peak Hour			
		Density	V/C	LOS	MPH	Density	V/C	LOS	MPH
I-15 Northbound									
4th St to Foothill Boulevard	Basic	23.6	0.6	C	64	40.0	0.9	E	43
Foothill Boulevard Off Ramp	Diverge	12.9	0.6	B	64	21.0	0.8	C	43
Foothill Boulevard Loop On Ramp	Merge	17.7	0.4	B	64	31.5	0.8	D	43
Foothill Boulevard Slip On Ramp	Merge	17.2	0.5	B	64	37.3	0.9	E	43
Foothill Boulevard to Baseline	Basic	22.0	0.5	C	64	39.3	1.0	E	56
Baseline Off Ramp	Diverge	44.2	0.7	E	64	-	1.3	F	56
Baseline to SR-210 WB	Weave	9.6	0.3	A	65	19.7	0.5	C	69
SR-210 EB Off Ramp	Diverge	4.0	0.3	A	65	13.6	0.6	B	69
SR-210 to Beech	Weave	7.0	0.2	A	65	16.9	0.5	B	69
Beech On Ramp	Merge	10.4	0.3	A	65	21.4	0.6	C	69
Beech to Duncan Canyon	Basic	11.5	0.3	B	55	23.8	0.6	C	59

Segment	Type	AM Peak Hour				PM Peak Hour			
		Density	V/C	LOS	MPH	Density	V/C	LOS	MPH
I-15 Southbound									
Duncan Canyon to Beech	Basic	26.5	0.7	D	63	16.3	0.4	B	60
Beech Off Ramp	Diverge	28.6	0.7	D	63	18.9	0.4	B	60
Beech On Ramp	Merge	21.8	0.7	C	63	11.1	0.4	B	60
Beech to SR-210	Basic	22.1	0.6	C	65	13.2	0.4	B	67
SR-210 Off Ramp	Diverge	19.9	0.5	B	65	11.9	0.3	B	67
SR-210 On Ramp	Merge	-	1.3	F	65	22.4	0.7	C	67
SR-210 to Baseline	Basic	30.9	0.8	D	65	16.5	0.4	B	67
Baseline Off Ramp	Diverge	34.4	0.8	D	65	23.5	0.5	C	67
Baseline Loop On Ramp	Merge	-	1.0	F	40	21.5	0.5	C	66
Baseline Slip On Ramp	Merge	-	1.1	F	40	19.2	0.5	B	66
Baseline to Foothill Boulevard	Basic	-	1.1	F	40	20.6	0.5	C	66
Foothill Boulevard Off Ramp	Diverge	-	1.1	F	40	14.1	0.6	B	66
Foothill Boulevard Loop On Ramp	Merge	-	1.1	F	65	20.7	0.5	C	63
Foothill Boulevard Slip On Ramp	Merge	-	1.1	F	65	18.2	0.5	B	63
Foothill Boulevard to 4th	Basic	-	1.1	F	65	20.3	0.5	C	63
SR-210 Eastbound									
Carnelian to Archibald	Basic	34.9	0.9	D	62	32.5	0.8	D	30
Archibald Off Ramp	Diverge	35.6	0.9	E	62	32.5	0.8	D	30

Segment	Type	AM Peak Hour				PM Peak Hour			
		Density	V/C	LOS	MPH	Density	V/C	LOS	MPH
Archibald On Ramp	Merge	33.0	0.9	D	60	31.8	0.8	D	30
Haven Off Ramp	Diverge	37.7	0.9	E	60	34.7	0.8	D	30
Haven On Ramp to Milliken Off Ramp	Weave	29.1	0.9	D	65	-	1.0	F	32
Milliken On Ramp	Merge	32.2	0.8	D	65	34.1	0.9	D	32
Milliken to Day Creek	Basic	29.9	0.8	D	63	31.5	0.8	D	48
Day Creek Off Ramp	Diverge	33.6	0.8	D	63	34.5	0.8	D	48
Day Creek On Ramp	Merge	33.5	0.9	D	63	32.2	0.9	D	48
Day Creek On to Lane Add	Basic	24.6	0.7	C	67	23.6	0.6	C	58
Lane Add to I-15	Basic	19.7	0.5	C	67	18.9	0.5	C	58
I-15 Off Ramp	Diverge	-	1.5	F	67	-	1.5	F	58
I-15 to Cherry	Basic	13.4	0.4	B	70	16.1	0.4	B	63
Cherry Off Ramp	Diverge	18.7	0.4	B	70	21.3	0.5	C	63
Cherry On Ramp	Merge	18.2	0.4	B	70	19.8	0.4	B	63
I-15 On Ramp	Basic	-	0.6	F	70	-	0.7	F	33
I-15 On Ramp to Lane Drop	Basic	33.0	0.8	D	70	22.4	0.6	C	33
SR-210 Westbound									
Citrus to I-15	Basic	26.1	0.7	D	56	24.7	0.6	C	65
I-15 Off Ramp	Diverge	26.8	0.7	C	56	25.4	0.7	C	56
Cherry Off Ramp	Diverge	32.0	0.8	D	56	31.6	0.7	D	65

Segment	Type	AM Peak Hour				PM Peak Hour			
		Density	V/C	LOS	MPH	Density	V/C	LOS	MPH
Cherry On Ramp	Merge	25.9	0.7	C	56	30.8	0.8	D	65
I-15 NB On Ramp	Merge	29.0	0.7	D	56	32.9	0.8	D	65
I-15 SB On Ramp	Basic	-	1.0	F	40	29.4	0.8	D	66
I-15 SB to Lane Drop	Basic	28.3	0.8	D	40	26.0	0.7	C	66
Lane Drop to Day Creek	Basic	44.7	1.0	E	40	38.4	0.9	E	63
Day Creek Off Ramp	Diverge	40.1	1.0	E	40	38.3	0.9	E	63
Day Creek On Ramp	Merge	-	1.3	F	40	32.7	0.9	D	63
Day Creek to Milliken	Basic	-	1.0	F	40	35.3	0.9	E	62
Milliken Off Ramp	Diverge	-	1.0	F	40	26.4	0.9	C	62
Milliken On Ramp	Merge	-	1.3	F	40	34.8	0.9	D	62
Haven Off Ramp	Diverge	-	1.0	F	30	37.5	0.9	E	60
Haven On Ramp to Archibald Off Ramp	Weave	37.6	0.9	E	30	39.5	1.0	E	63
Archibald On Ramp	Merge	36.3	1.0	E	30	34.1	0.9	D	63
Archibald to Carnelians	Basic	42.9	1.0	E	40	38.4	0.9	E	66

*Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in **Appendix K**.*

Notes: Calculated using methodologies consistent with the Highway Capacity Manual.

Density reported as passenger cars per mile per lane.

"-" LOS F segments with V/Cs higher than 1 the HCM calculation doesn't really work and so we don't report a density for those values.

As shown in **Table 4.15-7**, 12 study freeway segments on I-15 and 16 study freeway segments on SR-210 are forecast to operate below LOS D during at least one peak hour in year 2040. As identified above, many of the freeway segments with the Plan Area would exceed the significance criteria. As such, there are

impacts to the freeway system near the Plan Area. The freeway traffic congestion also further burdens local streets that drivers use to avoid I-15 and SR-210 and cut through the City. Therefore, the Plan would contribute to projected impacts on the freeway as identified from Caltrans, such as the requirement of additional lanes, and funding for these additional improvements is not currently provided in the current RTP. As such, impacts would be potentially significant. A discussion on the potential mitigation for freeway facility impacts is discussed below under level of significance after mitigation.

Project Transportation Facilities

Pedestrian Facilities

Currently, over 97 miles of public hiking and riding trails are planned, which supports opportunities for healthy exercise. There are two types of public hiking and riding trails in the City, which are Regional Trails and Community Trails. Regional trails are long distance connectors to regional parks, scenic canyons and other open spaces. These types of trails are designed for hikers, bicyclists, and equestrian users. Community Trails provide connections to community facilities, such as parks and schools. These trails are designed for hikers and equestrian users. Approximately 1.5 mile south of the RCA is the Pacific Electric Trail. This regional trail extends from the County line in Claremont to the city of Rialto, providing 21 miles of a recreational path. Directly to the north of the Neighborhood Area, the Etiwanda Falls trails are popular local hiking trails.

The major streets that provide access to the Plan Area including Banyan Street, Milliken Avenue, Haven Avenue, and Day Creek Boulevard, all have well connected and maintained sidewalk networks. These facilities currently provide access for pedestrians to the Project from bus stops nearby, as well as several grocery stores near the Plan. As such, impacts would be less than significant.

Bicycle Facilities

The Plan includes facilities to support bicycles and pedestrians on site, as noted above and in **Section 2.0: Project Description**. The Plan would therefore be consistent with the City's General Plan and the Master Plan for Bicyclists and Pedestrians. As such, impacts would be less than significant.

Transit

As mentioned previously, the existing public transit would serve the Plan in the Plan Area vicinity. The land use plan includes a mix of uses that will increase trip internalization to reduce transportation impacts from the Plan. In addition, the City and the Plan include measures and policies that support the use of alternative modes of travel, such as transit, and the Plan would not conflict with these plans. It is expected that transit ridership would increase due to the new population introduced from the Plan. The Plan Area is located near the Metrolink Station and Omnitrans bus routes. At the time of development, plans will be

reviewed by the City and/or transit agency for appropriate bus stops/shelter locations. Transit services may include, but not limited to, carshare facilities, bike-share stations, transit pass kiosks, or concierge services. With regulatory compliance, the existing transit facilities would have sufficient supply to serve the Plan's new population growth. As such, impacts would be less than significant.

Threshold TRAF-2: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

As stated previously, the San Bernardino County CMP defines a network of state highways and arterials; LOS standards and related procedures; the process for mitigation of impacts of new development on the transportation system; and technical justification for the approach. The CMP sets the LOS standard for the County's CMP-designated highway system at LOS E for roadway intersections and freeway interchanges in the County's CMP-designated highway system and implements an enhanced transportation management program to ensure that the designated roadways and intersections meet the set standard.

It should be noted however that the San Bernardino CMP does not require any specific analysis methodology or analysis requirements be addressed in a transportation impact analysis for a development project. Therefore, any identified deficiency on a road segment requires a deficiency plan from the local agency and does not include state highways.

As previously discussed, the San Bernardino County CMP defines LOS E or better as the acceptable level of service for facilities included in the CMP network. However, it also notes that local agency thresholds should be applied as long as they provide improved service levels compared to the CMP requirements. Because the City and Caltrans have LOS standards that are more stringent than CMP standards, any impacts captured by an analysis using the local standards is captured under CMP analysis as well. As the Plan would not have any significant impacts under the more stringent City and Caltrans' thresholds for these locations, with implementation of Mitigation Measures noted previously, the CMP impacts would also be less than significant. Therefore, the Plan would not result in any CMP facilities exceeding the CMP LOS standard. As such, with implementation of **MM TRAF-1** through **MM TRAF-3** for reducing traffic volumes, CMP impacts would be reduced to less than significant levels.

Threshold TRAF-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The Plan Area located in not located in an airport land use influence area nor does Plan does not include any characteristics that would change air traffic in the study area. As shown in **Section 4.13: Population and Housing**, the Plan would result in 9,090 residents to the Plan Area. The City is determining the significance of the growth associated with the Plan based on the significance of this growth with SCAG Regional Forecasts. The current 2016-2040 SCAG Growth Forecasts only reflect growth projected for the 305 acres of the Plan Area currently in the City, which is a population increase of 2,000. The draft 2020-2045 SCAG Growth Forecasts includes approximately 1,600 Households for about a population of 4,900 for the annexation area. The total population growth projected in the City's General Plan for the portion of the Plan in the City and portion of the SOI proposed for annexation is approximately 4,346 persons. Therefore, there would be 4,744 persons above the projections in the City's General Plan for the Plan.

It is expected that this increase in population would also increase in air travel at the nearby airports in the Plan Area vicinity, including Ontario Airport, Burbank Airport, and Los Angeles International Airport. As indicated by SCAG, forecasted origin and destination passenger demand in the region would increase from 72,600,000 to 112,200,000 million annual passengers, which is equivalent to a compound annual growth rate of 1.6 percent.[16] For the portion of the Plan that is incrementally over SCAG and the City's General Plan forecasts, the RTP/SCS forecasts for 2040 would not result in any substantial increase in air traffic levels. In addition, the increase would be distributed based on travel for the Ontario Airport, Burbank Airport, and Los Angeles International Airport. For these reasons, impacts would be less than significant.

Threshold TRAF-4: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Plan circulation master plan does not include any specific design features that would potentially increase hazards in the study area. The Plan would establish an additional level of review by requiring the submission of a Precise Plan application for propose subdivision or phase of development to ensure consistency with the Plan. Street designs will be reviewed for conformance with the Plan to ensure no design features that would create hazards are created, such as with the City standard for street improvement designs. With regulatory compliance, impacts would be less than significant.

16 SCAG, Aviation & Airport Ground Access (April 2016), accessed March 2019, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_Aviation.pdf.

Threshold TRAF-5: Result in inadequate emergency access?

Adequate access by police, fire, and other emergency vehicles into the Plan Area will be provided by the proposed street network. The Plan Area is located within proximity to major roadways with direct freeway access. The Plan includes a series of interconnected streets providing adequate access for emergency personnel. As discussed above, through the Precise Plan application process, the adequacy of access for emergency vehicles will be reviewed to ensure it is adequate. As shown in **Section 4.14: Public Services and Recreation**, the Plan will include a Master Fire Protection Plan for the entire Plan Area and neighborhood specific fire protection plans, which are based on the Master Fire Protection Plan, for the sub-areas and proposed phases of construction. In addition, with coordination and consultation with the RCFPD, the Plan would require adequate access for emergency vehicles and evacuations. All development within the Plan Area would be reviewed by the RCFPD for compliance with applicable provisions of the California Fire and Residential Codes along with the requirements of the RCFPD's Standards and Guidance documents, including but not limited to, requirements for fire apparatus access roads, gates, address and building signage, Knox boxes, fire protection water supply systems, and site plan criteria. Development plans would be reviewed by the RCFPD to ensure compliance with the RCFPD's Fire Protection Standards, Guidance Documents, and the California Fire Code. With regulatory compliance with the City and the California Fire Code, impacts would be less than significant.

Threshold TRAF-6: Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

As shown above, the Plan would not result any significant impacts to public transit, or pedestrian and bicycle facilities. The City's General Plan and Development Code include measures and policies that support use of alternative modes of travel and the Plan would be consistent with the Community Mobility Chapter and the Master Plan for Bicyclists and Pedestrians. The list of policies applicable to the Plan are shown to be consistent with the applicable safety and circulation policies, as shown in detail in **Section 4.10: Land Use and Planning**. The Plan includes a comprehensive bicycle and pedestrian network that will provide accessibility for pedestrians and bicycles. As stated above under Threshold TRAF-1, transit ridership would increase due to the Plan; however, impacts would be less than significant because current transit facilities would have sufficient space for the new population growth. The Plan would comply with the California Fire Code and work with public services to ensure the safety of residents, employees, or visitors to the Plan Area (see **Section 4.14: Public Services** for more detail). As such, impacts would be less than significant.

Threshold TRAF-7: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), Criteria for Analyzing Transportation Impacts?

As discussed previously, this threshold relates to the new section on analysis of transportation impact based on VMT. While conformance with this section is not required until July 1, 2020, analysis of VMT impacts is provided for informational purposes. The City is participating with the other cities in the County in a process coordinated by the San Bernardino County Transportation Authority to define a countywide VMT analysis methodology that will be conducted over the next year. As no methodology has been defined at this time, the VMT estimate for the Plan was reviewed under the guidance provided in the December 2018 Technical Advisory on Evaluating Transportation Impacts under CEQA prepared by the Governor's Office of Planning and Research (OPR). Based on an extensive review of the applicable research, and in light of an assessment by the California Air Resources Board quantifying the need for VMT reduction in order to meet the State's long-term climate goals, OPR recommends that a per capita or per employee VMT that is 15 percent below that of existing development may indicate that transportation impacts would be less than significant.

An estimate of VMT was generated by the San Bernardino Transportation Analysis Model (SBTAM) and U.S. Environmental Protection Agency (USEPA) MXD trip generation methodology to accurately estimate Plan trip internalization based on land use mix and accessibility. The SBTAM was used for both the base year no project and base year with project scenarios to estimate VMT by trip purpose for both trip attractions and for trip productions. Next, the MXD model was used to estimate trip generation and trip internalization for the uses that would be allowed by the Plan. These were combined with the average trip length information to estimate VMT for the project. The estimated VMT for the Plan is 291,800 VMT per day or 30.40 VMT/service population. **Table 4.15-8: VMT per Service Population by Region** shows the regional VMT per service population for the base year, cumulative year, and cumulative year plus project for the City and the San Bernardino County Valley Region.

As shown in **Table 4.15-8**, the Plan is performing better than 15 percent below either of the comparable regions from a VMT perspective, as compared to VMT estimates from the existing base year model. The Plan performs 19 percent better than the City and 21 percent better than the San Bernardino County Valley Region. These results are considered reasonable given the Plan mix of land uses and increased accessibility provided with the extension of Wilson Avenue through the Plan Area, although there would still be a higher gross VMT in the area and cause congestion related impacts. In addition, the VMT/SP in the City and the San Bernardino County Valley Region have decreased, indicating a net positive effect on Cumulative VMT in the region. Factors contributing to the net positive effect include access to regional freeways, the mix of land uses keeping trips within the Plan Area, and the Plan providing local serving schools and commercial to the City. As the Plan would have less than 15 percent VMT growth than the

compared existing development by service population transportation impacts would considered be less than significant based on analysis of VMT. Therefore, the VMT calculated is showing that the development will operate more efficiently than the surrounding land use, meaning it will have a positive effect on VMT for the general region.

Table 4.15-8
VMT per Service Population by Region

Region	Base Year No Project (VMT/SP)	Cumulative Year Project (VMT/SP)	Cumulative Year with Project (VMT/SP)
Rancho Cucamonga	37.68	36.88	36.85
San Bernardino County Valley Region	35.57	38.87	38.83

*Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, Technical Memorandum, April 2019, included in **Appendix K**.*

Cumulative Impacts

As mentioned above, the SBTAM was utilized to develop future forecasts in the study area. SBTAM is a San Bernardino County model that began as the SCAG regional travel demand model, which is utilized for the SCAG RTP and forecasts traffic volumes on roadway segments for the entire six-county SCAG region. The SCAG model was refined to provide additional detail for San Bernardino County and was calibrated for use in San Bernardino County by ensuring that the model is able to replicate existing traffic volumes on county roadways after refinement. SBTAM is considered the most appropriate tool for testing changes in land use and roadway network in San Bernardino County. When SBTAM was developed, extensive model documentation was prepared which outlined the model. Therefore, the following analysis is based on projections rather than a specific set of related projects, relative to the other EIR sections presented therein.

Intersection Operations

Table 4.15-9: 2040 Cumulative and Cumulative plus Project Intersection Peak-Hour Levels of Service summarizes the results of the Future with Project Conditions during the AM and PM peak hours for the 43 study intersections. As shown in **Table 4.15-9**, the following study intersections are forecast to operate at a deficient LOS during one or both peak hours for Cumulative Year (2040) Conditions:

- Intersection 18: Banyan Street and Rochester Avenue—AM Peak Hour (LOS F)
- Intersection 33: Base Line Road and East Avenue—AM Peak Hour (LOS E), PM Peak Hour (LOS F)

- Intersection 34: Baseline Ave and I-15 Northbound Ramps—PM Peak Hour (LOS E)
- Intersection 35: Terra Vista Parkway and Milliken Avenue—PM Peak Hour (LOS E)
- Intersection 41: Foothill Boulevard and Day Creek Boulevard—PM Peak Hour (LOS E)

Table 4.15-9
2040 Cumulative and Cumulative plus Project Intersection Peak-Hour Levels of Service

No.	Intersection	Peak Hour	Cumulative		Cumulative plus Project	
			Delay (sec/veh)	LOS	Delay (sec/veh)[1]	LOS[2]
1	Wilson Avenue and Amethyst Avenue	AM	9.3	A	9.4	A
		PM	9.5	A	9.8	A
2	Wilson Avenue and Archibald Avenue	AM	6.0	A	6.1	A
		PM	6.0	A	5.7	A
3	Wilson Avenue and Hermosa Avenue	AM	17.5	C	20.5	C
		PM	15.2	C	20.3	C
4	Wilson Avenue and Haven Avenue	AM	17.1	B	18.5	B
		PM	18.4	B	21.1	C
5	Wilson Avenue and College Drive	AM	14.0	B	14.4	B
		PM	14.4	B	18.0	C
6	Wilson Avenue and Milliken Avenue[3]	AM	6.3	A	14.5	B
		PM	2.9	A	8.5	A
7	Wilson Avenue and Day Creek Boulevard	AM	18.6	B	65.0	E
		PM	12.2	B	>120	F
8	Wilson Avenue and Etiwanda Avenue[4]	AM	4.7	A	4.5	A
		PM	4.6	A	4.7	A
9	Wilson Avenue and East Avenue[4]	AM	18.1	B	13.1	B
		PM	7.0	A	6.0	A
10	Wilson Avenue and Wardman Bullock Road	AM	32.9	C	40.6	D
		PM	18.7	B	19.6	B
11	Wilson Avenue and Cherry Avenue	AM	51.0	D	54.9	D
		PM	30.5	C	33.2	C
12	Beech Avenue and I-15 Southbound Ramps	AM	33.5	D	32.2	C
		PM	19.6	B	19.8	B
13	Beech Avenue and I-15 Northbound Ramps	AM	20.1	B	24.1	C
		PM	49.1	D	54.9	D
14	Los Osos High School and Milliken Avenue	AM	14.9	B	18.0	B
		PM	7.4	A	9.2	A

No.	Intersection	Peak Hour	Cumulative		Cumulative plus Project	
			Delay (sec/veh)	LOS	Delay (sec/veh)[1]	LOS[2]
15	Banyan Street and Cabernet Place	AM	12.0	B	12.4	B
		PM	11.9	B	12.8	B
16	Banyan Street and Fredericksburg Avenue	AM	6.0	A	6.5	A
		PM	4.5	A	4.7	A
17	Banyan Street and Milliken Avenue	AM	32.6	C	67.6	E
		PM	31.7	C	36.6	D
18	Banyan Street and Rochester Avenue	AM	60.7	F	10.3	B
		PM	25.7	D	13.8	B
19	Banyan Street and Day Creek Boulevard	AM	25.8	C	74.6	E
		PM	15.6	B	29.3	C
20	Milliken Avenue and SR-210 Westbound Ramps	AM	22.0	C	33.2	C
		PM	19.8	B	16.8	B
21	Day Creek Boulevard and SR-210 Westbound Ramps	AM	30.2	C	53.3	D
		PM	26.7	C	24.7	C
22	Milliken Avenue and SR-210 Eastbound Ramps	AM	14.8	B	14.9	B
		PM	17.9	B	12.6	B
23	Day Creek Boulevard and SR-210 Eastbound Ramps	AM	21.9	C	20.9	C
		PM	18.9	B	23.2	C
24	Lark Drive and Rochester Avenue	AM	9.7	A	10.1	B
		PM	5.4	A	5.7	A
25	Victoria Park Lane and Milliken Avenue	AM	11.6	B	11.9	B
		PM	13.3	B	14.3	B
26	Victoria Park Lane and Rochester Avenue	AM	14.1	B	15.3	B
		PM	9.5	A	9.9	A
27	Victoria Park Lane and Day Creek Boulevard	AM	25.8	C	25.8	C
		PM	27.2	C	27.0	C
28	Base Line Road and Milliken Avenue	AM	38.8	D	39.7	D
		PM	32.9	C	32.9	C
29	Base Line Road and Rochester Avenue	AM	31.4	C	36.7	D
		PM	34.6	C	33.3	C
30	Base Line Road and Day Creek Boulevard	AM	36.9	D	37.0	D
		PM	37.4	D	37.4	D
31	Base Line Road and Etiwanda Ave	AM	42.2	D	47.9	D
		PM	35.2	D	36.1	D

No.	Intersection	Peak Hour	Cumulative		Cumulative plus Project	
			Delay (sec/veh)	LOS	Delay (sec/veh)[1]	LOS[2]
32	Base Line Road and I-15 Southbound Ramps	AM	17.4	B	17.4	B
		PM	17.1	B	16.9	B
33	Base Line Road and East Ave	AM	80.1	F	80.3	F
		PM	>120	F	>120	F
34	Baseline Ave and I-15 Northbound Ramps	AM	21.1	C	21.1	C
		PM	55.6	E	56.3	E
35	Terra Vista Parkway and Milliken Avenue	AM	24.4	C	24.8	C
		PM	59.2	E	63.8	E
36	Church Street and Rochester Avenue	AM	23.5	C	24.8	C
		PM	30.6	C	34.6	C
37	Church Street and Day Creek Boulevard	AM	20.0	C	21.6	C
		PM	30.4	C	37.1	D
38	Church Street and Milliken Avenue	AM	39.2	D	39.8	D
		PM	38.9	D	38.8	D
39	Foothill Boulevard and Milliken Avenue	AM	33.8	C	33.2	C
		PM	50.7	D	51.0	D
40	Foothill Boulevard and Rochester Avenue	AM	41.1	D	41.6	D
		PM	41.1	D	39.7	D
41	Foothill Boulevard and Day Creek Boulevard	AM	27.8	C	31.5	C
		PM	58.8	E	63.3	E
42	Foothill Boulevard and I-15 Southbound Ramps	AM	18.2	B	17.5	B
		PM	11.3	B	10.9	B
43	Foothill Boulevard and I-15 Northbound Ramps	AM	18.6	B	20.1	C
		PM	14.7	B	17.0	B

*Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in **Appendix K**.*

Notes:

[1] Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way stop-controlled (AWSC) intersections. Worst movement delay reported for side-street-stop-controlled (SSSC) intersections

[2] LOS calculations performed using the Highway Capacity Manual (HCM) 6th Edition method

[3] Intersection becomes a roundabout-controlled intersection in the Existing Plus Project scenario, Cumulative (2040) scenario and Cumulative (2040) Plus Project Scenario

[4] Intersection becomes a roundabout-controlled intersection in the Cumulative (2040) scenario and Cumulative (2040) Plus Project Scenario

Freeway Impacts

Table 4.15-10: 2040 Cumulative Freeway LOS Conditions present the results of the freeway basic, merge, and diverge assessment for the I-15 and I-210 freeways for the Cumulative Year conditions. The freeway

mainline volumes were obtained from PEMs data and were balanced through the corridor using ramp terminal intersection volumes along the corridor. Bus/truck percentages are assumed to be 10 (based on the most recent Caltrans Traffic Census for truck traffic), the terrain was assumed to be level, free-flow speed was assumed to be 70 miles per hour, and a peak-hour factor of 0.98 was assumed for the segments as to provide a consistent yet conservative assessment.

Table 4.15-10
2040 Cumulative Freeway LOS Conditions

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
I-15 Northbound							
4th St to Foothill Boulevard	Basic	30.2	0.8	D	-	1.0	F
Foothill Boulevard Off Ramp	Diverge	14.6	0.6	B	23.4	0.9	C
Foothill Boulevard Loop On Ramp	Merge	24.3	0.6	C	-	1.0	F
Foothill Boulevard Slip On Ramp	Merge	25.4	0.7	C	-	1.1	F
Foothill Boulevard to Baseline	Basic	31.0	0.7	D	-	1.2	F
Baseline Off Ramp	Diverge	77.7	0.9	E	-	1.7	F
Baseline to SR-210 WB	Weave	17.5	0.5	B	32.0	0.8	D
SR-210 EB Off Ramp	Diverge	12.0	0.5	B	24.2	0.8	C
SR-210 to Beech	Weave	14.7	0.4	B	28.4	0.7	D
Beech On Ramp	Merge	17.4	0.5	B	32.7	0.8	D

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
Beech to Duncan Canyon	Basic	18.5	0.5	C	37.0	0.9	E
I-15 Southbound							
Duncan Canyon to Beech	Basic	44.1	1.0	E	16.6	0.4	B
Beech Off Ramp	Diverge	41.1	1.0	E	19.6	0.4	B
Beech On Ramp	Merge	-	1.0	F	11.6	0.4	B
Beech to SR-210	Basic	31.4	0.8	D	13.0	0.4	B
SR-210 Off Ramp	Diverge	27.4	0.7	C	11.8	0.3	B
SR-210 On Ramp	Merge	-	1.6	F	25.8	0.8	C
SR-210 to Baseline	Basic	-	1.1	F	17.5	0.5	B
Baseline Off Ramp	Diverge	-	1.2	F	25.3	0.6	C
Baseline Loop On Ramp	Merge	-	1.6	F	22.2	0.5	C
Baseline Slip On Ramp	Merge	-	1.8	F	19.7	0.5	B
Baseline to Foothill Boulevard	Basic	-	1.5	F	21.2	0.6	C
Foothill Boulevard Off Ramp	Diverge	-	1.8	F	14.7	0.6	B
Foothill Boulevard Loop On Ramp	Merge	-	1.8	F	21.5	0.5	C
Foothill Boulevard Slip On Ramp	Merge	-	2.1	F	25.7	0.7	C

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
Foothill Boulevard to 4th	Basic	-	1.6	F	24.5	0.7	C
SR-210 Eastbound							
Carnelian to Archibald	Basic	-	1.1	F	-	0.9	F
Archibald Off Ramp	Diverge	-	1.1	F	-	0.9	F
Archibald On Ramp	Diverge	-	1.1	F	34.2	0.9	D
Haven Off Ramp	Basic	-	1.1	F	-	0.9	F
Haven On Ramp to Milliken Off Ramp	Basic	38.1	1.0	E	38.2	0.9	E
Milliken On Ramp	Basic	-	1.0	F	37.9	1.0	E
Milliken to Day Creek	Diverge	43.5	1.0	E	-	0.9	F
Day Creek Off Ramp	Basic	39.1	0.9	E	-	0.9	F
Day Creek On Ramp	Diverge	-	1.0	F	36.1	1.0	E
Day Creek On to Lane Add	Merge	29.4	0.8	D	-	0.7	F
Lane Add to I-15	Merge	23.1	0.6	C	-	0.6	F
I-15 Off Ramp	Basic	-	1.6	F	-	1.5	F
I-15 to Cherry	Merge	18.7	0.5	C	20.2	0.5	C
Cherry Off Ramp	Basic	24.0	0.6	C	-	0.6	C
Cherry On Ramp	Merge	22.6	0.5	C	23.0	0.5	C

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
I-15 On Ramp	Basic	-	0.7	F	-	0.7	F
I-15 On Ramp to Lane Drop	Diverge	35.0	0.9	E	22.9	0.6	C
SR-210 Westbound							
Citrus to I-15	Basic	-	0.9	F	28.6	0.7	D
I-15 Off Ramp	Diverge	33.4	0.9	D	29.5	0.8	D
Cherry Off Ramp	Diverge	37.1	0.9	E	34.0	0.8	D
Cherry On Ramp	Merge	32.7	0.8	D	34.7	0.9	D
I-15 NB On Ramp	Merge	36.4	0.9	E	37.0	0.9	E
I-15 SB On Ramp	Basic	-	1.3	F	33.7	0.9	D
I-15 SB to Lane Drop	Basic	39.9	0.9	E	29.2	0.8	D
Lane Drop to Day Creek	Basic	-	1.3	F	-	1.0	F
Day Creek Off Ramp	Diverge	-	1.4	F	-	1.0	F
Day Creek On Ramp	Merge	-	1.6	F	-	1.0	F
Day Creek to Milliken	Basic	-	1.3	F	-	1.0	F
Milliken Off Ramp	Diverge	-	1.4	F	-	1.0	F
Milliken On Ramp	Merge	-	1.6	F	-	1.0	F
Haven Off Ramp	Diverge	-	1.4	F	-	1.0	F
Haven On Ramp to	Weave	-	1.2	F	-	1.2	F

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
Archibald Off Ramp							
Archibald On Ramp	Merge	-	1.2	F	-	1.0	F
Archibald to Carnelians	Basic	-	1.2	F	-	1.1	F

*Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in **Appendix K**.*
Notes: Calculated using methodologies consistent with the Highway Capacity Manual.
Density reported as passenger cars per mile per lane.
"-" LOS F segments with V/Cs higher than 1 the HCM calculation doesn't really work and so we don't report a density for those values.

Table 4.15-11: 2040 Cumulative plus Project Freeway LOS Conditions present the results of the freeway basic, merge, and diverge assessment for the I-15 and I-210 freeways for the Cumulative Year plus Project conditions. Similar to above, the freeway mainline volumes were obtained from PEMs data and were balanced through the corridor using ramp terminal intersection volumes along the corridor. Bus/truck percentages are assumed to be 10-11 percent (based on the most recent Caltrans Traffic Census for truck traffic), the terrain was assumed to be level, free-flow speed is assumed to be 70 miles per hour, and a peak-hour factor of 0.95 was assumed for the segments as to provide a consistent yet conservative assessment.

Table 4.15-11
2040 Cumulative plus Project Freeway LOS Conditions

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
I-15 Northbound							
4th St to Foothill Boulevard	Basic	30.7	0.8	D	-	1.0	F
Foothill Boulevard Off Ramp	Diverge	15.0	0.6	B	-	0.9	F
Foothill Boulevard Loop On Ramp	Merge	24.3	0.6	C	-	1.0	F

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
Foothill Boulevard Slip On Ramp	Merge	25.4	0.7	C	-	1.1	F
Foothill Boulevard to Baseline	Basic	31.1	0.7	D	-	1.2	F
Baseline Off Ramp	Diverge	77.5	0.9	E	-	1.7	F
Baseline to SR-210 WB	Weave	17.5	0.5	B	31.9	0.8	D
SR-210 EB Off Ramp	Diverge	12.0	0.5	B	24.2	0.8	C
SR-210 to Beech	Weave	14.6	0.4	B	28.3	0.7	D
Beech On Ramp	Merge	17.4	0.5	B	32.6	0.8	D
Beech to Duncan Canyon	Basic	18.8	0.5	C	37.3	0.9	E
I-15 Southbound							
Duncan Canyon to Beech	Basic	44.5	1.0	E	16.9	0.4	B
Beech Off Ramp	Diverge	41.3	1.0	E	20.3	0.4	B
Beech On Ramp	Merge	-	1.0	F	11.7	0.4	B
Beech to SR-210	Basic	31.4	0.8	D	13.0	0.3	B
SR-210 Off Ramp	Diverge	27.4	0.7	C	11.8	0.3	B
SR-210 On Ramp	Merge	-	1.6	F	25.8	0.8	C
SR-210 to Baseline	Basic	-	1.1	F	17.5	0.5	B

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
Baseline Off Ramp	Diverge	-	1.2	F	25.3	0.6	C
Baseline Loop On Ramp	Merge	-	1.6	F	22.2	0.5	C
Baseline Slip On Ramp	Merge	-	1.8	F	19.8	0.5	B
Baseline to Foothill Boulevard	Basic	-	1.5	F	21.3	0.6	C
Foothill Boulevard Off Ramp	Diverge	-	1.8	F	14.7	0.6	B
Foothill Boulevard Loop On Ramp	Merge	-	1.8	F	21.6	0.5	C
Foothill Boulevard Slip On Ramp	Merge	-	2.1	F	27.1	0.7	C
Foothill Boulevard to 4th	Basic	-	1.6	F	25.3	0.7	C
SR-210 Eastbound							
Carnelian to Archibald	Basic	-	1.1	F	-	1.0	F
Archibald Off Ramp	Diverge	-	1.1	F	-	1.0	F
Archibald On Ramp	Merge	-	1.1	F	-	1.0	E
Haven Off Ramp	Diverge	-	1.2	F	-	0.9	F
Haven On Ramp to Milliken Off Ramp	Weave	-	1.0	F	-	1.1	F
Milliken On Ramp	Merge	-	1.0	F	38.6	1.0	E

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
Milliken to Day Creek	Basic	44.0	1.0	E	-	0.9	F
Day Creek Off Ramp	Diverge	39.5	1.0	E	-	0.9	F
Day Creek On Ramp	Merge	-	1.1	F	-	1.0	F
Day Creek On to Lane Add	Basic	31.4	0.8	D	-	0.8	F
Lane Add to I-15	Basic	24.3	0.7	C	-	0.6	F
I-15 Off Ramp	Diverge	-	1.6	F	-	1.5	F
I-15 to Cherry	Basic	20.6	0.6	C	21.8	0.6	C
Cherry Off Ramp	Diverge	25.7	0.6	C	-	0.6	C
Cherry On	Merge	24.3	0.6	C	24.3	0.6	C
I-15 On Ramp	Merge	-	0.7	F	-	0.7	F
I-15 On Ramp to Lane Drop	Basic	38.6	0.9	E	24.1	0.6	C
SR-210 Westbound							
Citrus to I-15	Basic	-	0.9	F	28.9	0.8	D
I-15 Off Ramp	Diverge	34.1	0.9	D	29.7	0.8	D
Cherry Off Ramp	Diverge	37.6	0.9	E	34.2	0.8	D
Cherry On Ramp	Merge	33.4	0.9	D	35.0	0.9	D
I-15 NB On Ramp	Merge	37.1	1.0	E	-	1.0	F
I-15 SB On Ramp	Basic	-	1.3	F	34.1	0.9	D

Segment	Type	AM Peak Hour			PM Peak Hour		
		Density	V/C	LOS	Density	V/C	LOS
I-15 SB to Lane Drop	Basic	41.3	1.0	E	29.5	0.8	D
Lane Drop to Day Creek	Basic	-	1.3	F	-	1.0	F
Day Creek Off Ramp	Diverge	-	1.4	F	-	1.0	F
Day Creek On Ramp	Merge	-	1.6	F	-	1.0	F
Day Creek to Milliken	Basic	-	1.3	F	44.1	1.0	E
Milliken Off Ramp	Diverge	-	1.4	F	29.7	1.0	D
Milliken On Ramp	Merge	-	1.7	F	-	1.0	F
Haven Off Ramp	Diverge	-	1.4	F	-	1.0	F
Haven On Ramp to Archibald Off Ramp	Weave	-	1.2	F	-	1.2	F
Archibald On Ramp	Merge	-	1.3	F	-	1.0	F
Archibald to Carnelians	Basic	-	1.2	F	-	1.0	F

*Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in **Appendix K**.*

Notes: Calculated using methodologies consistent with the Highway Capacity Manual.

Density reported as passenger cars per mile per lane.

"-" LOS F segments with V/Cs higher than 1 the HCM calculation doesn't really work and so we don't report a density for those values.

Based on **Table 4.15-10** and **Table 4.15-11**, 19 study freeway segments on I-15 and 29 study freeway segments on SR-210 are forecast to operate below LOS D during at least one peak hour in year 2040. Therefore, the Plan would contribute to projected impacts on the freeway as identified from Caltrans and that additional lanes are required and funding for these additional improvements is not currently provided in the current RTP. As such, impacts would be potentially significant. A discussion on the potential mitigation for freeway facility impacts is showcased below under level of significance after mitigation.

TRANSPORTATION FACILITIES

Bicycle, Pedestrian, and Vehicular Safety

As analyzed above, Plan impacts related to bicycle, pedestrian, and vehicular safety would be less than significant. In addition, as with the Plan, it is anticipated that future related projects would be subject to City review to ensure that they are designed with adequate access/circulation. Furthermore, since modifications to access and circulation plans are largely confined to the specific site, a combination of impacts with other related projects that could lead to cumulative impacts is not expected. Thus, Plan impacts with regard to bicycle, pedestrian, and vehicular safety would not be cumulatively considerable, and cumulative impacts would be less than significant.

Transit

As mentioned above, the Plan would be well-served by public transit. Although the Plan (and other related projects) will cumulatively add transit ridership, the total transit capacity of the numerous transit lines would be able to accommodate the Plan's transit trips, as shown above. Furthermore, it is assumed that public transit providers would add additional service when required in order to accommodate cumulative demand in the region. Therefore, the Plan would not exceed regional transit capacity and transit impacts would be less than significant.

MITIGATION MEASURES

The following measures are proposed to mitigate transportation impacts to less than significant. Implementation of Mitigation Measure **MM TRAF-1** will mitigate the impact from addition of traffic from the EHNCP at intersections 7, 17, 19 and 41. These improvements along with Mitigation Measure **MM TRAF-2** will also mitigate cumulative impacts at these intersections to less than significant levels.

MM TRAF-1 The Property Owner/Developer shall implement the following intersection improvements.

- **Intersection 7: Wilson Avenue and Day Creek Boulevard**. The improvements identified below can fit within the existing right-of-way and will require striping modifications and median improvements. With these recommended improvements, operations are forecast to operate at an acceptable LOS during the AM and PM peak hours. In order for this intersection to operate acceptably with the addition of the project traffic, the following improvements shall be made prior to the issuance of a building permit for the 1595th residential unit in the Neighborhood Area:

- Modify eastbound approach of the intersection from one left-turn lane, one through lane, and one through-right shared lane to one left-turn lane, one through lanes, and one right-turn lane

- Add right-turn overlap phasing in the eastbound direction

- Optimization of cycle length

- **Intersection 17: Banyan Street and Milliken Avenue**. For this intersection to operate acceptably with the addition of project traffic, this intersection requires adjustment and optimization of the AM peak-hour signal timing plans, including a cycle length of 120 seconds. To ensure that the full effect of the project was considered in the "plus project" analysis, signal timing was locked and consistent with the "no project" scenario. The change in traffic volumes requires a reallocation of green signal time to more efficiently serve the traffic demand. With the recommended improvement, operations are improved to an acceptable LOS during the AM peak hour. This improvement shall be made prior to the issuance of a building permit for the 2755th residential unit in the Neighborhood Area.

- **Intersection 19: Banyan Street and Day Creek Boulevard**. For this intersection to operate acceptably with the addition of project traffic, this intersection requires adjustment and optimization of the AM peak-hour signal timing plans relative to the expected traffic volume demand. To ensure that the full effect of the project was considered in the "plus project" analysis, signal timing was locked and consistent with the "no project" scenario. The change in traffic volumes requires a reallocation of green signal time to more efficiently serve the traffic demand. With the recommended improvement, operations are improved to an acceptable LOS during the AM peak hour. This improvement shall be made prior to the issuance of a building permit for the 1885th residential unit in the Neighborhood Area.

- **Intersection 41: Foothill Boulevard and Day Creek Boulevard.** The improvements below can fit within the existing right-of-way and will require signing and striping modifications. With these recommended improvements, operations are forecast to operate at an acceptable LOS during the PM peak hours. The improvement is consistent with the proposed mitigation measure in the Empire Lakes Specific Plan EIR. For this intersection to operate acceptably with the addition of the project traffic, the following improvements shall be made:

  - Modify northbound approach of the intersection from two left-turn lanes, three through lanes, and one right-turn lane to two left-turn lanes, two through lanes, one through-right shared lane, and one right-turn lane

- Optimization of coordinated splits

This measure is estimated to be triggered at 5% when the entire Plan is at full buildout.

MM TRAF-2 Prior to the issuance of building permits, the Property/Owner Developer shall pay its fair share to the City of Rancho Cucamonga for the cost of the improvements identified below to mitigate cumulative impacts at these intersections. This fair share contribution will be used by the City with other sources of funds including, but not limited to, fair share contributions from other projects, to construct the following improvements.

- **Intersection 33: Base Line Road and East Avenue**. The modifications below can fit within the existing right-of-way and will require signing and striping modifications. With these recommended improvements, operations are forecast to operate at an acceptable LOS during the AM and PM peak hours. In order for this intersection to operate acceptably with the addition of the project traffic, the following modifications will be needed:
  - Modify northbound approach of the intersection from one left-turn lane, one through lane, and one through-right shared lane to one left-turn lane, one through lane, and one right-turn lane
  - Restripe the southbound approach from one dedicated right-turn lane, two through lanes and one left turn late to two dedicated right-turn lanes, one through lane and one left-turn lane
  - Add right-turn overlap phasing in all directions
  - Optimize signal timing plan coordinated splits
- **Intersection 35: Terra Vista Parkway and Milliken Avenue**. The modifications below can fit within the existing right-of-way and will require signing and striping modifications. With these recommended improvements, operations are forecast to operate at an acceptable LOS during the PM peak hours. In order for this intersection to operate acceptably with the addition of the project traffic, the following modifications will be needed:
  - Modify eastbound approach of the intersection from one left-turn lane, one through lane, and one through-right shared lane to two left-turn lanes and one through-right shared lane
  - Adjust signal timing plan coordinated splits

MM TRAF-3 Prior to the issuance of building permits, the Property/Owner Developer shall pay its fair share for the following measures required to mitigate Cumulative Year (2040) Plus Project conditions. This fair share contribution will be used by the Caltrans with other sources of funds including, but not limited to, fair share contributions from other projects, to construct the following improvements.

- **Intersection 34: Baseline Avenue and I-15 Northbound Ramps**. The modifications below can fit within the existing right-of-way and will require signing and striping modifications. With these recommended improvements, operations are forecast to operate at an acceptable LOS during the PM peak hours. In order for this intersection to operate acceptably with the addition of the project traffic, the following modifications will be needed:
    - Modify northbound approach of the intersection from one left-turn lane, one left-right shared lane, and one right-turn lane to one left-turn lane and two right-turn lanes.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Intersection Operation

Existing (2017) Conditions

Table 4.15-12: 2017 Existing Year Comparison of No Project, Plus Project, and Mitigated Scenarios below compares the delay and LOS for the Existing (2017), Existing (2017) Plus Project, and Existing (2017) Plus Project with Mitigation scenarios. For all locations, the identified Mitigation Measures (**MM TRAF-1**) improve the intersection operations to either an acceptable LOS or pre-project conditions. As such, impacts would be reduced to a less than significant level.

Table 4.15-12
2017 Existing Year Comparison of No Project, Plus Project, and Mitigated Scenarios

No.	Intersection	Peak Hour	Existing (2017)		Existing Plus Project		Existing Plus MM Project	
			Delay (sec/veh)	LOS	Delay (sec/veh)[1]	LOS[2]	Delay (sec/veh)[1]	LOS[2]
7	Wilson Avenue and Day Creek Boulevard	AM	19.8	B	>120	F	46.4	D
		PM	10.0	A	>120	F	26.3	C
17	Banyan Street and Milliken Avenue	AM	36.9	D	55.6	E	52.7	D
		PM	16.7	B	21.1	C	19.8	B
19	Banyan Street and Day Creek Boulevard	AM	34.0	C	75.9	E	43.4	D
		PM	15.1	B	24.1	C	23.3	C
41	Foothill Boulevard and Day Creek Boulevard	AM	26.7	C	30.2	C	27.4	C
		PM	70.5	E	77.6	E	54.0	D

*Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in **Appendix K**.*

Notes:

[1] Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way stop-controlled (AWSC) intersections. Worst movement delay reported for side-street-stop-controlled (SSSC) intersections

[2] LOS calculations performed using the Highway Capacity Manual (HCM) 6th Edition method

Cumulative (2040) Conditions

Table 4.15-13: 2017 Existing Year Comparison of No Project, Plus Project, and Mitigated Scenarios below compares the delay and LOS for the Cumulative Year (2040), Cumulative Year (2040) Plus Project, and Cumulative Year (2040) Plus Project with Mitigation scenarios. For all locations, the identified Mitigation Measures (**MM TRAF-2** and **MM TRAF-3**) improve the intersection operations to either an acceptable LOS or pre-project conditions. As such, impacts would be reduced to a less than significant level.

Table 4.15-13
2040 Cumulative Year Comparison of No Project, Plus Project, and Mitigated Scenarios

No.	Intersection	Peak Hour	Cumulative (2040)		Cumulative Plus Project		Cumulative Plus MM Project	
			Delay (sec/veh)	LOS	Delay (sec/veh)[1]	LOS[2]	Delay (sec/veh)[1]	LOS[2]
7	Wilson Avenue and Day Creek Boulevard	AM	18.6	B	65.0	E	28.2	C
		PM	12.6	B	207	F	24.4	C
17	Banyan Street and Milliken Avenue	AM	32.6	C	67.6	E	37.1	D
		PM	31.7	C	36.6	D	25.2	C
19	Banyan Street and Day Creek Boulevard	AM	24.7	C	66.7	E	48.2	D
		PM	15.2	B	25.8	C	24.6	C
33	Base Line Road and East Avenue	AM	79.3	E	79.4	E	52.5	D
		PM	132	F	131	F	53.3	D
34	Baseline Avenue and I-15 Northbound Ramps	AM	21.1	C	21.1	C	25.5	C
		PM	55.6	E	56.3	E	48.9	D
35	Terra Vista Parkway and Milliken Avenue	AM	24.4	C	24.8	C	31.3	C
		PM	59.2	E	63.8	E	40.2	D
41	Foothill Boulevard and Day Creek Boulevard	AM	27.8	C	31.5	C	31.5	C
		PM	58.8	E	63.3	E	51.0	D

Source: Fehr and Peers, Etiwanda Heights Neighborhood and Conservation Plan Transportation Impact Study, March 2019, included in ***Appendix K****.*

Notes:

[1] *Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way stop-controlled (AWSC) intersections. Worst movement delay reported for side-street-stop-controlled (SSSC) intersections*

[2] *LOS calculations performed using the Highway Capacity Manual (HCM) 6th Edition method*

Freeway Impacts

As identified above, many of the freeway segments with the addition of Plan traffic would exceed the significance criteria. As such, there are both project-level impacts and cumulative impacts to the freeway system near the Plan Area. The freeway traffic congestion also further burdens local streets that avoid I-15 and SR-210 to cut through Rancho the City. It is noted that freeways are currently congested and is anticipated to get further congested, with or without the Plan, due to regional population growth.

To mitigate the impacts at the identified locations, freeway mainline widening or freeway ramps widening would be needed, which requires a complete reconstruction of the freeway in the Plan Area vicinity; a process that is suited to regional planned efforts and is infeasible for a single development project or specific plan project to undertake. Since freeways are an interconnected system, it would not be possible,

nor effective, to provide isolated spot improvements of one segment of the freeway where deficient operations are observed.

While the cumulative analysis assumes planned and funded improvements for freeway segments, additional freeway improvements are not considered feasible at this time because: (1) such improvements are unlikely to be accomplished within a reasonable period of time (i.e. the horizon year of the project) and would therefore not reduce or avoid impacts because such a project would require substantial consultation with SCAG and Caltrans, (2) such a project will require SCAG and Caltrans to make various policy choices to amend the RTP and related long term transportation plans which cannot be determined at this time (e.g. funding such a suggestion could potentially eliminate or delay other regional projects which may be of higher priority), (3) SCAG and Caltrans would have to perform additional transportation planning to determine the effectiveness of such a suggestion, and (4) given the large scope of the suggested project, such planning should be done on a regional level rather than based upon the needs of individual components of the transportation system such as the Plan.[17] The keystone of regional planning is consistency between the general plan, its internal elements, subordinate ordinances, and all derivative land use decision, therefore a case-by-case reconsideration of regional land-use policies, in the context of a project-specific EIR, is the very antithesis of that goal. However, if a funding program for these improvements is determined at a future date that includes a local funding component, the Plan will participate on a fair share basis.

Lastly, the I-210 and I-15 freeways are not controlled by the City; the City cannot not guarantee implementation of measures to mitigate cumulative impacts to freeways. For these reasons, impacts would remain significant and unavoidable.

17 Citizens of Goleta Valley v. Board of Supervisors of Santa Barbara County (1990) 52 Cal.3d 553.