



Community Mobility

Existing Conditions Report

May 2020



Summary

The purpose of assessing existing conditions is to help the City of Rancho Cucamonga develop a General Plan update (PlanRC) strategy to encourage an integrated, multimodal transportation system that meets the needs of Rancho Cucamonga. This chapter reviews several aspects of transportation mobility, including regulatory setting, travel characteristics, streets and roadways along with their functional classifications, pedestrian facilities, bicycle facilities, transit services and facilities, goods movement, parking, and the future trends of transportation.

Key Findings

Key findings of the assessment are noted below. Additional detail and information can be found later in this chapter.

- Existing regional rail connections are east-west, but there is an opportunity to create a regional transit hub within the Inland Empire by creating a north-south regional transit connection that will connect Rancho Cucamonga to Ontario, Eastvale, Corona, and other jurisdictions. Collaboration among regional transportation agencies and surrounding cities including Rancho Cucamonga will be needed to pursue this. The collaboration may include buy-in from regional transit agencies and creation of a joint powers authority to reach the common goal of increased regional rail connections. In addition, the City should identify and evaluate the roadway connections to nearby communities as another opportunity for improving regional networks.
- State regulations such as Assembly Bill 1358 (California Complete Streets Act) and Senate Bill 743 (SB 743) are affecting the desired functionality of City streets and the analysis of transportation impacts.
 - The California Complete Streets Act requires a circulation element to plan for all modes of transportation, including walking, biking, car travel, and transit, for users of all ages and abilities. The City adopted a complete streets ordinance in 2012 to ultimately provide for the safe, convenient, and comfortable experience of all travelers. The City should update the complete streets ordinance to provide access for users of all abilities and mode choice.
 - SB 743 aims to manage congestion management with the promotion of infill development, active transportation for improved public health, and the reduction of greenhouse gas emissions. This will be achieved by shifting from using auto delay (LOS) as the primary metric to using vehicle miles traveled (VMT) to evaluate transportation impacts of land development for CEQA purposes. LOS may still be used for roadway planning purposes and for evaluating CEQA impacts of specific roadway projects.
- Current roadway classifications prioritize automobile circulation because the roadway hierarchy is based on the vehicular capacity, type and frequency of vehicular access that is allowed (e.g., intersection spacing, driveway locations). However, these same streets also need to serve bicyclists, pedestrians, and transit users. In some cases, for example, it is more important to prioritize walking or biking over vehicle capacity because of the character of the street (i.e., a downtown shopping district with on-street parking), adjacent land uses (i.e., parks, schools, or mixed-use developments), or to create connectivity between adjacent, complementary uses. Use of a new system such as a street typology that addresses the overall context of a roadway and the adjacent land uses is one way to provide a more balanced planning approach across travel modes.

Alternatively, a layered network approach can be employed to identify those streets where active modes and/or transit should be prioritized, and other streets where vehicle capacity is more important (but where other modes could still be considered). Identifying the modal priority for regional roadway connections could also be investigated in light of the General Plan update.

- Collisions involving bicycles and pedestrians had higher rates of fatal and severe injuries compared to collisions involving motor vehicles across the City. Safety should be a major priority for street treatments, especially when planning future activity centers where high pedestrian activity is anticipated. The City may also consider making a greater commitment to “safety first” by prioritizing safety of all users.
- From electric vehicles and ridesharing to autonomous vehicles, innovation in the transportation sector is already changing the way we get around. These developments and innovations have the potential to make travel safer, more convenient, and more environmentally sustainable. The General Plan Update will need to anticipate how these changes could affect the design of streets and consider new curbside management strategies as travel behavior and vehicle ownership patterns evolve.
- Due to a mismatch in local jobs and skill levels of residents, only 15% of Rancho Cucamonga residents work in the City and 85% commute to other locations. Their travel patterns indicate that the majority of residents travel west and east to jobs in other cities in Los Angeles and San Bernardino Counties, respectively. The General Plan update should identify incentives to increase the number of local jobs for higher skill levels in the City and increase commute trip internalization.
- Despite having a generally good sidewalk network, key sidewalk gaps exist in the City. Some parts of the City have sidewalk gaps as a result of design choice. For example, the gaps in the older neighborhoods of northern Alta Loma reflect the intention to preserve a rural character, and the areas along Base Line and Carnelian Street were developed under County standards. Closing sidewalk gaps should be prioritized in the southwest part of the City where there is a higher density of pedestrian-related collisions and future development potential. Overall, sidewalks may still be desirable in all areas, especially on routes to school.
- There is limited roadway connectivity between the north and south part of the City across SR-210 and a lack of east-west connectivity to the north of SR-210. The Mobility Element should focus on connectivity to the north area, especially to assist in emergency access.
- The City offers a well-connected grid of arterial streets, many of which have existing and planned bicycle facilities. However, many of these streets are also truck routes and facilitate high travel speeds; both of which decrease bicycle comfort. The City should review the on-street bicycle network to separate the truck routes from bicycle facilities or to provide alternative bicycle routes.
- The robust network of existing City trails is a great community asset and there is an opportunity to connect bicycle facilities throughout the City using drainage channels and utility corridors. The General Plan update should identify these opportunities and coordinate with appropriate agencies to ensure their implementation.

Community Mobility

This chapter provides an assessment of existing transportation regulations, infrastructure conditions, services, and system performance in the City of Rancho Cucamonga. The information provided in this chapter establishes a consistent baseline that frames the City's transportation conditions in the larger regional context of San Bernardino County and Inland Empire Cities.

Introduction

This chapter discusses the existing transportation infrastructure in the City and the Sphere of Influence, including roadways, bicycle and pedestrian facilities, and transit. It also describes truck routes and traffic distribution patterns throughout the City. Rancho Cucamonga's transportation system not only serves the everyday mobility needs of its residents, but also affects regional travel patterns associated with its growing employers and goods movement industry. Consequently, the General Plan Update will evaluate transportation conditions in Rancho Cucamonga at both a local and regional scale in this changing context.

This report will subsequently be used as a basis for facilitating community input on planning issues, priorities, and visions for the future; preparing alternative land use and transportation planning scenarios; formulating policies and implementation actions for the General Plan; and creating the environmental setting portion of the Environmental Impact Report for the General Plan.

Transportation System and Context

The City of Rancho Cucamonga has convenient access to both local and regional transportation facilities, including freeways, arterial roadways, a commuter rail connection, and convenient proximity to the Ontario International Airport. Three major freeways serve the City: Interstates 10 and 15 and State Route 210. Interstate 10 (I-10) runs just south of the City limits with several interchanges at major arterials. Interstate 15 (I-15) runs along the eastern edge of the City, and State Route 210 (SR-210) runs thorough the northern part of the City. To the east of Rancho Cucamonga lies the City of Fontana, to the south is the City of Ontario, and to the west is the City of Upland. This section discusses the existing transportation system, focusing on commute trends and the current regulatory framework shaping transportation in the City of Rancho Cucamonga.

Key Transportation Agencies

City of Rancho Cucamonga

The City of Rancho Cucamonga is responsible for planning, constructing, and maintaining local public transportation facilities, including all City streets, City-operated traffic signals, sidewalks, and bicycle facilities. These local services are funded primarily by gas-tax revenue, Measure I revenue, and developer fees. The City has jurisdiction over all

City streets and traffic signals except for those operated by Caltrans (noted below) or shared with adjacent jurisdictions.

San Bernardino County Transportation Authority (SBCTA)

San Bernardino County Transportation Authority (SBCTA), formerly San Bernardino Association of Governments (SANBAG), is the joint powers authority that oversees regional transportation planning comprising all the cities in San Bernardino County. SBCTA oversees the countywide multimodal transportation system with delivering freeway construction projects, regional road improvements, transit and rail improvements, grade separations, call boxes and ridesharing programs, congestion relief, as well as long-term planning efforts.

Southern California Association of Governments (SCAG)

The regional transportation planning agency and Metropolitan Planning Organization (MPO) for the Southern California region is SCAG. SCAG develops long-range regional transportation plans (RTPs) including the Sustainable Communities Strategy (SCS) and growth forecast components. SCAG also develops the regional transportation improvement programs (RTIP).

Caltrans

Caltrans has authority over the State highway system, including mainline facilities, interchanges, and arterial State routes. Caltrans approves the planning and design of improvements for all State-controlled transportation facilities. Caltrans facilities in or serving Rancho Cucamonga include I-10, 1-15, SR-210 Freeways and the associated interchanges.

Transit Operators

OmniTrans

OmniTrans operates local and express bus service as well as bus rapid transit service in Rancho Cucamonga. OmniTrans also operates the shuttle service and paratransit service in the City.

Metrolink

Metrolink is the commuter rail system in Southern California that connects Rancho Cucamonga with destinations in Los Angeles County, San Bernardino County, and Riverside County.

System Monitoring

The City is working towards the goal of installing Advanced Traffic Management System (ATMS) that allows staff to monitor traffic at strategic locations throughout the City. Phase 1 of the ATMS is currently in design and is expected to begin construction in late 2020. The system allows for the transportation system to work more effectively and efficiently by providing the ability to adjust critical traffic signals from the City's Traffic Management Center (TMC). These tools will allow the City of Rancho Cucamonga to better monitor and address congestion issues.

Regulatory Setting

The regulatory framework is meant to inform decision makers about the regulatory agencies and policies that affect transportation in the City of Rancho Cucamonga. This enables decision makers to execute informed decisions about planning improvements to transportation systems.

State Regulations

Assembly Bill 1358 (California Complete Streets Act)

Assembly Bill 1358 (AB 1358) or the California Complete Streets Act, was signed into law on September 30, 2008. Since January 1, 2011, AB 1358 has required circulation element updates to address the transportation system from a multimodal perspective. The Act states that streets, roads, and highways must “meet the needs of all users in a manner suitable to the rural, suburban, or urban context of the General Plan.” The Act requires a circulation element to plan for all modes of transportation where appropriate, including walking, biking, car travel, and transit. In addition, the Act requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and the disabled.

Rancho Cucamonga adopted its Complete Streets Ordinance in 2012 to implement the goals of providing complete streets in the City from the 2010 General Plan¹.



Conceptual Street Cross-Section of a Complete Street. Source: Fehr & Peers

Assembly Bill 32 (Global Warming Solutions Act)

Assembly Bill 32 (AB 32) or the Global Warming Solutions Act was signed into law on September 27, 2006. AB 32 established a comprehensive program to reduce greenhouse gas emissions to combat climate change. This bill requires the California Air Resources Board (CARB) to develop regulations that reduce greenhouse gas emissions to 1990 levels by 2020. On January 1, 2012, the greenhouse gas rules and market mechanisms, adopted by CARB, took effect and became legally enforceable. The reduction goal for 2020 is to reduce greenhouse gas emissions by 25% of the current rate in order to meet 1990's level, and a reduction of 80% of current rates by 2050. The AB 32 Scoping Plan contains the main strategies California will use to reduce the greenhouse gases. The scoping plan has a range of greenhouse gas reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, and an AB 32 program implementation regulation for funding. In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40% below 1990 levels.

CARB recognizes cities as “essential partners” in reducing greenhouse gas emissions. The Air Resources Board has developed a Local Government Toolkit with guidance for GHG reduction strategies such as improving transit, developing bicycle/pedestrian infrastructure, increasing city fleet vehicle efficiency, and other strategies.

The City of Rancho Cucamonga is currently striving to comply with AB 32 and implement greenhouse gas reduction strategies into the City's General Plan by adopting the Complete Streets Ordinance in 2012 and publishing Sustainable Community Action Plan in 2018. SBCTA is also undertaking several initiatives including transit

¹ <https://smartgrowthamerica.org/app/legacy/documents/cs/policy/cs-ca-ranchocucamonga-ordinance.pdf>

investments, technology-enabled multimodal action plan, Transit-Oriented Development (TOD) planning, countywide active transportation investment, etc. which intends to comply with the statewide reduction targets.

Senate Bill 375 (Sustainable Communities and Climate Protection Act)

Senate Bill 375 (SB 375) or the Sustainable Communities and Climate Protection Act, provides incentives for cities and developers to bring housing and jobs closer together and to improve public transit. The goal is to reduce the number and length of automobile commuting trips, helping to meet the statewide targets for reducing greenhouse gas emissions set by AB 32.

SB 375 requires each MPO to add a broader vision for growth to its transportation plan - called a Sustainable Communities Strategy (SCS). The SCS must lay out a plan to meet the region's transportation, housing, economic, and environmental needs in a way that enables the area to lower greenhouse gas emissions. The SCS should integrate transportation, land-use, and housing policies to plan for achievement of the emissions target for each region. The SCAG Regional Transportation Plan (RTP) and SCS were adopted in 2016.

For consistency with the regional planning objectives of the SCS, consideration of ways to achieve the following is needed as part of the General Plan Update process:

- Support transit-oriented development;
- Support mixed-use development, which improves community walkability;
- Improve jobs-to-housing ratio;
- Promote land use patterns that encourage the use of alternatives to single-occupant automobile use;
- Apply Transportation System Management (TSM) and Complete Streets practices to arterials to maximize efficiency;
- Improve modes through enhanced service, frequency, convenience, and choices; and
- Enhance Transportation Demand Management (TDM) practices to reduce barriers to alternative travel modes and attract commuters away from single-occupant vehicle travel.

Senate Bill 743 (SB 743)

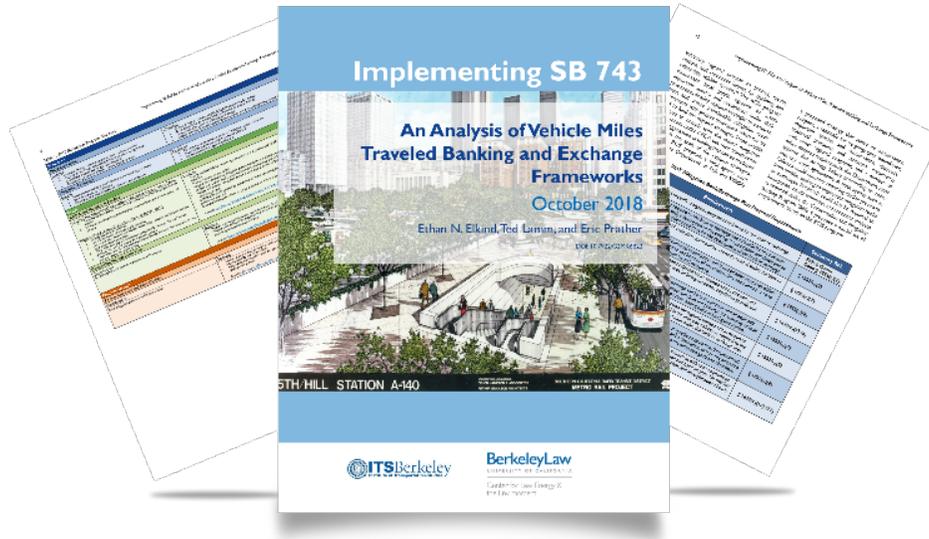
Senate Bill 743 (SB 743) was signed into law on September 27, 2013 and has the potential to fundamentally change the traditional transportation impact analyses conducted as part of the CEQA process. According to this bill, traffic impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area will not be considered significant. Also, residential, mixed-use, and employment center projects meeting specific criteria would be exempt from CEQA. Furthermore, for the CEQA process, this bill eliminates measures such as auto delay, level of service (LOS), and other vehicle-based measures of capacity in many parts of California. Instead, other measurements such as vehicle miles traveled (VMT) are to be utilized to measure impacts.

The purpose of SB 743 is to balance the needs of congestion management, infill development, public health, greenhouse gas reductions, and other goals. The Office of Planning and Research released the *Technical Advisory on Evaluating Transportation Impacts in CEQA*² in December 2018. Rancho Cucamonga is currently leading the countywide effort to develop the SB 743 implementation study, a guiding document for VMT analysis methodology, thresholds, and mitigation strategies for transportation impact evaluation for SBCTA agencies.

To comply, the City of Rancho Cucamonga is leading the process in San Bernardino County to develop guidelines and significance criteria consistent with SB 743 by July 1, 2020. This process includes adoption of thresholds of

² *Technical Advisory on Evaluating Transportation Impacts in CEQA*, 2018. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

significance and identification of a VMT analysis methodology. These choices will be documented in the updated traffic impact study guidelines but will be revisited during the PlanRC process.



SB 743 Implementation Framework Example. Source: Fehr & Peers

Regional Regulations

San Bernardino County Congestion Management Program (CMP)

The passage of Proposition 111 in June 1990 established a process for each metropolitan county in California, including San Bernardino County within which the City of Rancho Cucamonga is located, to prepare a Congestion Management Plan³ (CMP). Updated by SBCTA in 2016, the CMP is an effort to align land use, transportation, and air quality management efforts in order to promote reasonable growth management programs that effectively use statewide transportation funds, while ensuring that new development pays its fair share of needed transportation improvements.

The focus of the CMP is the development and coordination of a multimodal transportation system across jurisdictional boundaries, incorporating the goals from SCAG RTP/SCS. Per the Level of Service target of “E” adopted by SBCTA, when a CMP segment falls to “F,” a deficiency plan must be prepared by the local agency where the deficiency is located. The plan must contain mitigation measures, including Transportation Demand Management (TDM) strategies and transit alternatives, and a schedule of mitigating the deficiency. It is the responsibility of local agencies to consider the traffic impacts on the CMP when reviewing and approving development proposals.

It should be noted that SB 743 provides the option for local agencies to opt out of the CMP individually due to the outdated regulatory nature of CMP. This may be something the City could consider in the future to reduce the regulatory requirement and the cost of annual monitoring of intersections. For reference, the following facilities are designated CMP facilities in or serving the City: I-10, I-15, SR-210, 19th Street, Base Line Road, Foothill Boulevard, Arrow Route, 4th Street, Archibald Avenue, Haven Avenue, and Milliken Avenue.

³ *San Bernardino County Congestion Management Program*, 2016. <https://www.gosbcta.com/wp-content/uploads/2019/10/2016-Congestion-Management-Plan-.pdf>

Regional Transportation Plan (RTP)

The Regional Transportation Plan (RTP) is prepared by SCAG for the six-county SCAG region. This long-range transportation plan (approximately 20-year horizon) projects population and employment growth and defines the vision and overall goals for the regional multimodal transportation system. The RTP identifies future transportation infrastructure needs and defines planned multimodal transportation improvements, including freeways, high-occupancy vehicle facilities, bus and rail transit, freight movement, and aviation. This plan therefore sets the framework for the regional transportation infrastructure system that serves Rancho Cucamonga.

Caltrans VMT-Focused Transportation Impact Study Guide (TISG)

The Caltrans VMT-Focused Transportation Impact Study Guide⁴ (TISG) provides a starting point and a consistent basis on which Caltrans evaluates traffic impacts to state highway facilities. Still in draft format, the guide provides information on when a traffic impact study is needed based on VMT, the scope of a traffic impact study (i.e. the boundaries of the traffic study and the analysis scenarios), the required data for a traffic impact study, analysis methodologies for various types of state facilities, and guidelines for mitigating impacts. A future update will include basis for requesting transportation impact analysis that is not based on VMT.

Measure I 2010-2040 Strategic Plan

First approved in 1989 and extended in 2004 by the voters, Measure I is the half-cent sales tax collected throughout San Bernardino County for transportation improvements. Administered by SBCTA, the Measure I 2010-2040 Strategic Plan⁵ is the official guide for the allocation and administration of the combination of local transportation sales tax, State and Federal transportation revenues, and private fair-share contributions to regional transportation facilities to fund delivery of the Measure I 2010-2040 transportation programs. The strategic plan identifies funding categories, allocations, and planned transportation improvement projects in the County for freeways, major and local arterials, bus and rail transit, and traffic management systems. For the fiscal years 2018-19 through 2022-23, Rancho Cucamonga has identified improvements worth approximately \$19 million in funding for pavement rehabilitation projects, citywide Americans with Disabilities Act (ADA) corrective measures, signal and striping maintenance, etc. These improvements are planned to be funded through the Measure I Local Streets Program. It is to be noted that the five-year Capital Improvement Program (CIP) is over programmed to allow use of this funding source if additional funding is available during the five-year planning period. For a detailed list of the projects, see Appendix A.

San Bernardino County Long-Range Transit Plan

SBCTA updates its Long-Range Transit Plan⁶ (LRTP) to address transit needs for an approximate 25-year horizon. The LRTP prioritizes goals and projects for transit growth. With the passage of SB 375 by the State legislature in 2008, the LRTP has been modified to more closely tie land use and transportation planning strategies. The LRTP addresses countywide travel challenges and creates a system aimed to increase the role of transit in future travel choices. The LRTP anticipates that a premium transit service, such as rapid buses and rail modes, will offer solutions to future travel demands by providing competitive travel times and increased reliability, mobility, and accessibility. Premium

⁴ Caltrans Draft VMT-Focused Transportation Impact Study Guide, 2020. <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-02-26-transmittal-and-draft-vmt-focused-tisg.pdf>

⁵ <https://www.gosbcta.com/wp-content/uploads/2019/09/2018-2023CIPSummaryReport.pdf>

⁶ San Bernardino County Long Range Transit Plan, 2010. <https://www.gosbcta.com/wp-content/uploads/2019/10/San-Bernardino-County-Long-Range-Transit-Plan.pdf>

transit will reduce dependence on cars, encourage community revitalization, and encourage more balanced transit-oriented land use development.

SBCTA Non-Motorized Transportation Plan

SBCTA published its Non-Motorized Transportation Plan⁷ (NMTP) in 2011 and revised in 2018, with the vision of creating a safe, interconnected cycling and walking system in the County. Supplemented by local jurisdiction inventory data, the plan provides both regional and city-level recommendations, and the jurisdictions are responsible for the implementation of the plan.

SBCTA Development Mitigation Nexus Study

The SBCTA Development Mitigation Nexus Study⁸ identifies the fair share contributions from new development for regional transportation improvements (e.g., freeway interchanges, railroad grade separations, and regional arterial highways). The Nexus Study is updated biennially or as requested by SBCTA Board of Directors and in close coordination with local jurisdictions.

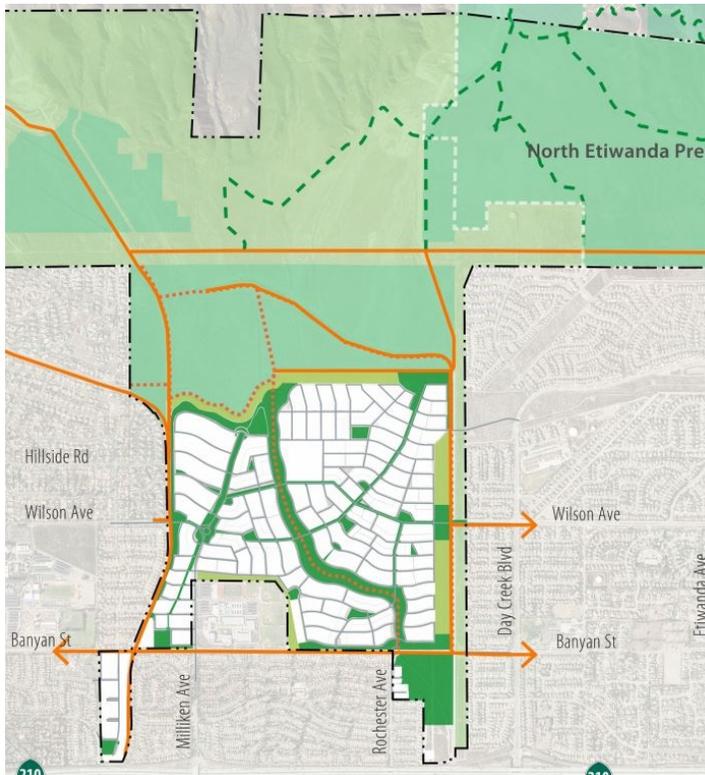
City Projects of Significance

Etiwanda Heights Neighborhood & Conservation Plan (EHNCP)

Adopted in October 2019, the Etiwanda Heights Neighborhood & Conservation Plan (EHNCP) is a Specific Plan that provides the vision and pre-zoning for conservation of the foothills and a neighborhood area in 4,393 acres of unincorporated land (the Planning Area) located to the north and northeast of the City's current boundary. In January 2020, the City submitted an application to the San Bernardino County Local Agency Formation Commission (LAFCO) for approval of the annexation of this planning area. As an undeveloped and rural area, the Planning Area currently has very little roadway network. The Specific Plan provides strategies for connected roadway network, opportunities for active transportation, and enabling existing and future residents to conduct some of their daily errands on foot, on horseback, by bike or a short drive within the neighborhood.

⁷ SBCTA Non-Motorized Transportation Plan. <https://www.gosbcta.com/wp-content/uploads/2019/10/Non-Motorized-Transportation-Plan-.pdf>

⁸ SBCTA Development Mitigation Nexus Study, 2018. <https://www.gosbcta.com/wp-content/uploads/2019/09/CMP-AppendixG-2018.pdf>



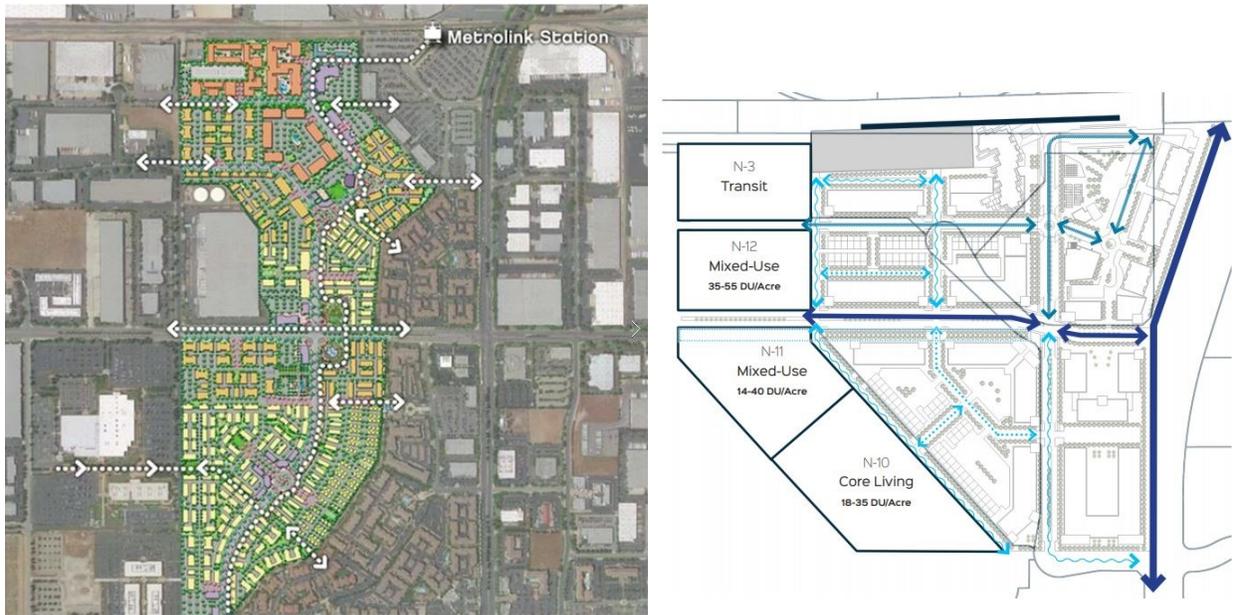
Etiwanda Heights Neighborhood and Conservation Plan (EHNCP) (conceptual). Source: City of Rancho Cucamonga (2016)

The Resort (Empire Lakes) Specific Plan, Planning Area 1

The Empire Lakes Specific Plan was amended in 2016 to allow for the development of a mixed-use project located on a former privately owned and operated golf course in close proximity to the Rancho Cucamonga Metrolink station and a variety of employment centers. The 160-acre Plan provides a setting for residential, commercial, and recreational activity in a connected, intimate, personal pedestrian-oriented community. The plan provides for up to 220,000-square-foot of non-residential development with up to 3,450 dwelling units consisting of a mix of apartments, multi-family and single-family homes. Multimodal circulation is provided on the Resort Parkway (previously referred to as “The Vine” in the amended Specific Plan), a spine road with buffered bike lanes, and a 16-foot wide pedestrian zone on each side.

Empire Yards Transit-Oriented Development Plan

In 2016, the City and SBCTA partnered with a proposed developer to design and implement a transit-oriented development (TOD) in the parking lot areas at the Rancho Cucamonga Metrolink Station. Currently called Empire Yards, the project concept is a multimodal transit village with mixed-use development that will attract Metrolink commuters and serve the broader community. There are opportunities to improve access between Empire Lakes and Empire Yards that will serve complementary land uses in the area.



Left Figure: Empire Lakes Specific Plan, Planning Area 1 (conceptual). Source: City of Rancho Cucamonga (2016); Right Figure: Empire Yards TOD Development Plan (conceptual). Source: City of Rancho Cucamonga (2017)

Travel Characteristics

Housing-Employment Dynamics

Based on 2017 American Community Survey (ACS) and the 2017 Longitudinal Employer-Household Dynamics (LEHD) Origin Destination Employment Statics, about 15% of Rancho Cucamonga’s working population lives and works in the City of Rancho Cucamonga, while the other 85% lives in the City but is employed outside of the City (Figure 3.1). As such, there is an opportunity to address the heavy outbound commute flows by focusing on policies that grow the number of people who both work and live in Rancho Cucamonga. The City should pursue options for shortening commute distances and expanding efforts that increase environmentally sustainable transportation options for commute. The City, through the Rancho Cucamonga Municipal Utility, should also leverage roadway improvements to build fiber infrastructure that provides high speed internet access and facilitates telecommute for both employers and residents in a post COVID-19 world.

There are approximately 82,000 total jobs and approximately 56,000 total households in Rancho Cucamonga.⁹ The City’s jobs to employed residents ratio is 1.08; indicating that the City largely maintains a balance between employed residents and employees within the City. However, the fact that only 15% of people both live and work in the City indicates that the local jobs do not match the skill levels or salary expectations of residents. In other words, although

⁹ U.S. Census Bureau. 2017. OnTheMap Application. Longitudinal-Employer Household Dynamics Program.

the City has a jobs/worker balance, there is a clear jobs/worker mismatch where most residents do not work in the City.

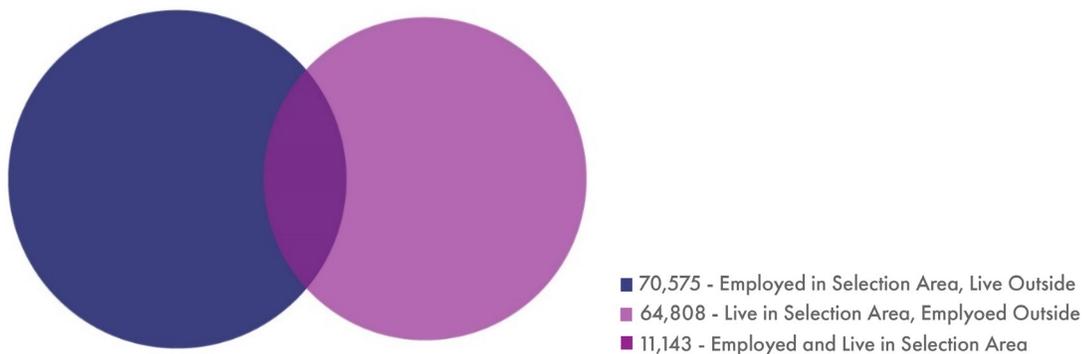
Table 3.1 shows the top workplace destinations of Rancho Cucamonga residents. About 15% of residents work in the City. The other top workplace cities are Ontario (9%), Los Angeles (8%), Upland (3%), Fontana (3%), and San Bernardino (4%); indicating a commute directionality towards the west.

Table 3.1. Top Workplace Destinations of Rancho Cucamonga Residents (2017)

City	Share*
Rancho Cucamonga, CA	15%
Ontario, CA	9%
Los Angeles, CA	8%
Upland, CA	4%
Fontana, CA	4%
San Bernardino, CA	4%
Pomona, CA	3%
Riverside, CA	3%
All Other Locations	50%

Source: U.S. Census Bureau. 2017. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. <http://onthemap.ces.census.gov/>

Figure 3.1. Inflow and Outflow of Job Counts (2017)



Source: Fehr & Peers (2020); U.S. Census Bureau. 2017. OnTheMap Application. <http://onthemap.ces.census.gov/>

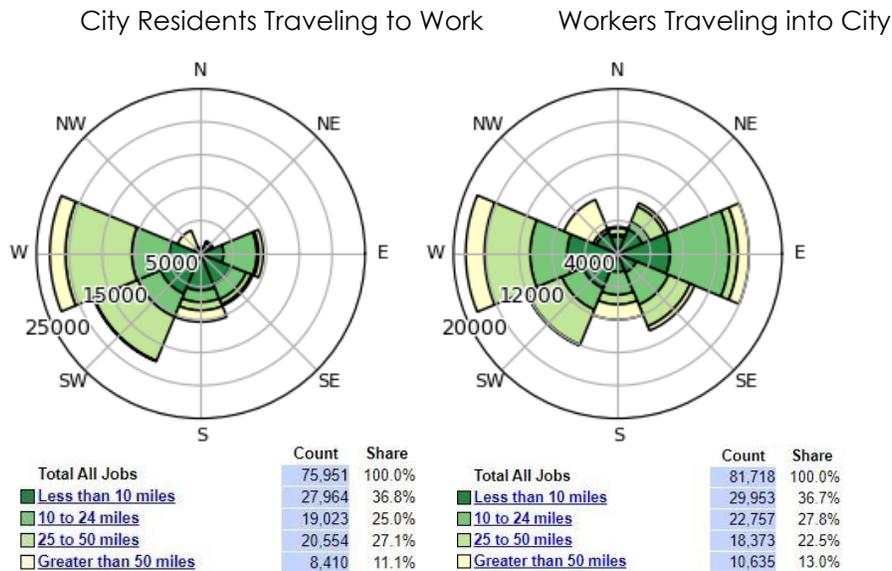
Commute Distances and Patterns

Commute patterns for employed residents are as follows:

- 37% of residents travel less than 10 miles to reach their employment.
- 25% of residents travel between 10 and 24 miles to reach their employment.
- 38% of residents travel 25 miles or more to reach their employment.

63% of Rancho Cucamonga residents travel more than 10 miles to reach their places of employment. The small share of residents traveling less than 10 miles to reach their employment supports the previous conclusions that the city has a relatively small number of people who live and work in Rancho Cucamonga. Figure 3.2 shows that most residents travel west for work, and most workers living outside the city travel from the west and east to work in Rancho Cucamonga.

Figure 3.2. Commute Distance and Direction (2017)



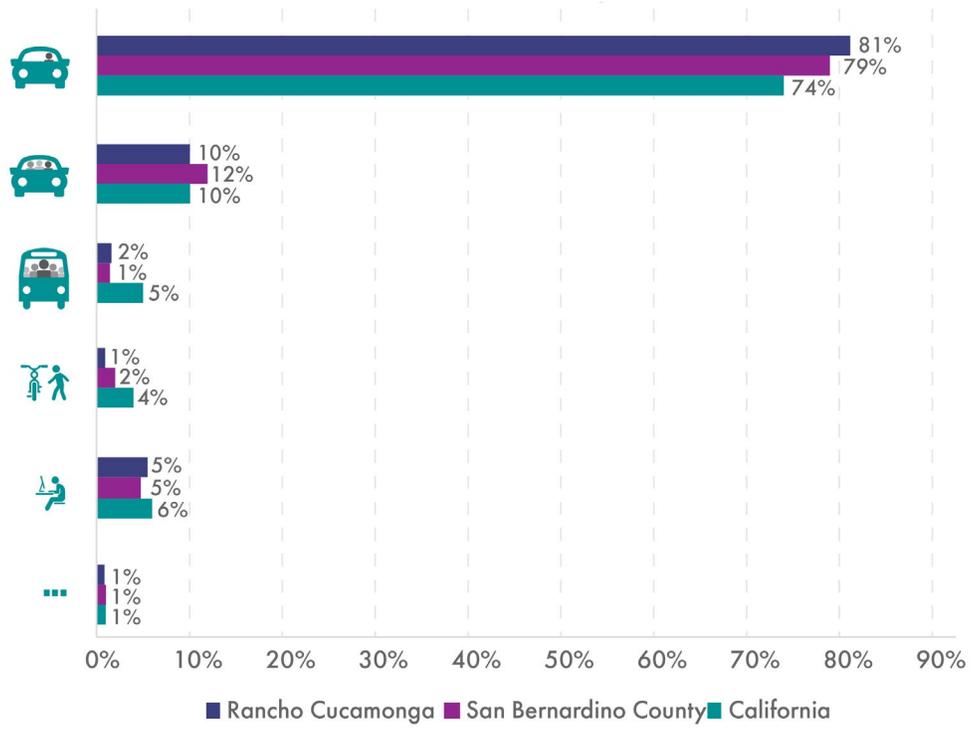
Source: U.S. Census Bureau. 2017. OnTheMap Application. <http://onthemap.ces.census.gov/>

Commuter Modal Split

Transportation modes for commute for the City of Rancho Cucamonga, San Bernardino County, and California are presented in Figure 3.3. The primary mode of travel for all three geographic areas is the automobile, which includes solo drivers and carpools. Automobile trips (both single occupancy vehicle and carpool) make up about 90% of total travel for both the City of Rancho Cucamonga and San Bernardino County, which is higher than the California average of 84%.

Bicycling and walking are less common in Rancho Cucamonga (1% of the total) when compared to the county (2%) and state (4%). Given the rectilinear grid patterns of streets, there are opportunities to increase the share of trips made by bicycle. The City’s public transit modal share (2%) is slightly higher than the County (1%) but substantially lower than the California average (5%). Working at home and other modes (e.g., taxi, motorcycle) comprise the remaining categories.

Figure 3.3. Mode Share for Commute Trips (2017)

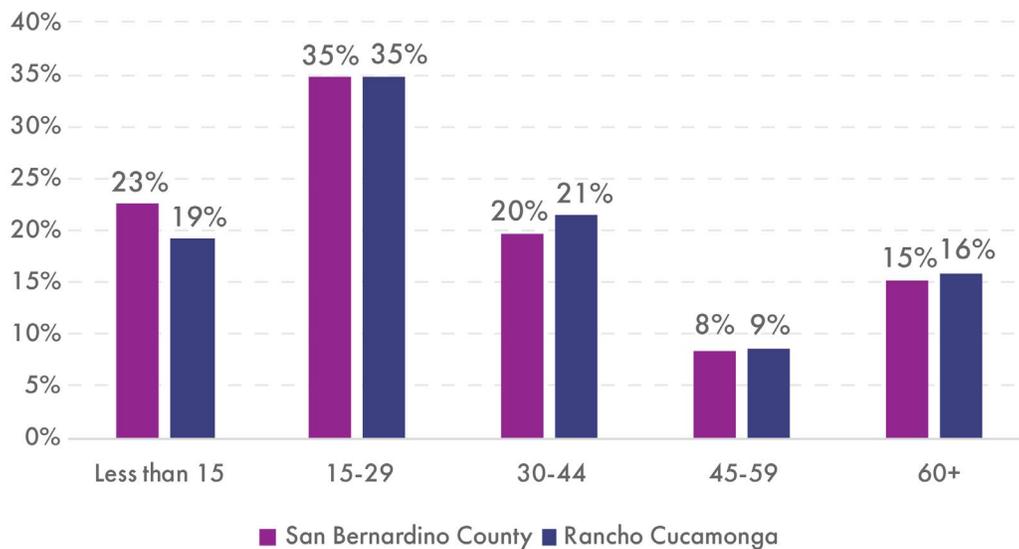


Source: Fehr & Peers (2020); U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Commute Lengths

Figure 3.4 displays the distribution of travel time to work by the percentage of working populations of the City of Rancho Cucamonga and San Bernardino County. The travel time distribution of Rancho Cucamonga residents is generally similar to that of San Bernardino County residents, although the share of Rancho Cucamonga residents that travel more than 30 minutes to work is 3% higher than the corresponding share of San Bernardino County residents.

Figure 3.4. Travel Time to Work in Rancho Cucamonga and San Bernardino County (2013-2017)



Source: Fehr & Peers (2020); U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

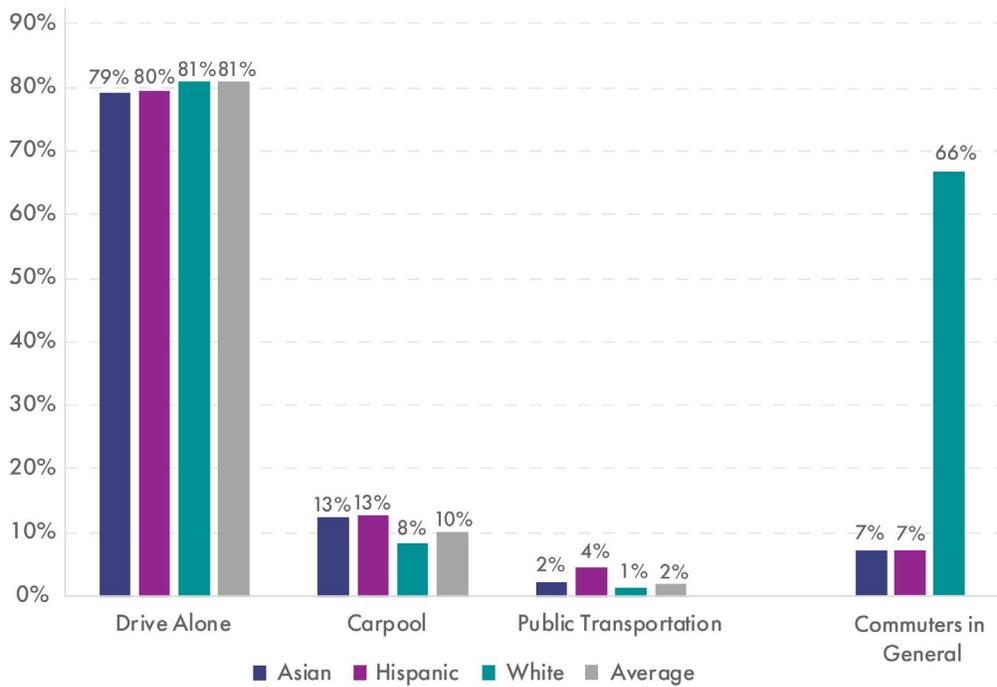
Socioeconomic Factors

Journey to Work Mode by Race and Income

Commute patterns tend to vary between white and nonwhite residents of Rancho Cucamonga, as shown in Figure 3.5. Residents across different races have the similar percentage of driving alone, but a higher percentage of nonwhite residents carpool or ride transit.

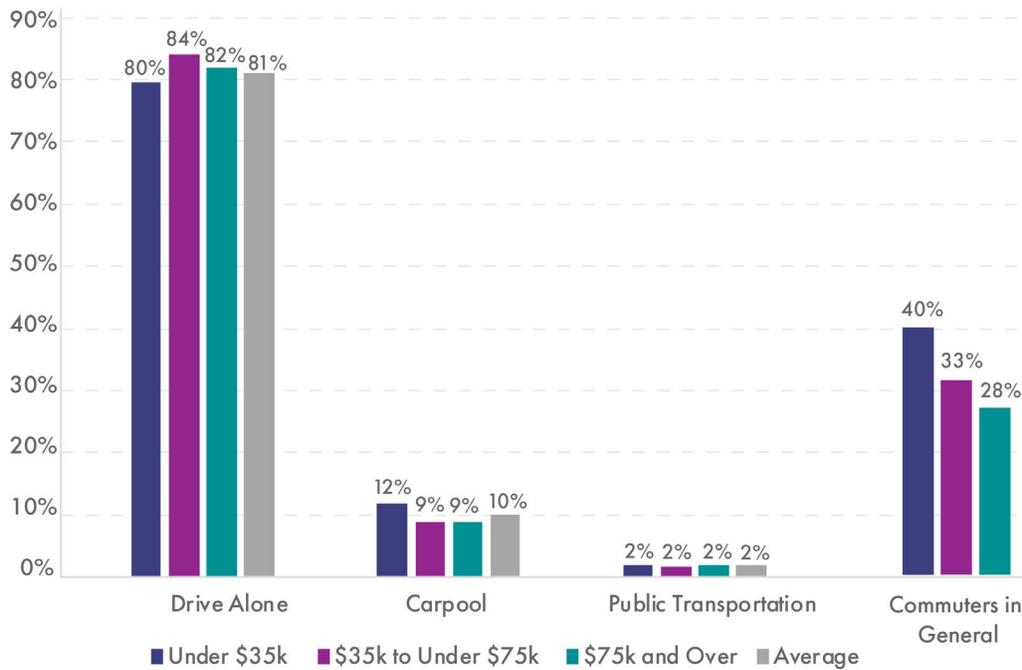
Commuting patterns are relatively comparable across incomes, as shown in Figure 3.6. Moderate income households tend to drive alone slightly more than lower or higher income households, while lower income households tend to carpool more. Transit ridership is the same across all incomes. One possible explanation for this pattern is that some of the highest paying jobs in downtown Los Angeles are more accessible via transit (particularly Metrolink) whereas lower paying jobs are accessed by fixed-route bus service within the City.

Figure 3.5. Journey to Work Mode Percent by Races/Ethnicities (2014-2018)



Source: Fehr & Peers (2020); U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates

Figure 3.6. Journey to Work Mode Percent by Income Level (2014-2018)



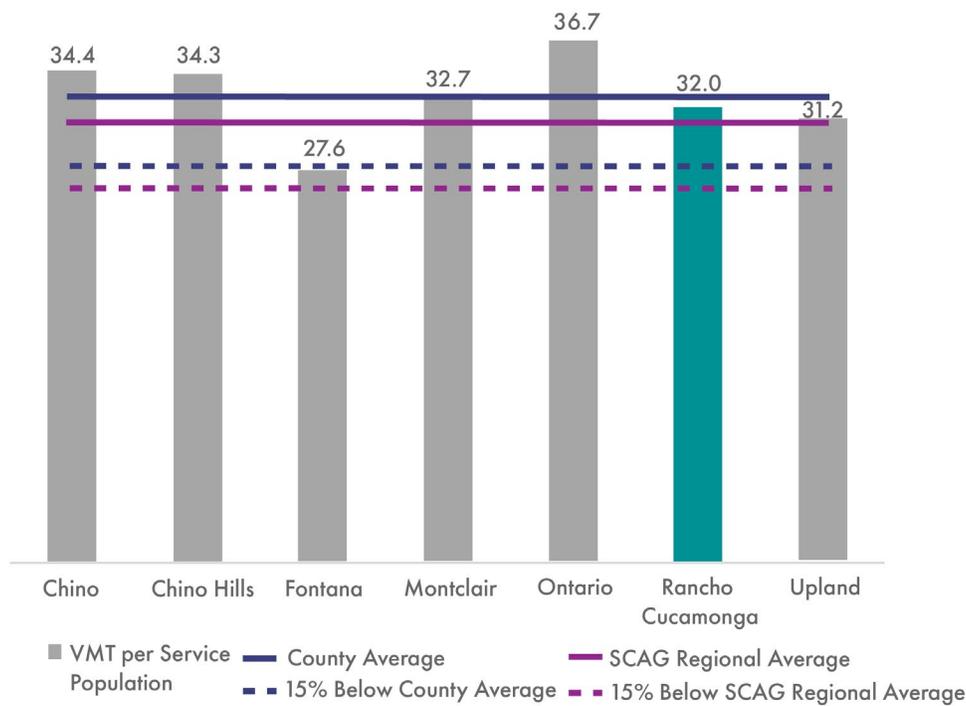
Source: Fehr & Peers (2020); U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates

Vehicle Miles Traveled (VMT)

Vehicle miles traveled (VMT) measures the number of miles traveled during a specified time within a specific region. Cities with more accessibility to key destinations and job centers in a region tend to generate less VMT on a per service population (service population is resident population plus employment) or per household basis compared to locations further away from job centers. After adjusting for commute distances, other things being equal, VMT can also be a good proxy to evaluate whether residents use local services or travel farther for those services.

Rancho Cucamonga VMT per service population is almost the same as the average of the County and in the middle among the neighboring cities in west San Bernardino County, as shown in Figure 3.7. Service population is the sum of the residents and workers in the jurisdiction. Fontana, located just east of the City, has significantly lower VMT per service population; indicating that Rancho Cucamonga could improve its travel efficiency in this area.

Figure 3.7. VMT Per Service Population Comparison in the Neighboring Cities (2018)



Source: Fehr & Peers (2020); Origin-Destination (OD) VMT per Service Population Base Year (2018) SBTAM Model

Existing Street System

This section discusses the existing street system, including discussion of roadway and pavement classifications and conditions. Networks for pedestrians, bicycles, and transit are discussed along with parking and safety information that will inform General Plan Update discussions concerning traffic and circulation.

Roadway System

Regional Highways

Interstate 10

I-10 is located approximately 0.7 miles south of the City limit and provides east-west connectivity to surrounding metropolitan areas. The major interchanges on I-10 that serve the City are provided via major north/south arterials including Vineyard Avenue, Archibald Avenue, Haven Avenue, Milliken Avenue, and Etiwanda Avenue.

Interstate 15

I-15 extends through the southeastern area of the City and along its northeastern City limit with key arterial interchanges at Beech Avenue, Base Line Road, Foothill Boulevard, and 4th Street.

State Route 210

State Route 210 (SR-210) runs through the northern portion of the City, with interchanges located at Carnelian Street, Archibald Avenue, Haven Avenue, Milliken Avenue, and Day Creek Boulevard.

Local Circulation

Roadway Hierarchy

The 2010 Rancho Cucamonga General Plan outlines a roadway hierarchy with three types of facilities: Primary Travel Corridors, Secondary Travel Corridors and Tertiary Travel Corridors (Figure 3.8 and Table 3.2). These roadway types are used as a general description to understand the movement of people and vehicles, and to identify connections to the transit and bicycle networks.

Roadway Classifications

Functional classifications of roadway networks categorize streets by purpose, location, and typical land uses to which they provide access. The functional classification system is often considered an automobile-centric method of planning and does not typically consider travel characteristics and multimodal priorities; consequently, this classification is becoming less common in California cities. Because streets oftentimes have multiple functions, defining street “typologies” beyond the existing functional roadway classifications could better support a multimodal transportation network, assist in implementing complete streets, and generally match the context of the land use environment.

In Rancho Cucamonga, the local street system is organized into a hierarchy of eight roadway types according to the Circulation Plan from 2010 Rancho Cucamonga General Plan. These nine types are Local Streets, Collector Streets, Modified Collector Streets with Median, Secondary Streets, Modified Secondary Streets with Median, Major Arterials, Modified Major Arterials with Median, Major Divided Arterials, and Major Divided Highways, as shown in Figure 3.9.

The current roadway classifications Rancho Cucamonga uses are typical throughout the state, but the current structure focuses only on vehicle travel. The Complete Streets Act (AB 1358) requires that California communities

consider all modes of travel when planning the transportation system. To comply with the requirements and intent of the Act, the General Plan update should include a revision of roadway classifications to better meet the needs of all users and abilities and address the land use context of each street.

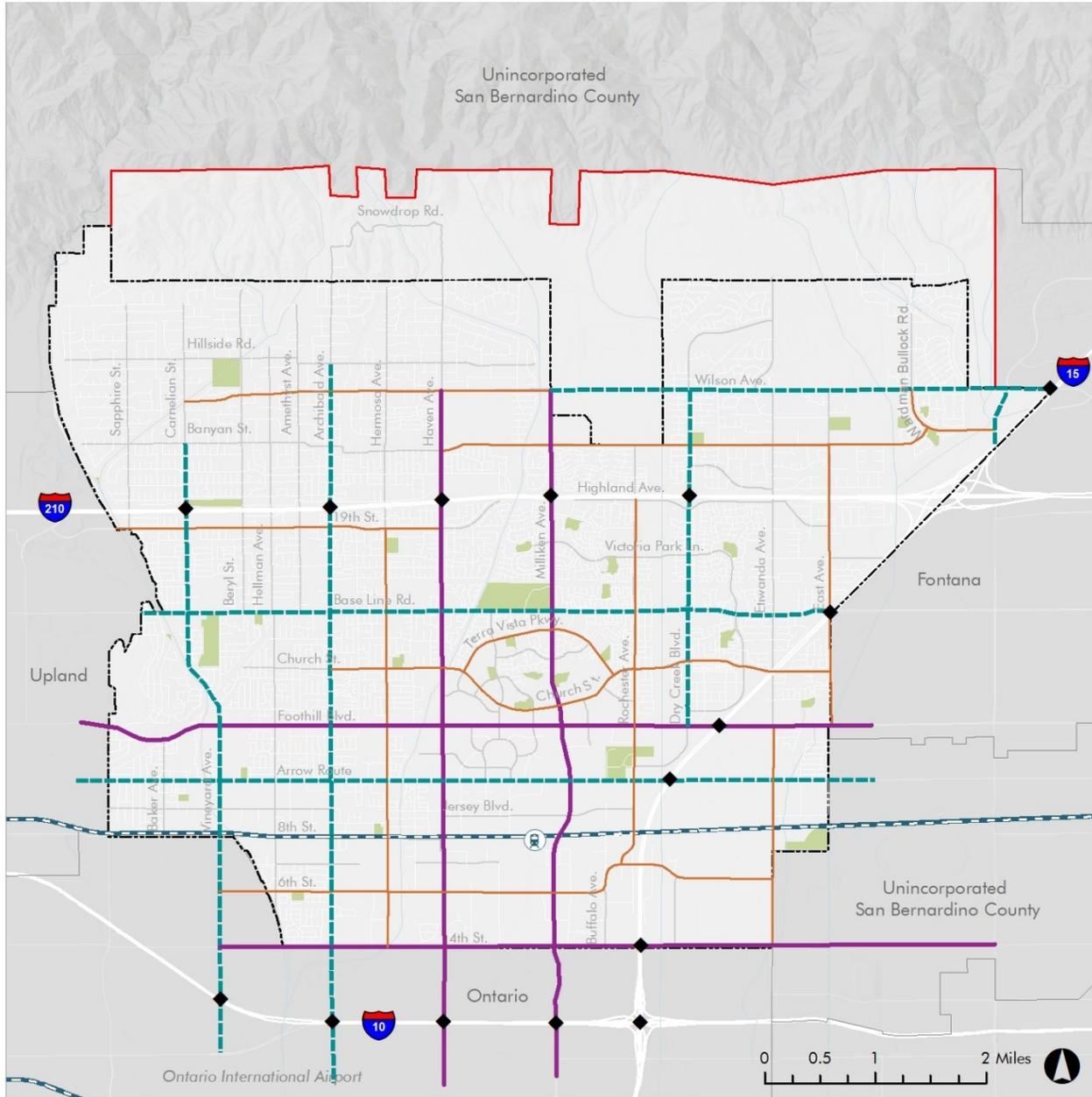
The City may review a reclassification and reprioritization of travel modes on roadways to better support complete streets that serve users of all ages, abilities, and mode choice. This is known as a layered network approach, which recognizes that not all streets can provide the best service for all travel mode types. A narrow street with multiple crossings may be great for walking but may not serve automobiles because of competing interests. By explicitly prioritizing a travel mode for each roadway type, the City of Rancho Cucamonga can focus on providing a network of preferred streets by mode, limiting the overlap between non-compatible modes.

Table 3.2. General Roadway Hierarchy Types (2010)

Type	Description	Features	Streets
Principal Travel Corridors	Traverses the City and extends beyond the City limits to connect to freeways and adjacent communities.	Total Lanes: 6 ADT: 30,000-40,000	<ul style="list-style-type: none"> ▪ Foothill Boulevard ▪ 4th Street ▪ Haven Avenue ▪ Milliken Avenue
Secondary Travel Corridors	Extends across the entire City and in most cases, connects with freeways and extends to other communities.	Total Lanes: 4-6 ADT: 20,000-30,000	<ul style="list-style-type: none"> ▪ Base Line Road ▪ Arrow Highway ▪ Carnelian Street/Vineyard Avenue ▪ Archibald Avenue ▪ Day Creek Boulevard
Tertiary Travel Corridors	Supports and provides access to the primary and secondary corridors. Are more locally oriented and locally traveled.	Total Lanes: 2-4 ADT: 10,000-15,000	<ul style="list-style-type: none"> ▪ Wilson Avenue ▪ Church Street ▪ Banyan Street ▪ 6th Street ▪ 19th Streets ▪ Hermosa Avenue ▪ Rochester Avenue ▪ Etiwanda Avenue ▪ East Avenue

Source: 2010 Rancho Cucamonga General Plan

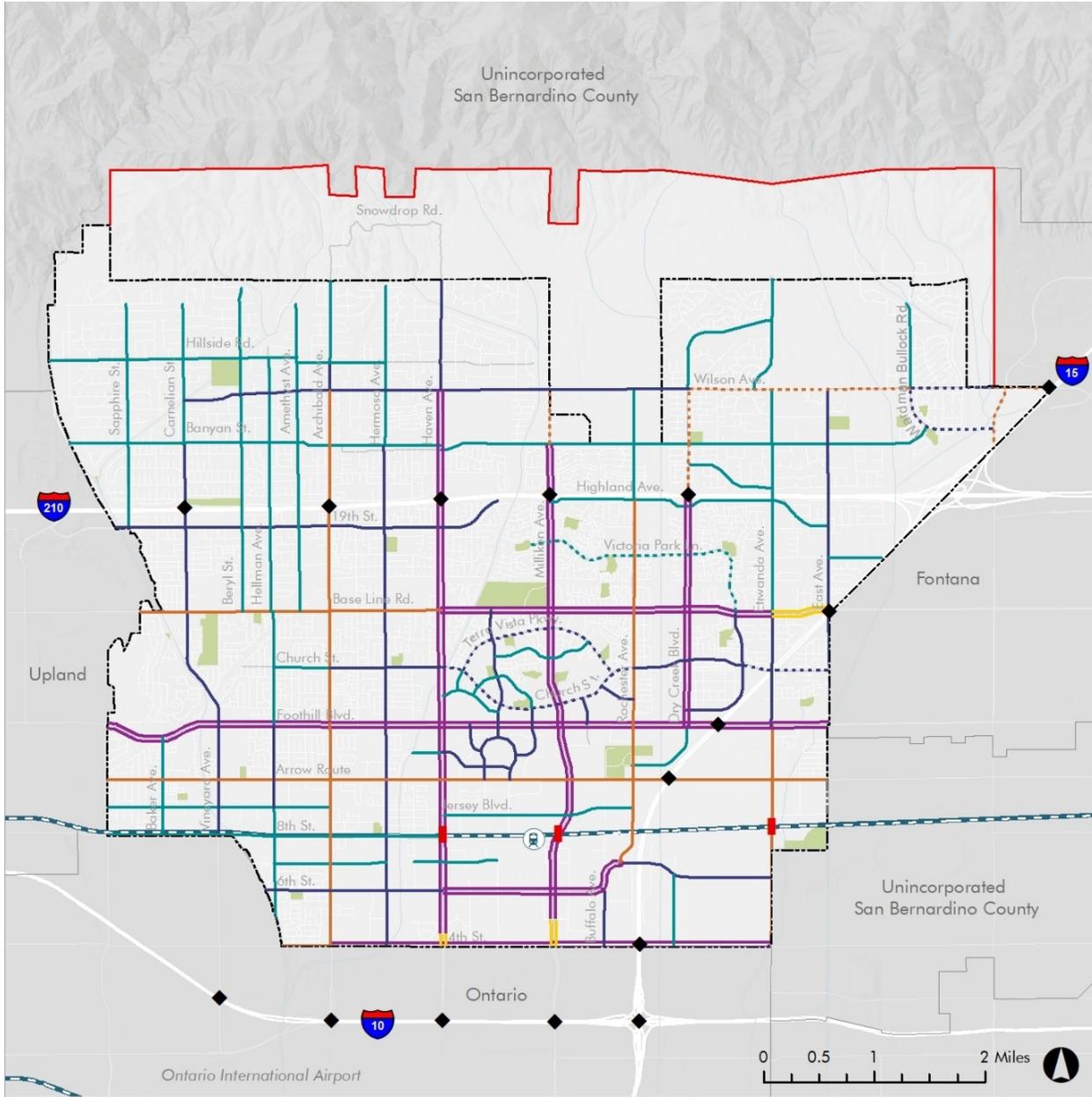
Figure 3.8. General Roadway Hierarchy (2020)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2020; SCAG, 2020; County of San Bernardino, 2020.



Figure 3.9. Roadway Classifications (2019)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2019.



- ◆ Interchange
- Railroad Grade Separation
- Collector
- Modified Collector with Median
- Secondary
- Modified Secondary with Median
- Major Arterial
- Modified Major with Median
- Major Divided Arterial
- Major Divided Highway
- Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways
- Ⓜ Metrolink Station
- Metrolink

Roadway Design Standards

The City has adopted roadway design standards for each of the roadway classifications identified in the 2010 General Plan. The 2010 General Plan requires roadway and intersection monitoring to be included in the traffic impact studies for proposed projects. Additional analyses may be needed to determine whether the proposed roadway improvements may exceed the standard cross sections at specific intersections. Site-specific access studies may be deemed necessary by the City Traffic Engineer to determine the feasibility of proposed access locations.

However, with the adoption of EHNCP, there have been recent modifications to the typical roadway cross sections and roadway classifications to better address the community values. With the PlanRC effort, typical roadway cross sections will likely not be included within the General Plan update. However, it may be more appropriate to include them in the City Standard Drawings such that they can be updated to reflect innovative street designs and respond to changing technologies as they evolve.

Private Streets

The 2010 General Plan allows for the construction of private streets under limited conditions, subject to approval by the Planning Commission. Private streets may be desirable in new developments where they would enhance neighborhood identification, provide access control, and include special design concepts. The Plan recommends constructing private streets to public street standards, but owners of the private streets are responsible for ensuring emergency access and maintenance of the streets. Different funding mechanisms such as localized tax through Community Facilities District or funding of private improvements through Homeowners Associations should be explored in order to reduce maintenance burden on the City.

However, private streets are often obstacles to overall street connectivity and are not recommended in an urban context. The City should encourage street grid connectivity instead of cul-de-sac private streets that limit connectivity and distribution of traffic.

Overall, it is recommended that the General Plan update focus on developing a complete streets network that is sensitive to the envisioned land use context. This should include prioritizing modes of travel and focusing on providing the best access and service for that priority mode. It is also recommended that roadway cross sections in the City Standard Drawings be incorporated into the development code to promote new, innovative street treatments.

Pavement Conditions

The SCAG 2016-2040 RTP/SCS measures the pavement conditions of both local roads and highway systems by county. The condition of the roadway pavement is important to consider for safety and positive driver experience. By tracking the pavement conditions, resources for maintenance funding for existing infrastructure can be allocated based on need. Pavement Condition Index (PCI) is the standard of practice measure of effectiveness used to assess pavement where 100 is the best score and 0 is the worst:

- **Very Good** (86-100 PCI) Pavements with little or no distress.
- **Good** (70-85 PCI) Pavements with some distresses that are predominantly non-load related. The pavement structure is sound and minor oxidation may occur.
- **Fair** (50-69 PCI) Pavements with a significant level of distress, which may be predominantly load-related. The pavement structure is becoming deficient.
- **Poor** (30-49 PCI) Pavements with moderate to severe surface distresses. Extensive weathering, block cracking, and load-related distresses such as alligator cracking and rutting may occur.
- **Very Poor** (0-29 PCI) Pavements with severe weather-related distresses as well as large quantities of load-related distresses. The pavement is nearing the end of its service life.

Table 3.4 summarizes the specific pavement conditions throughout Rancho Cucamonga arterials, collectors and local residential streets. Figure 3.10 shows the PCI for local roadways in SCAG for 2013. San Bernardino County has a score of 71, which is considered adequate (the lowest range of “Good”). As shown, the City’s overall weighted PCI for the pavement network in 2018 is 70, which is in the “Good” category and almost same as the County average. The City of Rancho Cucamonga also reported that approximately 69% (by area) of the City’s streets are in the “Good” or “Satisfactory” condition categories, 25.7% are in either the “Fair” or “Poor” categories, while 5.3% of the streets fall under the “Very Poor”, “Serious” or “Failed” condition.

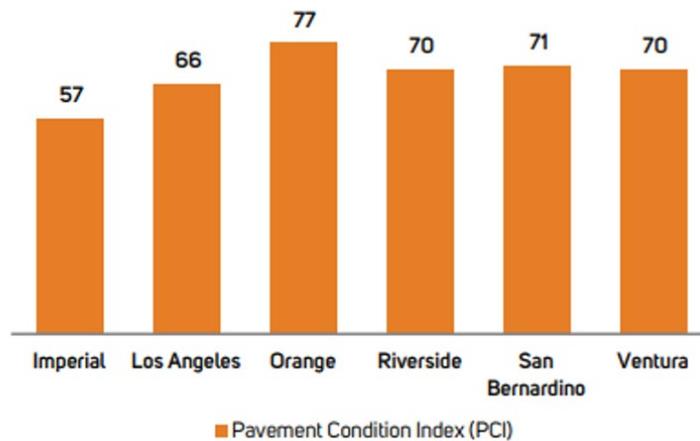
Local roads make up the largest rank class in terms of number of segments, centerline and lane miles, and surface area. Thus, they should be maintained regularly to ensure efficient movement of goods and people.

Table 3.4. Pavement Network Summary (2018)

Functional Class	Centerline Mileage	Lane Miles	Pavement Area (SF)	% Pavement Area	Weighted Average PCI
Arterial	78.3	246.4	20,552,906	20%	76
Secondary	36	137.1	10,450,541	10.2%	77
Collector	51	102.1	11,531,649	11.3%	75
Industrial	16.6	33.1	3,421,217	3.3%	65
Local	316.1	633.5	56,489,263	55.1%	66

Source: City of Rancho Cucamonga, 2018

Figure 3.10. County Pavement Condition Index (2016)



Source: SCAG 2016-2040 RTP/SCS, Appendix Performance Measures

Major Roadway Improvement Projects

According to the SCAG 2016 RTP/SCS approved project list of Federal Transportation Improvement Program (FTIP), several roadway improvements are planned in the City of Rancho Cucamonga, as shown in Table 3.5. The projects are listed by state highway, local highway, and transit.

Table 3.5. Major Improvement Projects (2016)

System	Route Name	From	To	Description	Completion Year
State Highway	I-15	Arrow Route	Foothill Blvd	I-15 at Arrow Route - construct new interchange between Arrow Route and Foothill Blvd	2040
Transit	Ontario Airport Shuttle	Rancho Cucamonga Metrolink Station	Ontario Airport	Direct shuttle bus connection from Rancho Cucamonga Metrolink station to Ontario Airport	2020

(Continued in next page)

System	Route Name	From	To	Description	Completion Year
Local Highway	East Ave	Wilson Ave	North Rim Way (New)	Widen East St from Wilson Ave to North Rim Way (new) from 2 to 4 lanes	2025
	Etiwanda Ave	Existing Terminus	North Rim Way (New)	Widen Etiwanda Ave from existing terminus to north rim way (new) from 0 to 2 lanes	2025
	Victoria Ave	Etiwanda High School	I-15	Widen Victoria Ave from Etiwanda High School to i-15 from 2 to 4 lanes	2025
	Etiwanda Ave	Miller Ave	850' N/O Miller Ave	Widen Etiwanda Ave from Miller Ave to 850' n/o Miller Ave, northbound only from 3 to 4 lanes	2025
	6th St	6th St	Cucamonga Creek Channel	Widen 6th St at Cucamonga Creek Channel from 2 to 4 lanes (50% Rancho Cucamonga/50% Ontario)	2025
	Baseline Rd	Etiwanda Ave	Shelby Pl	Widen Baseline Rd from Etiwanda Av to i-15 from 4 to 6 lanes	2025
	East Ave	Chateau Dr	Victoria Ave	Widen East Ave from Chateau Dr to Victoria Ave from 2 to 4 lanes	2025
	Arrow Route	Etiwanda Ditch	Arrow Route @ Etiwanda Ditch	Widen Arrow Route at Etiwanda ditch from 2 to 4 lanes	2025
	Hellman Ave	Cucamonga Creek Channel	Hellman Ave @ Creek Channel	Widen Hellman Ave at Cucamonga Creek Channel (50%rc, 50% Ontario) from 2 to 4 lanes	2025
	Arrow Route	Grove St	Baker St	Widen Arrow Route from Grove St to Baker St from 2 to 4 lanes	2025
	Etiwanda Ave	Banyan	Wilson Ave	Widen Etiwanda Ave from Banyan Rd to Wilson Ave from 2 to 4 lanes	2025
	Church Ave	Archibald Ave	Haven Ave	Widen Church Ave from Archibald Ave to Haven Ave from 2 to 4 lanes	2025
	Foothill Blvd	Archibald Ave	Hermosa Ave	Widen Foothill Blvd from Archibald Ave to Hermosa Ave from 4 to 6 lanes	2025
	Miller Rd	Etiwanda Ave	East St	Widen Miller Rd from Etiwanda Ave to East St from 2 to 4 lanes	2025
	Foothill Blvd	Vineyard Ave	Archibald Ave	Widen Foothill Blvd from Vineyard Ave to Archibald Ave from 4 to 6 lanes	2025
	Etiwanda Ave	6th St	Arrow Route	Widen Etiwanda Ave from 6th St to Arrow Route from 2 to 4 lanes	2025
	Wilson Ave	Milliken Ave	Day Creek Blvd	Widen Wilson Ave from Milliken Ave to Day Creek Blvd from 0 to 4 lanes	2025
	Wilson Ave	Wilson Ave	Day Creek Channel	Construct new 4-lane (2 each direction) Bridge at Wilson and Day Creek Channel	2025
	Etiwanda Ave	Etiwanda Ave	@SCRRA	Construct Grade Separation for Etiwanda Ave @ Southern California Regional Rail Authority tracks with overhead roadway	2025
	Youngs Canyon Rd	San Sevaine	Cherry Ave	Construct new 4-lane divided Youngs Canyon Rd from San Sevaine to Cherry Ave	2026
Cherry Ave	South Rancho Cucamonga City Limits	Wilson Ave	Widen Cherry Ave from South Rancho Cucamonga City limits to Wilson Ave from 2 to 4 lanes	2021	
Grove Ave	San Bernardino Rd	Foothill Blvd	Widen Grove from San Bernardino Ave to Foothill Blvd from 1 to 2 lanes (East side only)	2025	
Arrow Route	Etiwanda Ave	East City Limits	Widen Arrow Route from Etiwanda to East Rancho Cucamonga City limit from 2 to 4 lanes	2035	

Source: SCAG 2016-2040 RTP/SCS, Project List

Near-Term Capital Improvement Program Projects

The City's Capital Improvement Program (CIP) includes both streets and traffic projects that include updates to the vehicle, bicycle, and pedestrian networks. The CIP includes funding for pre-construction activities such as feasibility studies and design, as well as construction funding. The proposed network improvements in Rancho Cucamonga with construction funding in the 2019-2020 CIP include:

General

- Advanced Traffic Management System (ATMS)
- At-grade railroad crossing improvement at 6th Street
- Grade separation on Etiwanda Avenue

Roadway

- Pavement rehabilitation at various locations
- ADA ramp installations at various locations

Transit

- Metrolink station improvements
- Sidewalk Improvements for Bus Stops

Bicycle and Pedestrian

- 6th Street Cycle Track & Milliken Avenue Bike Lane
- 9th Street northside west of Vineyard Avenue-Sidewalk Improvements
- Barrier Replacement at Flood Control Entrance/Exit
- Day Creek Channel Bike Trail
- Milliken Ave Underpass-Sidewalk Expansion
- Pacific Electric Trail drainage improvements
- School crosswalk improvements
- Southeast Corner Foothill Boulevard and Etiwanda Avenue- Sidewalk Survey

Transit

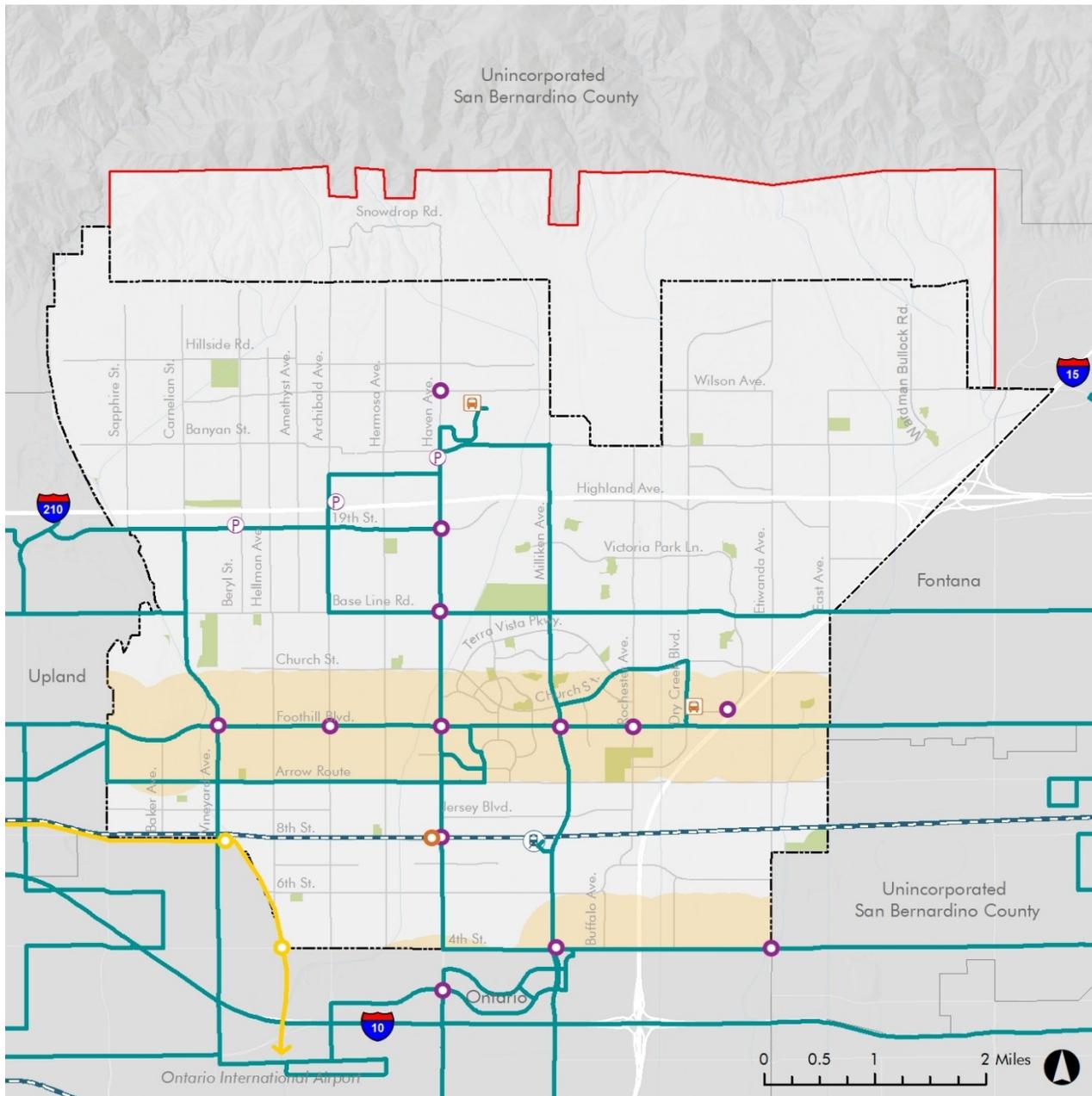
Public transportation is a vital part of the circulation system within Rancho Cucamonga. Transit expands mobility options to citizens who may not be able to afford or physically operate other means of travel, while some choose not to drive. The transit options in Rancho Cucamonga are shown on Figure 3.11. Intercity buses, local buses, and demand-responsive service are provided; all of which help people move. As is the case in many jurisdictions, it is important that Rancho Cucamonga continue to invest in and improve local transit service, since the most frequent users include some of the most vulnerable City residents and workers, such as older adults, persons with disabilities, and students.

Bus Transit

OmniTrans

Majority of the available public transportation is provided by OmniTrans via fixed route bus services. OmniTrans is the public transportation agency in San Bernardino County that provides seven bus routes within the City of Rancho Cucamonga. These routes connect to the Rancho Cucamonga Metrolink Station, Civic Center, Chaffey College, Ontario International Airport, Victoria Gardens, and the surrounding cities of Fontana, Upland, Ontario, Montclair, and Chino.

Figure 3.11. Transit Facilities (2020)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2019; SBCTA, 2020.



- Bus Routes
- Transit Center
- Rapid Transit Stops (Planned)
- Potential Relocation of Metrolink Station
- Potential Gold Line Station
- Potential Gold Line
- Transit Priority Area
- Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways
- P Park & Ride
- T Metrolink Station
- Metrolink

Major City bus routes include routes 66, 67, 80, 81, 82, 85, and 86. As shown in Figure 3.11, the bus routes run primarily along Haven Avenue, Day Creek Boulevard, Milliken Avenue, Carnelian Street/Vineyard Avenue, Base Line Road, Foothill Boulevard, and Arrow Route, and along parts of Banyan Street, Victoria Park Lane, and 4th Street. Two routes originate in the City at Chaffey College and Civic Center and all other routes start and end beyond the City limits. Route 80 serves the Rancho Cucamonga Metrolink Station. Table 3.6 shows the service frequencies for all routes during peak hours on weekdays.

Table 3.6. Bus Route Service Frequencies (2020)

Route	Peak Hour Frequency
Route 66	15-30 minutes
Route 81	60 minutes
Route 82	60 minutes
Route 85	60 minutes
Route 86	60 minutes

Source: OmniTrans, 2020

Access

OmniTrans also provides a demand-response service called Access, which is a curb-to-curb van service for people unable to independently use the fixed-route service. This service complies with the requirements of the Americans with Disabilities Act (ADA). Reservations must be made in advance, and pick-up and drop-off must be provided within a three-quarter mile range of the existing OmniTrans fixed bus routes and during the same service hours as those routes.



Chaffey College Transit Center. Source: Fehr & Peers (2020)

Planned Bus Transit

Internal City Local Transit Service

The 2010 General Plan recommended establishing a localized internal circulator transit service to connect neighborhoods to schools, parks, commercial centers, and key destinations such as the Civic Center, Central Park, the Metrolink Station, the Epicenter, and Victoria Gardens. A system such as this would benefit teens, older adults, and others within the City who do not own a car or drive. This local service could be operated by the City or OmniTrans through a joint effort. The feasibility of funding sources for this type of service will be actively explored with OmniTrans. A demand-responsive service with public-private partnership to subsidize TNC, with smaller vehicles and routes along collector and/or local streets, would be an opportunity to build the network until increased ridership justifies the fixed route service. This service would feed into and support regional fixed-route service, significantly enhancing transit access citywide.

The General Plan also identified three possible internal circulator transit service areas, which would provide connections from all neighborhoods to key destinations east, northwest, and southwest. A local transit center in the Terra Vista Town Center was envisioned to provide for transfers among routes. “Microtransit” options can be explored to supplement the existing fixed-route bus service, especially in the areas that are not covered by the half-mile walking radius from the bus stop locations, as shown in Figure 3.12.

Combined with a series of mobility hubs at strategic locations, microtransit service could broaden the transit reach in the City. Microtransit is defined as a privately-operated transit system, which in many cases mirrors the operations of public transit agencies along select routes. Mobility hubs are a key first mile/last mile solution that can provide seamless connections to and between different mobility services.

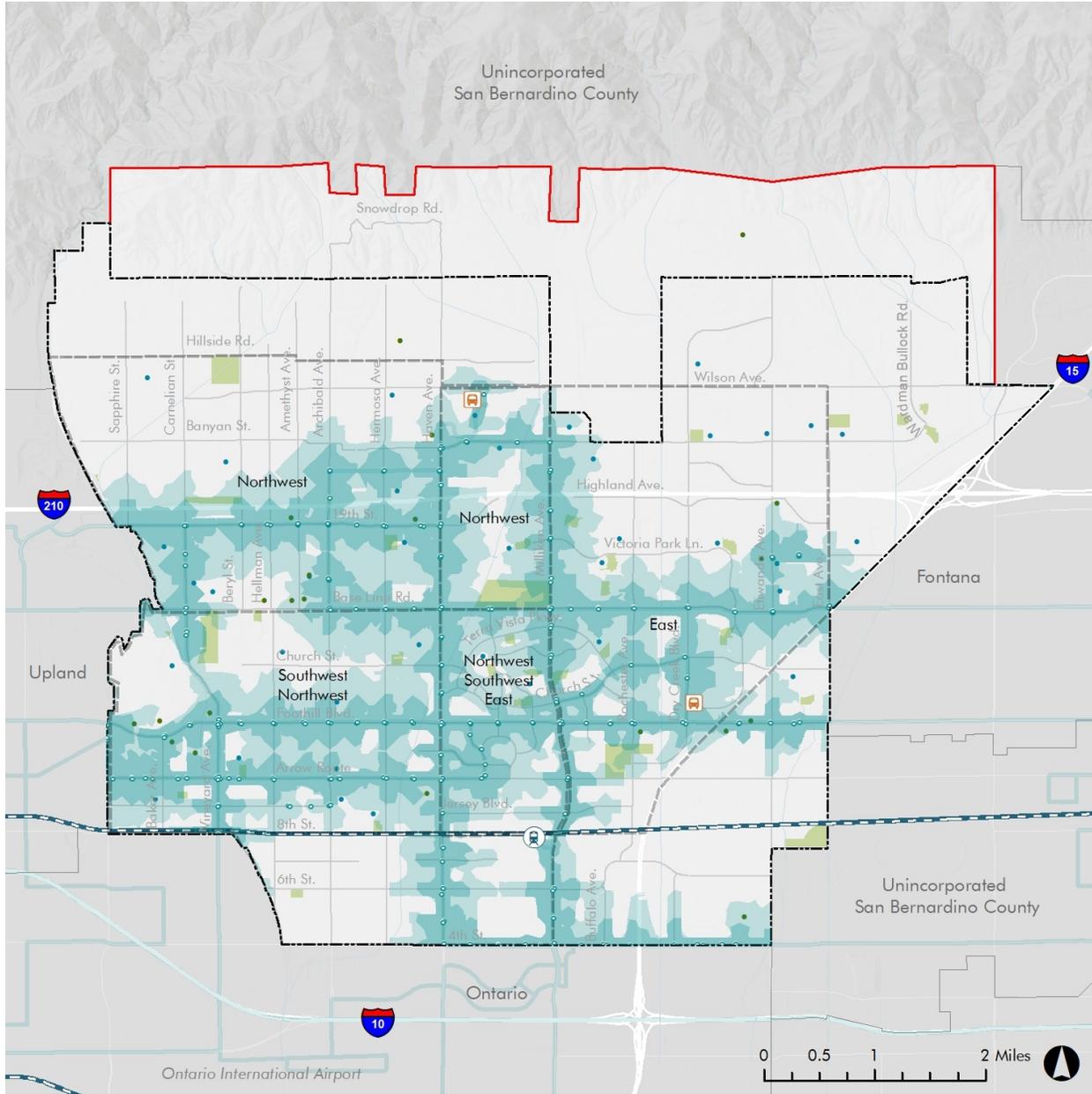
Park-and-Ride Facilities and Parking

The City of Rancho Cucamonga has two park-and-ride facilities located near the SR-210 that are available to commuters. Park-and-ride lots are made possible through partnerships with private property owners, Caltrans, and the SBCTA. Park-and-ride lots are strategically located to serve people who need a place to store their cars while they join a carpool, a vanpool, or use transit. Park and ride lots are valuable resources to the city as they can aid with reducing automobile travel and subsequent emissions, consistent with AB 32.

According to the SCAG 2016 RTP/SCS approved project list, Caltrans has no new park-and-ride facilities planned for the City of Rancho Cucamonga. Currently, no data is available on the composition of the riders who use the park and ride facilities. As part of the General Plan Update, the City of Rancho Cucamonga could designate action items to further study park-and-ride facilities and their uses.

As for parking requirements for individual developments, the City has adopted parking and loading standards by land use, as well as options for shared parking among two or more uses to reduce overall parking supply requirements. Reducing overall parking supplies helps to minimize impervious areas in surface parking lots, and results in more efficient use of land so that portions of parking lots or structures do not sit empty for long periods.

Figure 3.12. Transit Walkshed Area (2020)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2019; SBCTA, 2020.



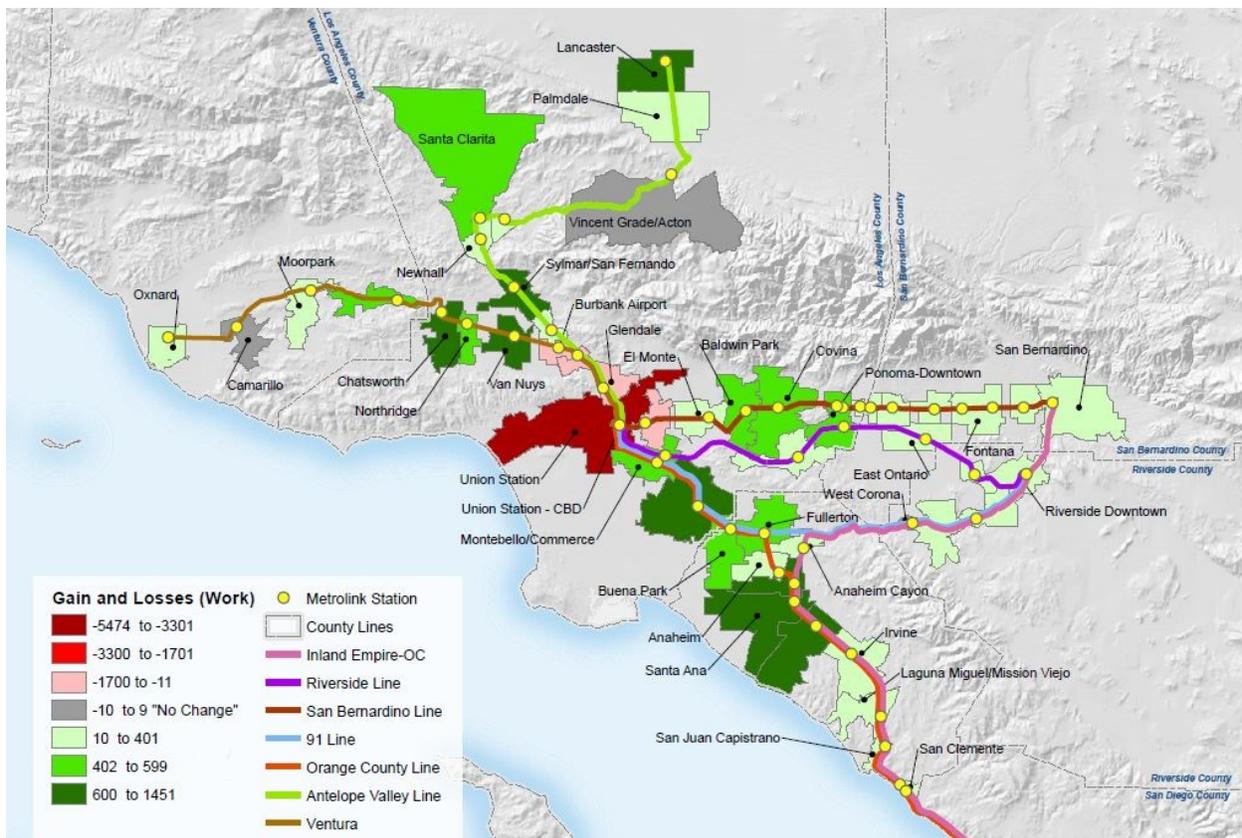
- Bus Stops
- Transit Center
- Local Transit Areas
- WalkShed within Quarter Mile of Bus Stops
- WalkShed within Half Mile of Bus Stops
- Schools
- Points of Interest
- Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways
- Metrolink Station
- Metrolink

Rail

Metrolink

Metrolink is a commuter rail program operated by the Southern California Regional Rail Authority (SCRRA), providing service from outlying suburban communities to employment centers such as Burbank, Irvine, and downtown Los Angeles. For Rancho Cucamonga, the San Bernardino Line (SBL) train services Metrolink stations in the cities of San Bernardino, Rialto, Fontana, Rancho Cucamonga, Upland, Montclair, Claremont, Pomona, Covina, Baldwin Park, El Monte, and Los Angeles.

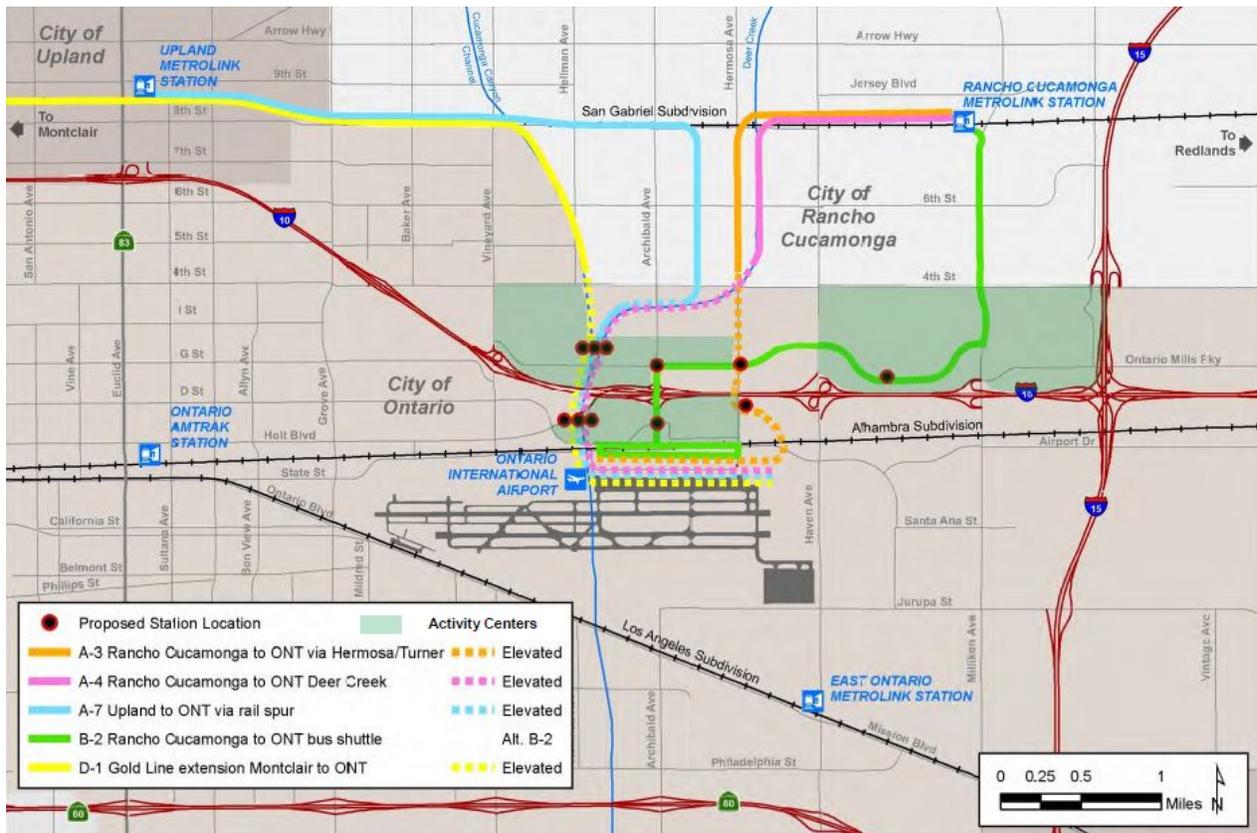
The Metrolink 10-Year Strategic Plan¹¹ (2015-2025) indicates that, through a partnership with Metro, the agency will experiment with lower fares across the board and targeted discounts on shorter distance trips with the goal to increase ridership and revenue. The plan anticipates an increase in regional population and employment in Inland Empire rail lines that includes Rancho Cucamonga.



Net change to work catchment areas served by Metrolink for all purposes (2010-2035). Source: Metrolink (2016)

¹¹ https://metrolinktrains.com/globalassets/about/metrolink_10-year_strategic_plan_2015-2025.pdf

The Ontario Airport Rail Access Study¹², published in 2014, recommended a set of transit alternatives to connect the Ontario International Airport to the City of Rancho Cucamonga. The City Council recently adopted a resolution with preferences for enhanced Metrolink Service to the Ontario International Airport that would utilize the Metrolink Station.



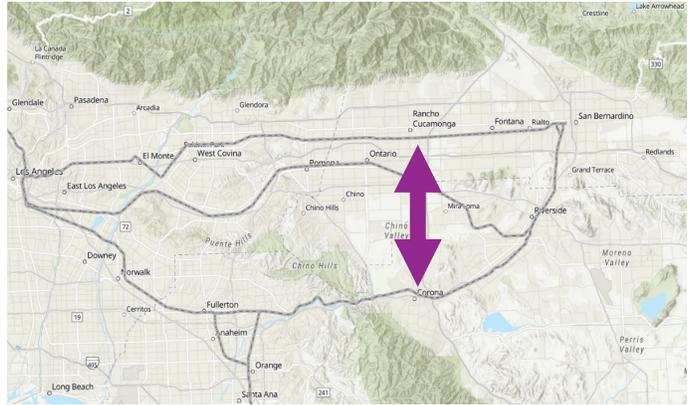
Transit alternatives to the Ontario International Airport (conceptual). Source: Ontario Airport Rail Access Study (2014)

Metro Gold Line

The Metropolitan Transportation Authority of Los Angeles County, or Metro, is responsible for light rail service operations in Los Angeles County, and will extend operations to San Bernardino County with the planned extension of the Gold Line. Plans as of 2020 have the east end of the line terminating in Montclair (with the west end of the line terminating at Los Angeles’ Union Station), but ultimate plans include the extension of the Gold Line all the way to Ontario International Airport. This would increase the need to connect Metrolink to the airport to assist in facilitating this connection.

¹² <https://www.gosbcta.com/wp-content/uploads/2019/10/Ontario-Airport-Rail-Access-Study-Report.pdf>

In conclusion, currently, the regional rail connections are east-west, but there are opportunities to create a regional hub within the Inland Empire by creating north-south connection. Collaboration across county boundaries and funding formulas will be needed to pursue this initiative but could be transformative in creating an inland empire “hub” for activity and urbanism.



Left Figure: Passengers waiting for train at the Metrolink Station in Rancho Cucamonga. Right Figure: Regional North-South Transit Connection. Source: Fehr & Peers (2020)

Bicycle Facilities

Bicycle facilities in Rancho Cucamonga consist of bike lanes, routes, trails, and paths, as well as bike parking. The existing and planned bicycle network in the City is shown in Figure 3.13. On-street bicycle facilities are classified into four categories depending on their design and function as described in the following page.

Although the City has a high network of Class II bikeways, many of these facilities are on high speed, wide roadways that limit rider comfort on the corridors (whereas the bike path system provides a comfortable, low stress biking environment). As such, the General Plan update should consider bicycle comfort and look at increasing the connectivity of low stress facilities through street prioritization (e.g. a layered network approach) or through better connections between activity centers and the Class I trails system.



Class I/Bike Path or Trail (34.5 miles):
Provides a completely separated right-of-way for the exclusive use of cyclists and pedestrians with crossflow minimized. Typically, the most desirable for all ages and abilities.
Example: Pacific Electric Trail



Class II/Bike Lane (31.75 miles):
Provides a striped lane for one-way travel on a street, which may include a “buffer” zone consisting of a striped portion of roadway between the bicycle lane and the nearest vehicle travel lane. Typically, suitable for some bicyclists comfortable sharing some space with cars.
Example: Base Line Road

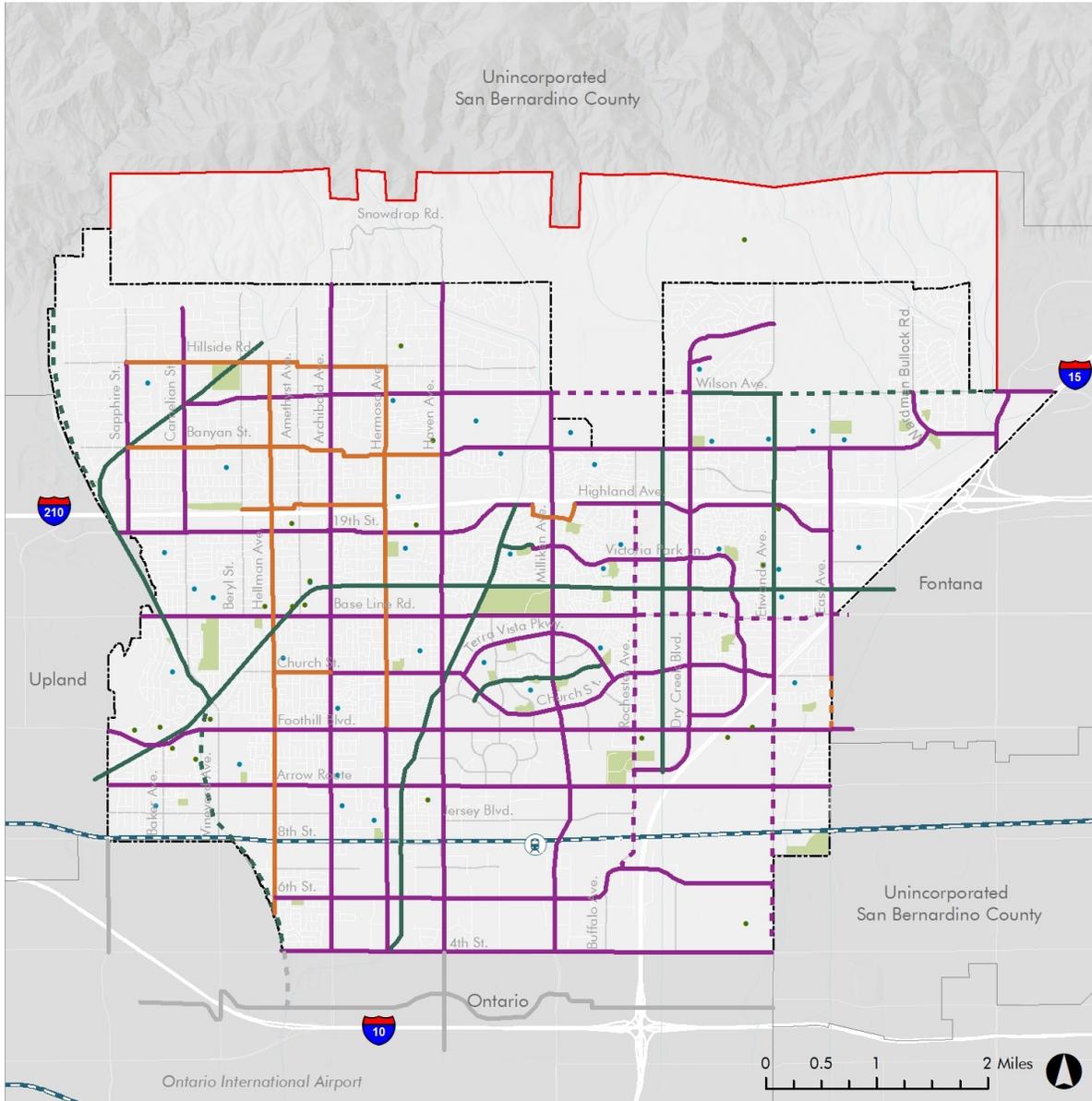


Class III/Bike Street (34.25 miles):
Provides for shared use with motor vehicle traffic to help guide bicyclists between major destinations. Typically, not suitable for most bicyclists except on local residential streets.
Example: Hillside Road



Class IV/Bike Boulevard (0 miles):
Provides a right-of-way designated exclusively for bicycle travel, which is protected from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking. Typically, suitable for most bicyclists.
No examples in Rancho Cucamonga

Figure 3.13. Bicycle Facilities (2015)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2015.



- Existing Class I (Multi-Use Path)
- - - Proposed Class I (Multi-Use Path)
- Existing Class II (Bike Lane)
- - - Proposed Class II (Bike Lane)
- Existing Class III (Bike Route)
- - - Proposed Class III (Bike Route)
- Existing Class III (Bike Route) Outside City
- - - Proposed Class III (Bike Route) Outside City
- Points of Interest
- Schools
- Ⓜ Metrolink Station
- Metrolink
- - - Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways

Trails

The City adopted its Trails Implementation Plan (TIP) in 1991 that provides design and technical guidance for bicycle routes, and hiking and riding trails (collectively referred to as “multi-purpose trails”). The Trails Advisory Committee, as an advisory body to the Planning Commission and City Council, generally reviews all development applications where trails are required per the TIP and, when necessary, reviews changes to the trails system. A recommended implementation action item would be to update the TIP in light of the General Plan update. The Trail Implementation Plan:

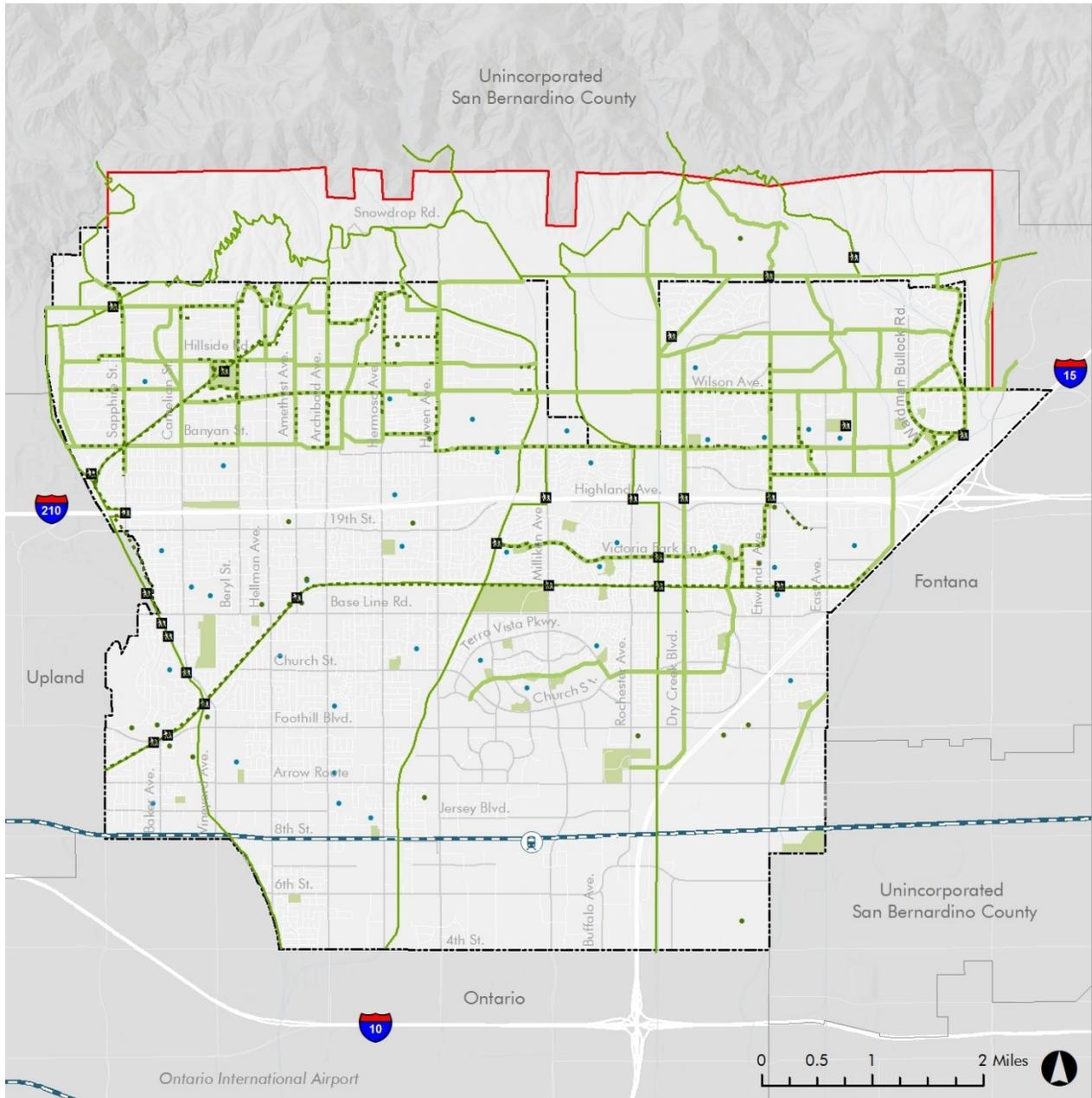
- Provides a more detailed analysis of trail conditions and strategies to address bikeway issues;
- Includes preliminary cost estimates for bikeway construction;
- Identifies funding mechanisms for bikeway implementation;
- Defines the roles of various City departments in the implementation of the bikeway system;
- Addresses horseback riding and hiking trail issues.

The existing multi-purpose trails are great community assets that serve the residents of Rancho Cucamonga for variety of recreational purposes. These trails are mostly in the northern portion of the City (north of SR-210), as shown in Figure 3.14. In addition to maintaining the existing trails, the existing flood channels and utility corridors through the city could also provide multimodal active transportation boulevards.



Equestrian Trail along Archibald Avenue. Source: Fehr & Peers (2020)

Figure 3.14. Trails (2019)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2019.



-  Trailheads
-  Schools
-  Points of Interest
-  Rancho Cucamonga City Limits
-  Equestrian Trails
-  Metrolink Station
-  Sphere of Influence
-  Community Trails
-  Metrolink
-  Adjacent City Limits
-  Regional Trails
-  Parks
-  Waterways

Pedestrian Network

Active modes of transportation provide environmental, economic, and social sustainability to a city and its transportation system while improving public and personal health. Inadequate facilities misuse valuable resources and discourage potential users. Well-designed pedestrian and bicycle facilities are needed to make active transportation safe, accessible, attractive, and comfortable enough to be a desirable alternative to driving. It is important to provide a seamless transportation system for all modes and for all people to improve circulation. The 2010 General Plan focuses on vehicular travel but encourages the proposal of policies and programs that facilitate pedestrian improvements.

Sidewalks and Crosswalks

Pedestrian facilities in Rancho Cucamonga consist of sidewalks and crosswalks. Figure 3.16 identifies all sidewalks in the city. Most residential and commercial developments provide sidewalks on public streets and internal circulation. Areas with no existing sidewalks are mainly located in the northwest, southwest, south and eastern portions of the city. While the sidewalk gaps in the established neighborhoods in the northwest part may be intentional, the gap closures to the southern part are more critical to examine due to the disadvantaged communities located there and the higher density of pedestrian collisions.

Sidewalks vary from wide and meandering curb separated sidewalks to narrow pathways on the side of the road. Sidewalks are sometimes obstructed, incomplete mid-block, or damaged. Crosswalks at signalized intersections are marked and are usually provided for all approaches. Crosswalks at unsignalized intersections are generally not well marked, although crosswalks around schools are always marked at intersections.

Overall, Rancho Cucamonga has 76% of sidewalk coverage in its streets (Figures 3.15 and 3.16). However, it is a community that has largely been designed with auto travel in mind, featuring suburban tract housing, ample parking in most centers, major through streets, and separation of land uses that comprise a notable portion of the city. Although walking may not be a viable form of transportation for errand trips, the ample sidewalk widths in established neighborhoods provide a walking environment that accommodates walking trips for leisure and exercise. The following six factors affect walkability and the pedestrian experience in the city:

Sidewalk Continuity: Communities are more walkable if sidewalks do not end abruptly and are present on the entire segment and both sides of a roadway. This is especially important for mobility-impaired users or those pushing small children in strollers.

Sidewalk Conditions: This refers to the physical condition of sidewalk surfaces. Sidewalks that are broken or cracked can deter walkability and impede mobility; particularly for mobility-impaired users, such as those in wheelchairs, persons using walkers, or strollers.

Shading: People are more inclined to walk in areas where there is shade present, particularly in Southern California with its relatively warm weather and limited rainfall, as compared to other locations. Additionally, shade trees create an aesthetic value that is pleasing to the pedestrians.

Grade: People are more inclined to walk in areas that are relatively flat or have limited grade changes.

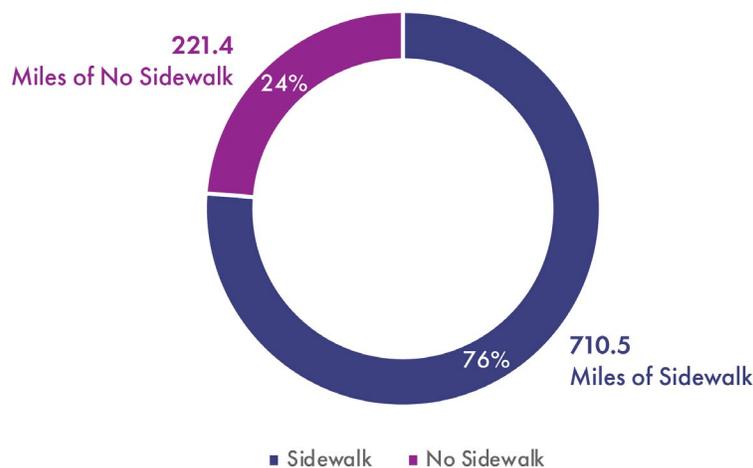
Amenities: All else being equal, people are more inclined to walk in areas that have interesting environments with shopping, retail, restaurants, and other similar uses. Pedestrian-friendly amenities include street furniture, attractive paving, public art, high visibility crosswalks, frequent crossings, slower vehicle speeds, way-finding signage, enhanced landscaping, and pedestrian-level lighting.

Buffers: A more walkable environment includes some degree of separation between the pedestrian and the motorist. This typically includes wider sidewalks, bicycle facilities, landscaping, street parking, and sidewalk bulb-outs at intersections where feasible. Crosswalks with appropriate signage serve as an important buffer as well.

Land use is inherently tied to transportation, and therefore policies that seek to make walking attractive, easy, and safe are important, particularly in activity centers. As described above, there are opportunities to improve sidewalk continuity and mid-block crosswalks, complete sidewalks between crosswalks, and provide an optimal number of adequate crosswalks and sidewalks. Sidewalk conditions can be improved with regular maintenance and compliance measures.

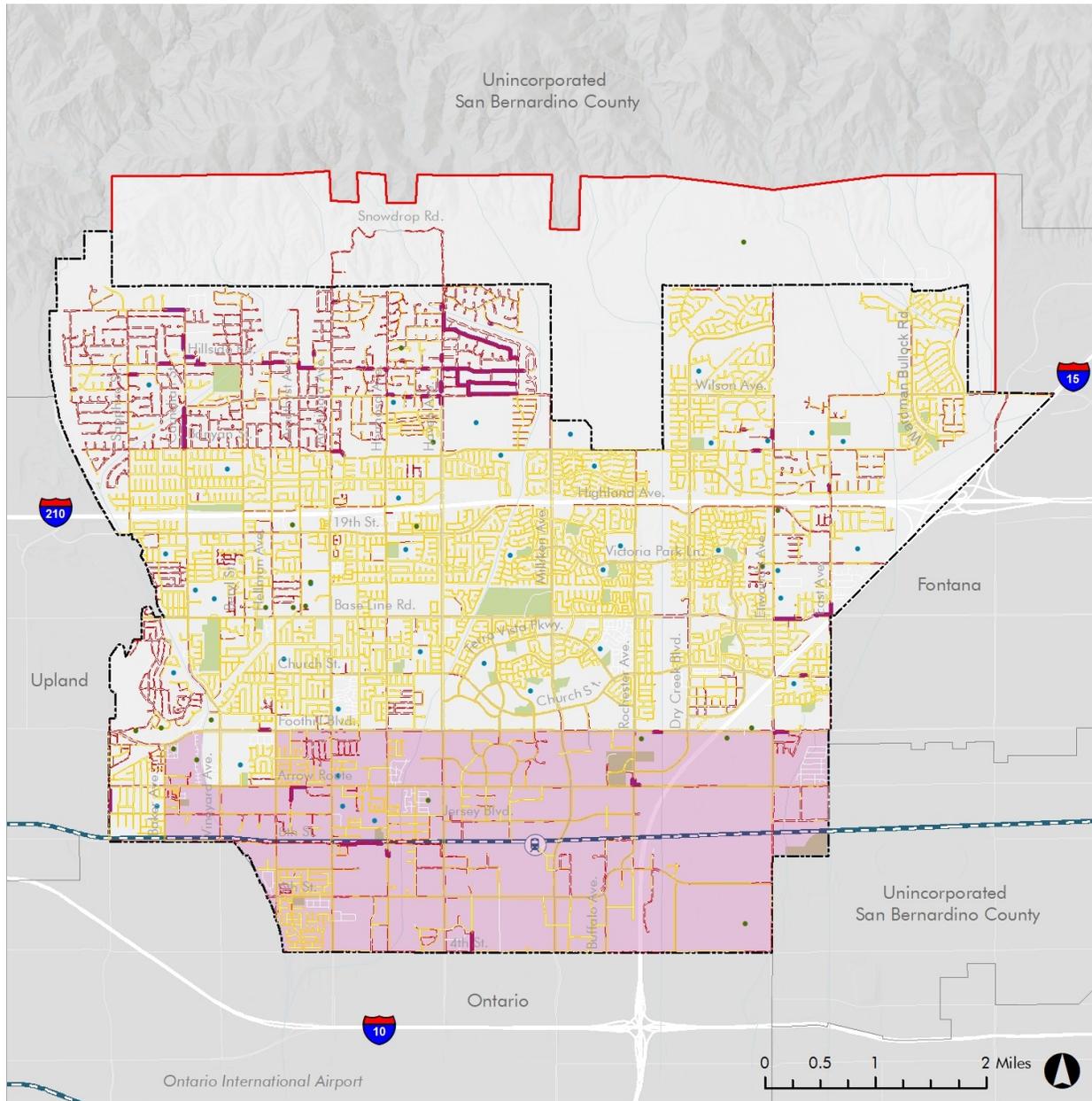
Treatments such as high-visibility crosswalks, curb extensions, curb cuts, and landscaped buffers may also improve safety and accessibility for all pedestrians, particularly near schools and other activity centers where pedestrian activity is high. Providing shade trees will make pedestrians more comfortable in hot weather. These improvements can enhance the transportation experience for non-driving populations, such as older adults and children, who may use routes for short distance trips, including recreation and school trips.

Figure 3.15. Sidewalk Coverage (2020)



Source: Fehr & Peers (2020); Active San Bernardino Open Data (2020)

Figure 3.16. Pedestrian Facilities (2019)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2019; CalEnviroScreen 3.0, 2018.



- Points of Interest
- Schools
- Existing Sidewalk
- Missing Sidewalk
- Priority Segment for Sidewalk Improvements
- Disadvantaged Communities (Top 25%)
- Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways
- Metrolink Station
- Metrolink

Circulation Master Plan for Bicyclists and Pedestrians

The City of Rancho Cucamonga published a Circulation Master Plan for Bicyclists and Pedestrians in May 2015. The Plan calls for an increase in bicycling and walking to enhance livability, health, transportation, the environment, and economic development. In addition to developing a connected network, The Plan also recommends bicycle programs to improve facilities that can make it safer for users of all ages and abilities to ride a bicycle on city streets. A recommended implementation action item for PlanRC would be to update the Circulation Master Plan for Bicyclists and Pedestrians in light of updates to the General Plan. The City of Rancho Cucamonga has also led the Pacific Electric Trail Master Plan in collaboration with SBCTA and neighboring cities.

Through extensive community outreach, the Plan developed bicycle facilities network recommendations as well as additional suggestions on improving bike facilities, intersections, bicycle sharing, wayfinding, bicycle parking, end-of-trip amenities, etc. The recommended pedestrian improvements included sidewalk gap closures and high priority segments. The trail implementation recommendations included wayfinding, high visibility crosswalks, sidewalk furniture, etc. The Healthy RC initiative of Safe Routes to School (SRTS) program has been in place since 2009 to increase the physical activity of children by encouraging walking and biking to get to and from school.

In addition, educational programs were recommended to create awareness about biking and walking among different ages and abilities. They included the creation of family-focused bicycling classes, safe routes to school programs, volunteer ambassador programs, bicycle hubs, personalized travel encouragements, bicycle valet program, car-free street events, etc. The recommended educational programs should be evaluated and considered for inclusion as goals or programs in the General Plan update.

Rancho Cucamonga has a rich network of local streets laid out in a grid fashion in the city's core, which collectively are excellent for a low-stress bicycle network. The City of Rancho Cucamonga could take advantage of the grid network and mix of land uses to develop bicycle boulevards that will increase the safety of people walking and bicycling. Local trips made by bicycle or on foot may be prioritized by expanding bicycle boulevards in the area. The City could pursue bicycle boulevards to improve the walking and bicycle experience through the menu of treatments listed in areas where the bicycle facilities overlap with truck routes.

Freight and Goods Movement

Truck Routes

Goods movement plays an important role in both the circulation network and the economy of Rancho Cucamonga. Often, it can be difficult to accommodate trucks and other vehicles without impeding other modes or the well-being of residents. Due to its important location between two highways and the role of logistics in the local economy, effectively accommodating goods movement along its roadways is critical for local transportation planning.

Truck traffic on City streets is restricted to specific routes that are designated for thru traffic of trucks over three tons. These truck routes help to facilitate the movement of goods throughout the City, while providing a connection between major freeway facilities to local roadways. Trucks are allowed on designated routes even if they do not have an origin or destination within the City of Rancho Cucamonga. Figure 3.17 displays the truck route system in the city.

Table 3.7 has information on the total truck traffic on I-10, I-15, and SR-210 that go through Rancho Cucamonga. Truck traffic on the freeway made up about 10% of total daily travel on I-10, up to about 8% on I-15, and up to about 5% on SR-210 in 2017. There are approximately 8,000-25,000 trucks passing through the City of Rancho Cucamonga

each day on local freeways. As population increases and development occurs in the City, this number is likely to rise due to higher demand for goods.

Based on available Caltrans Truck Annual Average Daily Traffic (AADT) data throughout the SCAG region, Rancho Cucamonga freeways contain similar levels of truck traffic. San Bernardino County freeways average approximately 10% trucks, and Riverside County freeways average around 14%.

There are bicycle routes that exist or are proposed along existing and/or proposed truck routes. These two modes may not be compatible on specific routes, and a layered network approach is recommended to prioritize each mode on select streets.

Technological innovation is presenting opportunities to improve the efficiency of goods movement in the future. Blockchain technology, a record-keeping technology that allows for faster and more secure transfer of information, has the potential to revolutionize the future of trucking and logistics by creating a new system of documenting transactions, tracking shipments and managing fleets.¹³ The same number of heavy vehicles are expected to travel along roadways while decreasing truck travel during peak congestion hours and reducing total truck travel times. In updating the General Plan, it will be important to consider the impact of this type of innovation and provide a flexible policy framework in response.

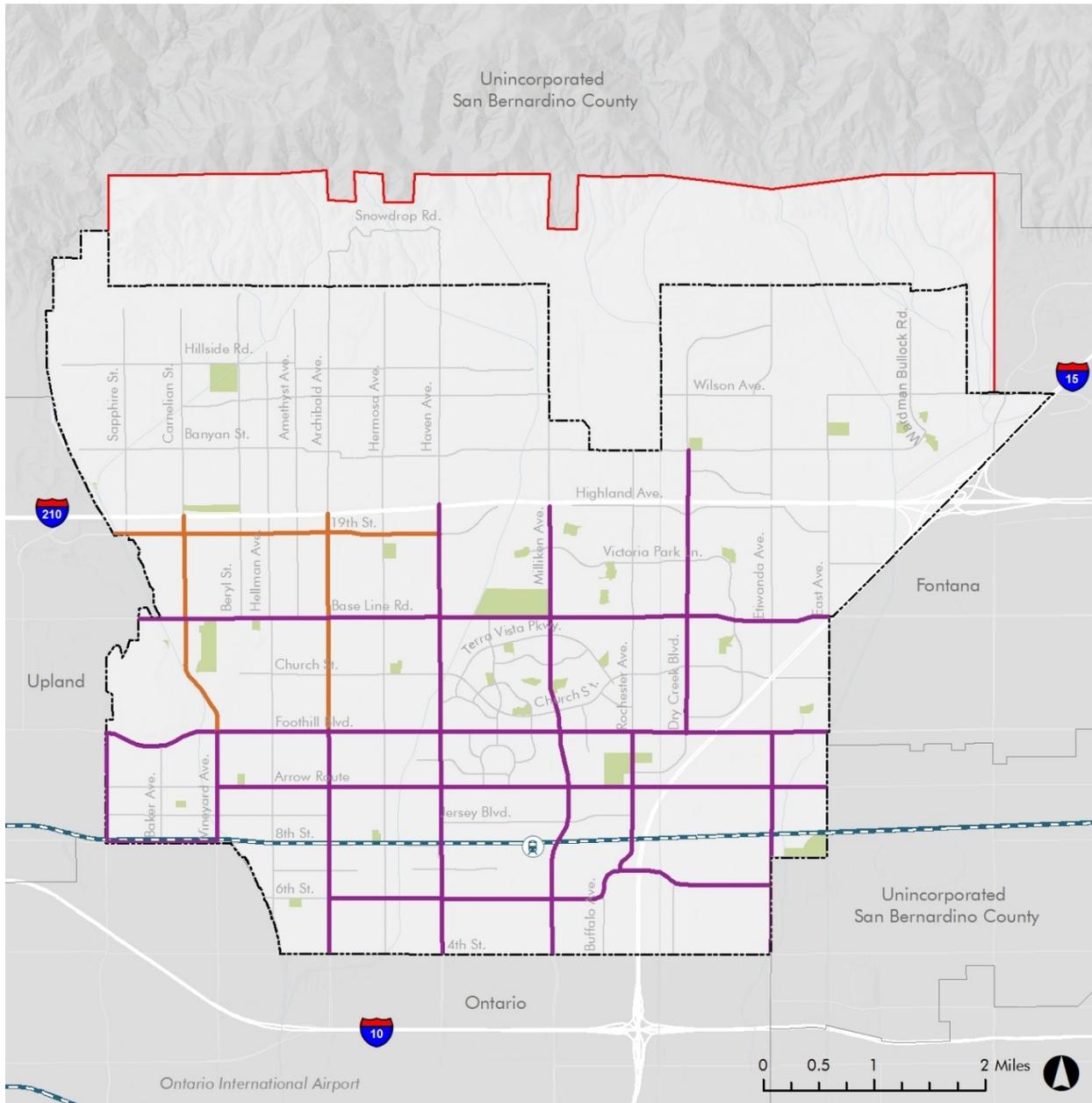
Table 3.7. Truck Traffic Volumes on Freeways (2017)

Description	Vehicle Annual ADT	Truck AADT	Truck – Percent of Total
I-10/Etiwanda Avenue	250,000	25,575	10.23%
I-10/ I-15 Interchange	264,000	17,662	6.69%
I-15/Foothill Boulevard	203,000	16,443	8.10%
SR-210/I-15 Interchange	186,000	8,705	4.68%

Source: Caltrans, Annual Average Daily Truck Traffic on the California State Highway System, 2018

¹³ Penske', The Role of Trucking Technology in Blockchain, accessed 15 January 2019, <https://www.pensketruckleasing.com/resources/industry-resources/trucking-blockchain/>

Figure 3.17. Truck Routes (2019)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2019.



- Truck Routes
- Truck Routes (38 Foot-Kingpin Limit)
- Metrolink Station
- Metrolink
- Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways

Freight Rail Lines

Local freight service operates through trackage rights on the Metrolink San Gabriel subdivision (formerly owned by Santa Fe Railroad) through Rancho Cucamonga – the same line that carries Metrolink trains on the San Bernardino line. This is not a main freight line; both the Union Pacific and Burlington Northern Santa Fe Railway (BNSF Railway) main lines are located farther south. The line does not serve through-freight traffic except for occasional diversions when the main freight lines to the south are closed or restricted for limited periods. Freight traffic levels are very light, with only infrequent service to local industrial uses.

The line serves local freight traffic and switchers to various spur lines to industrial areas and lineside industries in south Rancho Cucamonga, including:

- A spur line between Archibald Avenue and Hermosa Avenue, with sidings to the south just east of Haven Avenue,
- Spur tracks north of the tracks just west of Milliken Avenue,
- Spurs to both the north and the south between Milliken Avenue and Rochester Avenue, and
- Spur tracks to the north between I-15 and Etiwanda Avenue.

Citywide, railroad lines cross most streets at grade, including on Vineyard, Hellman, Archibald, Hermosa, Rochester, and Etiwanda Avenues. The grade separated crossings at Milliken Avenue and Haven Avenue have been constructed along these key travel corridors. A grade separation at Etiwanda Avenue and the BNSF Railway line is currently under design to better accommodate truck traffic.

Aviation

Ontario International Airport

Ontario International Airport (ONT) is a medium-hub, full-service airport with commercial jet service to major U.S. cities and many international destinations. The airport, located in the City of Ontario, is approximately one mile from Rancho Cucamonga's southern boundary. ONT is one of five commercial airports providing air travel in the Los Angeles metropolitan area. Carrying the third highest passenger volume, behind Los Angeles International Airport (LAX) and John Wayne Airport (SNA), this is the only airport in the region with significant capacity for growth.

Today, access to ONT is almost exclusively by passenger vehicles, accessing the airport via surface streets and the freeway system (Interstate 10 and 15 (I-10, I-15) and State Route 60 (SR-60)). Airport parking is plentiful and convenient; terminal-area parking costs range from \$21-\$27 per day and the airport-operated remote is also available.

Other available modes include airport shuttle services, taxis, and hotel/motel courtesy vehicles. The only available public transportation is OmniTrans Route 61 which travels on Airport Drive but does not enter the terminal area. Although, ONT is within five miles of three Metrolink stations, train schedules and bus links are not timed to coincide with flight arrivals and departures.

As previously noted, the City supports the desire to connect ONT to the Rancho Cucamonga Metrolink station via rail access that should be reflected in the General Plan update. Additionally, airport influence areas have specific restrictions to building heights and other planning factors that the General Plan update should also consider (if needed).

Upland Cable Airport

Cable airport is a non-towered public-use airport located three miles from the western boundary of Rancho Cucamonga. Covering a 95-acre area, it is a privately owned airport with an average of 252 aircraft operations per day. The General Plan update should review any land use regulations due to the proximity of Cable Airport and ensure that the General Plan is consistent with those requirements.

Network Performance and Safety

Traffic Volumes

For evaluating the major street segments and signalized intersections within the jurisdiction of Rancho Cucamonga, traffic count collections at the intersections are required. However, the traffic count effort is currently pending due to COVID-19 and will be carried out at a later time to reflect the typical traffic volumes on the streets.

Collision Profile (2014-2018)

A traffic collision is any event where a moving vehicle strikes any object. That object could be another car, a pedestrian, or something fixed in place (such as a light post). When collisions cause damage or injury, the details are recorded by the local law enforcement agency and loaded into the California Highway Patrol (CHP) Statewide Integrated Traffic Records System (SWITRS). The City's database, which includes the latest SWITRS data (2014-2018), was used to analyze collisions.

From 2014 to 2018, there were a total of 1,233 collisions in Rancho Cucamonga, with a total of 21 fatalities and 34 people severely injured. The fatality rate in the City was 1.63%, compared to the countywide fatality rate of 2.6%.

As shown in Figure 3.18, the top three cited factors contributing to collisions in the City were right-of-way violations (28%), unsafe speed (23%), and traffic signals and signs (14%). The top three cited factors in the County were unsafe speed (33%), improper turning (17%) and right-of-way violations (15%). The state of California has identified the lane departures, impaired driving and aggressive driving as the top three challenge area involvement in fatalities and severe injuries¹⁴.

The number of vehicle collisions of any type during the five-year period between 2014 and 2018 ranged from 150 to 215 per year, as shown on Figure 3.19 [vehicle with vehicle traffic collisions (2014-2018)]. Most years showed a similar number of vehicle-to-vehicle collisions (Figure 3.20). During the same time period, the rate of collisions involving a pedestrian was 6.8% and bicyclist was 6.4%, compared to countywide rate of 5.3% and 3.3% respectively.

The percentage of collisions involving a pedestrian or bicyclist was disproportionately higher than the vehicle-to-vehicle collisions among the fatalities and severe injuries during these five years. Among the collisions with fatalities or severe injuries, the collisions involving a pedestrian was 22% and a bicyclist was 5%, compared to countywide rate of 24% and 5% respectively. In the state of California, between 2008 and 2017, the percent of a pedestrian involved in fatalities or severe injuries was 19% and 8% involved a bicyclist¹⁵.

Collision Density (2014-2018)

During the five-year period between 2014 and 2018, the vehicle collision density was spread out in the City with most major intersections seeing high number of collisions (Figure 3.21). The intersections that showed higher

¹⁴ https://www.ots.ca.gov/wp-content/uploads/sites/67/2020/02/Annual_Report_Final_WEB_back_1-28-20.pdf

¹⁵ <https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/safety/shsp/shsp-2020-2024-a11y.pdf>

number of vehicle collisions density were Foothill Boulevard and Hermosa Avenue, Foothill Boulevard and Rochester Avenue, Foothill Boulevard and Day Creek Boulevard, and Base Line Road and Milliken Avenue. Bicycle collisions occurred at specific areas, with high number occurring at the southwest part of the city, as shown in Figure 3.22. The intersections that showed higher number of bicycle collisions density were Base Line Road and Vineyard Avenue, Base Line Road and Rochester Avenue, and Foothill Boulevard and Hellman Avenue. As shown in Figure 3.23, the higher density of pedestrian collisions occurred mostly on Foothill Boulevard to the southwest part of the city as well. Several fatal collisions involving a pedestrian occurred at the edge of the city on 4th Street.

While the vehicle collisions were occurring throughout the city, the collisions involving a pedestrian and bicycle were more concentrated to the southwest part of the city. The number of fatal collisions involving a pedestrian and bicycle were comparatively higher than collisions involving a vehicle. The City should consider recommendations and policies for safer streets to protect its vulnerable users such as the pedestrians and bicyclists.

By making safety a high-level priority, it can be acknowledged that traffic deaths and injuries are preventable. This understanding allows cities to approach prioritizing projects differently – not only addressing current problems, but proactively targeting future safety concerns. The process to achieve safety for all includes multidisciplinary engagement, identifying high-risk areas and implementing strategies geared toward eliminating or curbing the risks.

Figure 3.18. Violation Categories for Collisions (2014-2018)

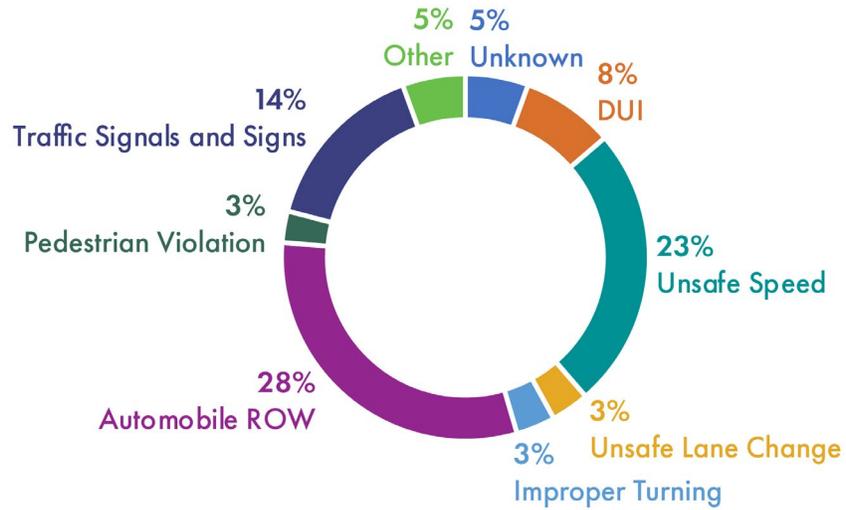


Figure 3.19. Vehicle with Vehicle Traffic Collisions (2014-2018)

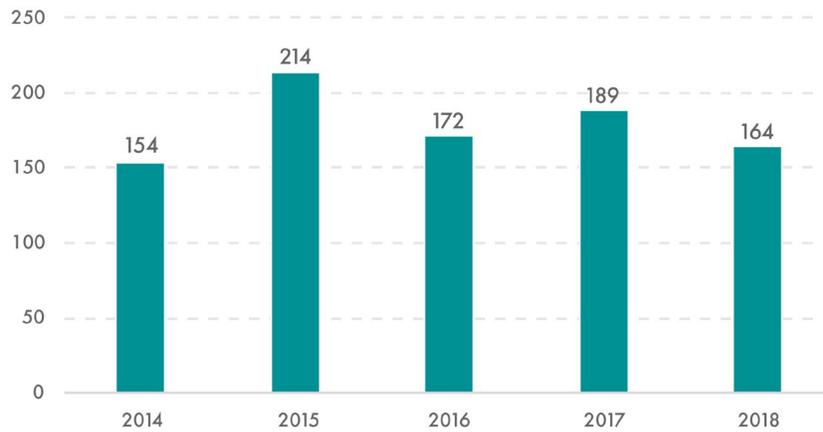
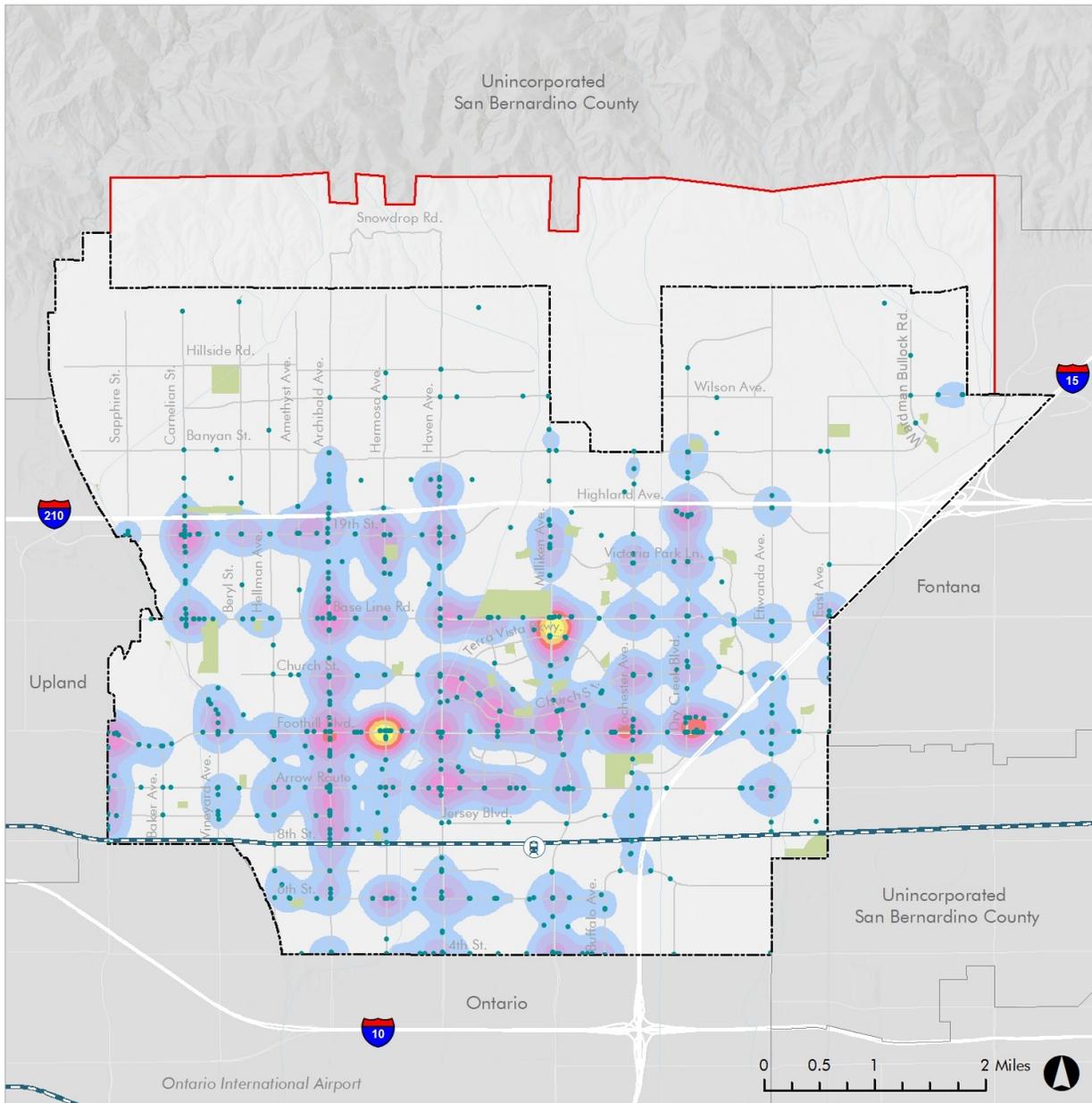


Figure 3.20. Pedestrian and Bicycle with Vehicle Traffic Collisions (2014-2018)



Source: Fehr & Peers (2020); Transportation Injury Mapping System (2014-2018)

Figure 3.21. Vehicle Collisions (2014-2018)

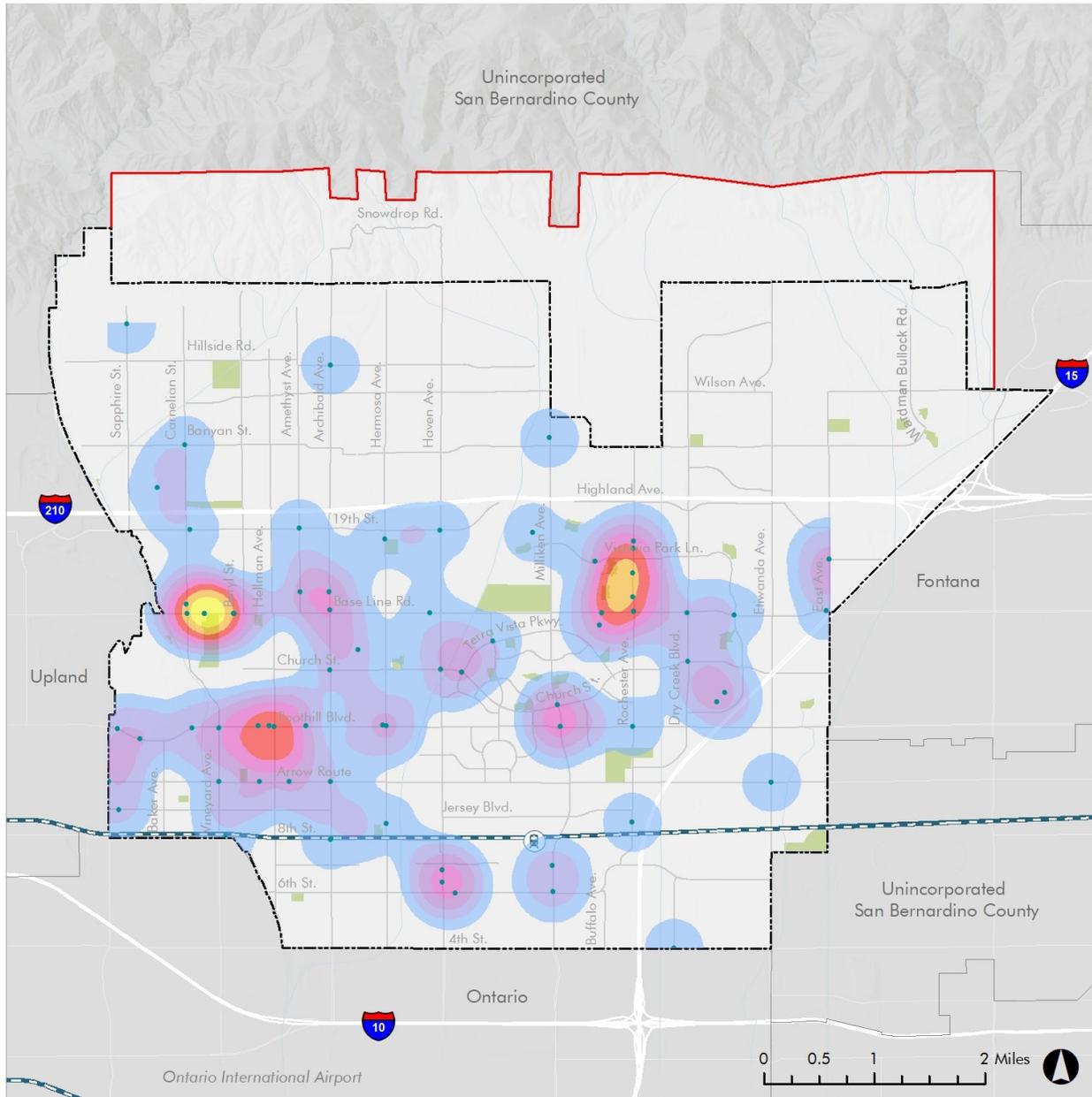


Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2019; TIMS, 2014-2018.



- Vehicle Collisions
- KSI Collisions
- Vehicle Collision Density**
- High
- Low
- Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways
- Ⓜ Metrolink Station
- Metrolink

Figure 3.22. Bicycle Collisions (2014-2018)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2019; TIMS, 2014-2018.

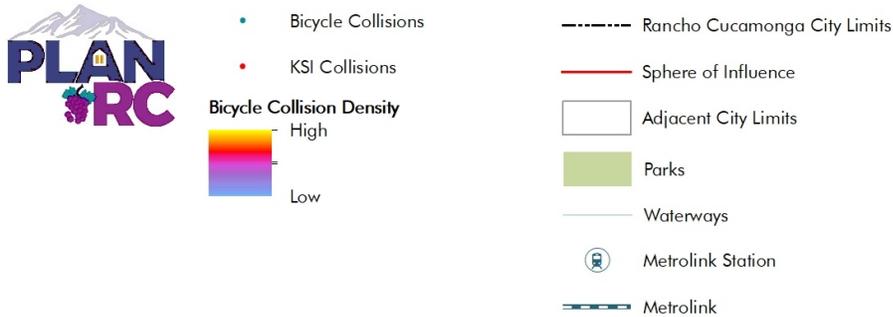
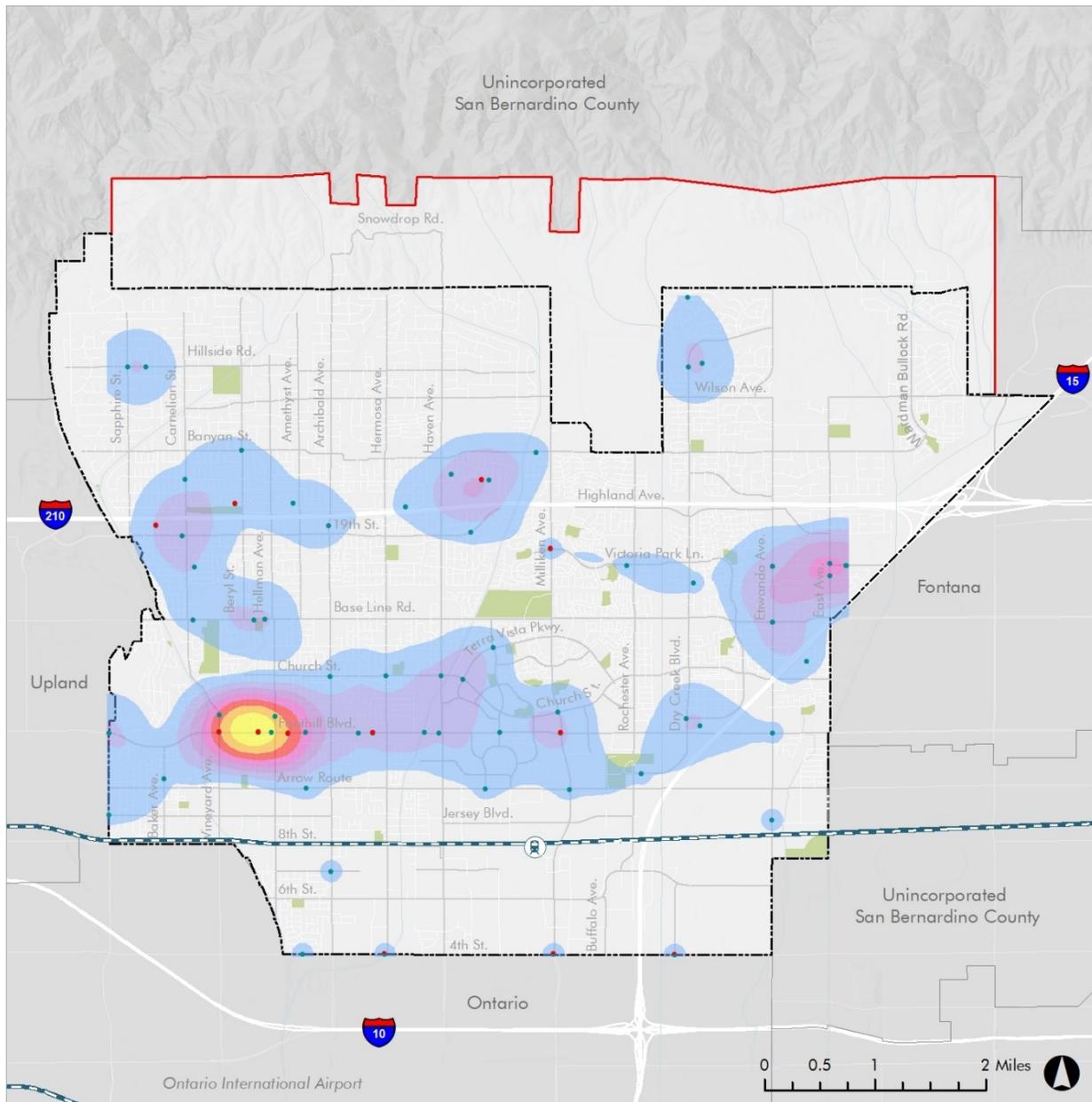


Figure 3.23. Pedestrian Collisions (2014-2018)



Fehr & Peers, 2020 | Sources: City of Rancho Cucamonga, 2019; TIMS, 2014-2018.



- Pedestrian Collisions
- KSI Collisions
- Pedestrian Collision Density**
- High
- Low
- Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways
- Ⓜ Metrolink Station
- Metrolink

Other Key Items

This section discusses key items, such as the future of transportation and state regulations. The General Plan can respond to these items and set forth policies to address concerns and anticipate growing technologies.

Transportation Improvement Funding

Senate Bill 1 Transportation Funding

The California Legislature passed Senate Bill No. 1 (SB 1) in 2017. The bill focuses on transportation funding through an increase in vehicle fees and gas taxes. The increases in fees and taxes are expected to raise an average of \$5 billion per year in new revenue for road repairs, transit, and active transportation. The City can anticipate funding from these sources to assist with maintenance of existing infrastructure and construction of new infrastructure once existing roads have been brought up to a state of good repair. Measure I and SB 1 are the City's prime sources of funding for transportation improvements and maintenance. Additional funding is still needed to fund the gap in deferred maintenance of roadways.

Active Transportation Program

The Active Transportation Program (ATP) was created by Senate Bill 99 and Assembly Bill 101 to encourage increased use of active modes of transportation, such as biking and walking. The ATP consolidates various transportation programs, including the Federal Transportation Alternative Program, State Bicycle Transportation Account, and federal and state Safe Routes to School Programs, into a single program.¹⁶ The ATP is meant to increase the proportion of active mode trips, increase the mobility and safety of active transportation users, enhance public health, improve greenhouse gas reduction efforts, and ensure disadvantaged communities benefit from the program by dedicating 25% of program funds.

Program funding is distributed in three ways, including to the State of California, to areas with populations of 200,000 or less, and to Metropolitan Planning Organizations. While the City has not been awarded ATP funding to date, it has partnered with SBCTA (the lead applicant) on two ATP funded projects to improve active transportation access to the Metrolink Station that include improved bicycle facilities along Milliken Avenue and a proposed cycle track on 6th Street. Continued efforts to secure ATP funding is a recommended implementation action item for PlanRC in light of updates to the General Plan. These efforts improve equity and help reach AB 32 goals of reducing greenhouse gas emissions.

Emerging Technologies

From electric vehicles to autonomous vehicles and ride hailing services, new technology is already changing the way we get around in the 21st Century. Further developments and innovations have the potential to make travel safer, more convenient, and more environmentally sustainable. This section covers some of the new technologies to consider in planning for mobility through 2040.

Shared Mobility

The City has recently adopted a shared mobility ordinance and is planning to initiate a pilot program to evaluate the impact of shared mobility alternatives such as bikeshare and scooter-share within the City. Under this pilot program, the City would select one or more operators to deploy shared mobility devices within designated city locations,

¹⁶ www.catc.ca.gov/program/ATP

generally in the Terra Vista area of the City. In response to the COVID-19, the City is currently investigating the potential nature of the application and process of the pilot program in a post-pandemic environment.

Autonomous Vehicles

California has granted permits to 65 firms allowing for self-driving cars to be tested on the street with a backup driver at the wheel. This technology has the potential to revolutionize mobility and is important to consider in updating the circulation element of the General Plan.

There are several levels of vehicle autonomy. They range from cruise control (low level of autonomy) to fully autonomous vehicles (AVs) that require no interaction with the driver. Manufacturers are developing this technology, and the Federal and State governments will likely determine regulations for a fully autonomous fleet. It is unknown how long it will take to convert all cars to autonomous vehicles or if that will ever happen. However, the expansion of AVs will likely alter travel behavior in the city. AVs are expected to make car travel less stressful, increase travel safety, and reduce operational inefficiencies on freeways, all leading to an increase in demand for automobile travel and potential farther expansion of land uses. The transition period, when streets carry large numbers of both conventional and autonomous vehicles, will involve complex interactions and require new informed analysis methods and professional judgment to address conflicts and benefits. Developing strategies that anticipate a future AV fleet and provide infrastructure to support this fleet will be an important part of the General Plan Update.

Parking utilization will be altered by the introduction of AVs. In the United States, a considerable amount of land is dedicated to parking by way of minimum parking requirements. Today there are about five parking spaces per vehicle in the United States; however, in the future as more shared AVs are available, the need for parking will likely be reduced. The General Plan Update will need to anticipate how these changes could affect the design of streets.

Electric Vehicles

Adoption of electric vehicles is becoming more widespread, and facilities for charging electric vehicles are in demand. In a car-dependent community, owning electric vehicles could be encouraged by constructing supporting facilities for them. As driving electric vehicles helps reduce emissions and supports AB 32 goals, the City of Rancho Cucamonga should consider guiding policies for vehicle charging infrastructure.

In this space, there could be an opportunity to create wireless charging areas for cars, bikes, scooters, microtransit, and other mobility options that can charge in these areas. As the City retrofits parking areas or develops roadways, they may want to consider this potential future and incorporate specific elements to make implementation easier once an integrated platform is developed.

Solar Roadway Technology

Solar roadway is another technological advancement that is currently being researched by agencies such as the Federal Highway Administration (FHWA). Solar panel cells are embedded into the roadway in order to harvest solar radiation into renewable energy. The surface of the solar cells is laminated in glass and light-emitting diodes (LEDs). While there are still constraints to work through, such as surface friction, water infiltration, cost of construction/maintenance, and lower than expected energy returns, the potential for this technological advancement and others similar to it may be considered in the update of the General Plan policies.

Transportation Network Companies

Transportation network companies (TNCs), such as Uber and Lyft, are increasing in popularity and usage. TNCs combine web-based applications, such as mobile applications, and ridesharing vehicles. While TNCs could reduce private vehicle ownership levels, they are also likely to increase total vehicle miles traveled. The greatest factors that

TNCs will affect in cities include parking, curb-space management, and transit use—especially in areas where parking is currently considered “difficult”.

When people use TNC services in place of a privately-owned automobile, the demand for parking goes down, while the demand for curbside drop-off and pick-up locations rises. As TNCs continue to rise and capture a greater share of travel modes, the City will have to identify areas where it is difficult park and develop strategies for curb space management, while reconsidering minimum parking requirements. Minimum parking requirements may be reduced or eliminated; or maximum parking requirements could be introduced in specific areas of the city.

TNCs can help improve first-last mile connections, where a person must find transportation options to get to a transit station, and from transit to their destination. The General Plan Update should consider appropriate curbside management strategies, such as areas that either prioritize or restrict passenger loading and unloading, as well as safety.

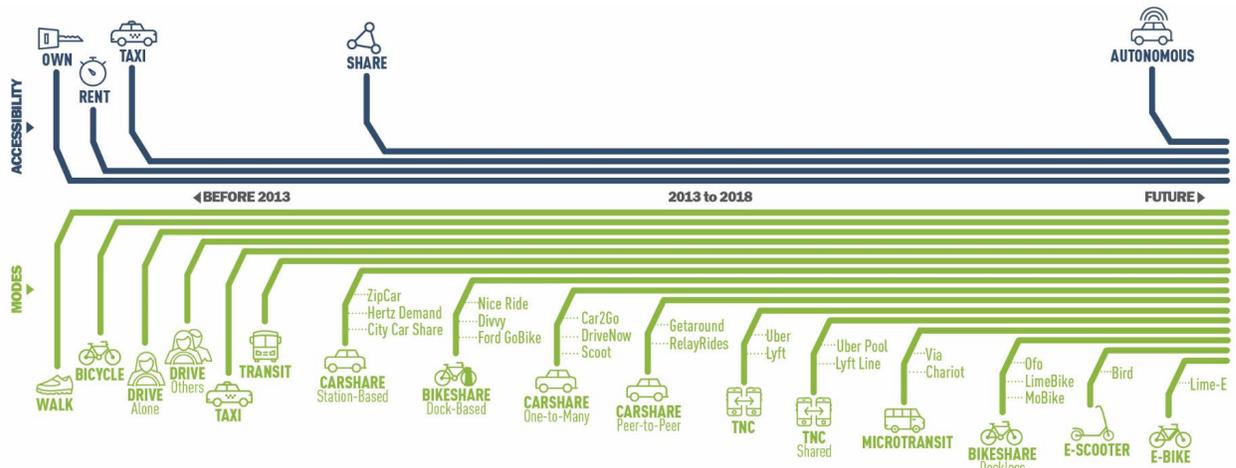
Microtransit

Microtransit is technology-enabled, demand-responsive transit services that are open to everyone. They can be used as incremental improvements to coverage-oriented dial-a-ride or paratransit services by suburban transit agencies, as supplements of low-performing suburban fixed route services by transit agencies, or as a premium for-profit fixed route service interlining with already overcapacity urban transit corridors. When considering a new service, a fixed-route bus is likely to best accomplish a ridership goal, while microtransit is better suited to a coverage goal that complements existing fixed-route transit service.

Mobility Hubs

Mobility Hubs can range from a small (bus shelter, bike parking, Transportation Network Company (TNC) drop-off spaces to very large (commuter rail integration with a bus transfer facility, transit plaza, bike repair station, bike share, TNC pick up, microtransit, bikeshare etc.). In Rancho Cucamonga, the Metrolink station currently provides the best potential to implement a robust mobility hub. While selecting a location for a mobility hub, the following components should be considered:

- Proximity to key transportation infrastructure and services,
- Easily accessible on foot or bicycle,
- Residents with low levels of mobility accessibility,
- Mixed land use, and
- Potential for future growth.



Disruptive trends in vehicle accessibility and travel mode



Emerging technologies in transportation: Autonomous Vehicles, Electric Vehicles, TNC's, Microtransit