



TECHNICAL MEMORANDUM

# Task 3.2 Mobility Gaps

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Prepared for County of Los Angeles Department of Regional Planning  
by IBI Group  
October 15, 2021

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# 1 Introduction

This technical memorandum summarizes the results of the analysis and identification of mobility gaps in the unincorporated communities located in the East San Gabriel Valley (ESGV), and has been prepared consistent with the approach outlined for Task 3.2 in the study scope of work. This analysis has been informed by the analysis and summary of existing transportation conditions completed as part of Task 3.1. In this draft form, this *Task 3.2 Mobility Gaps* Technical Memorandum is based solely on the technical analysis completed to date by the consultant team. Updates to this technical memorandum are anticipated, in order to incorporate input received through the community engagement efforts that will be conducted during the summer of 2021. The combination of technical analysis and community input is crucial to establish an overall understanding of mobility gaps and needs for the residents of the unincorporated communities in the ESGV.

## 1.1 Study Purpose and Background

The East San Gabriel Valley Planning Area is one of 11 Planning Areas delineated by the Los Angeles County 2035 General Plan. As the County of Los Angeles Department of Regional Planning (DRP) begins to prepare the East San Gabriel Valley Area Plan, this study will support the development of the Area Plan's mobility element. The East San Gabriel Valley Mobility Action Plan (ESGV MAP) is envisioned to develop innovative, creative, and implementable mobility solutions and strategies to support the 24 unincorporated communities located in the East San Gabriel Valley. The MAP will respond to the mobility challenges and opportunities of the study area, focusing on the critical role that transportation plays in the health, happiness, and well-being of nearly one million residents.

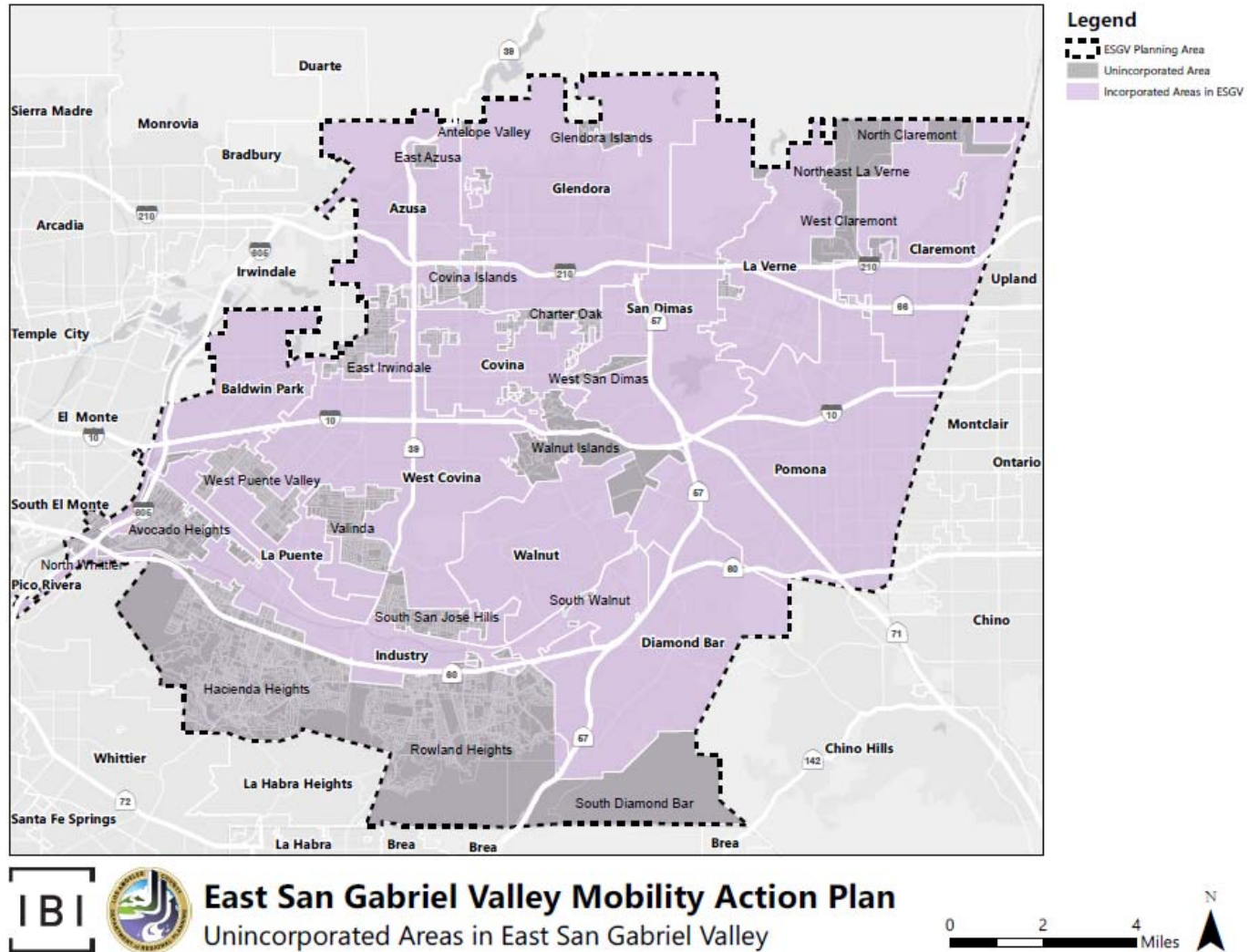
The East San Gabriel Valley is a vibrant and dynamic collection of communities and neighborhoods that have their own unique history, image, and values. This region has been historically underserved in terms of mobility choices when compared to other subregions in Los Angeles County.

Limitations in access to mobility impacts the quality of life of residents in unincorporated communities. Limited mobility options can impact residents' ability to travel to work, school, and shopping, reducing choices and opportunities related to each of these aspects of life. Improvements to mobility and access to key daily destinations can have a profound impact on quality of life, economic opportunity, and individual prosperity. To understand the challenges and opportunities for mobility in the East San Gabriel Valley, this technical report will explore the area's existing conditions, demographics, local plans, and policies related to mobility.

## 1.2 Study Area

The study area spans 210 square miles and is located east of I-605 Freeway, south of the Angeles National Forest and the San Gabriel Mountains, west of the Los Angeles County Line, and north of the Puente Hills. The major east-west highways running through the study area are I-210 in the north, I-10 in the center, and SR-60 to the south. Figure 1-1 presents the study area boundary, highlighting the locations of the unincorporated communities and cities within the East San Gabriel Valley.

Figure 1-1. Study Area



## 1.3 Mobility Gaps – Building on Task 3.1 (Existing Conditions) Outcomes

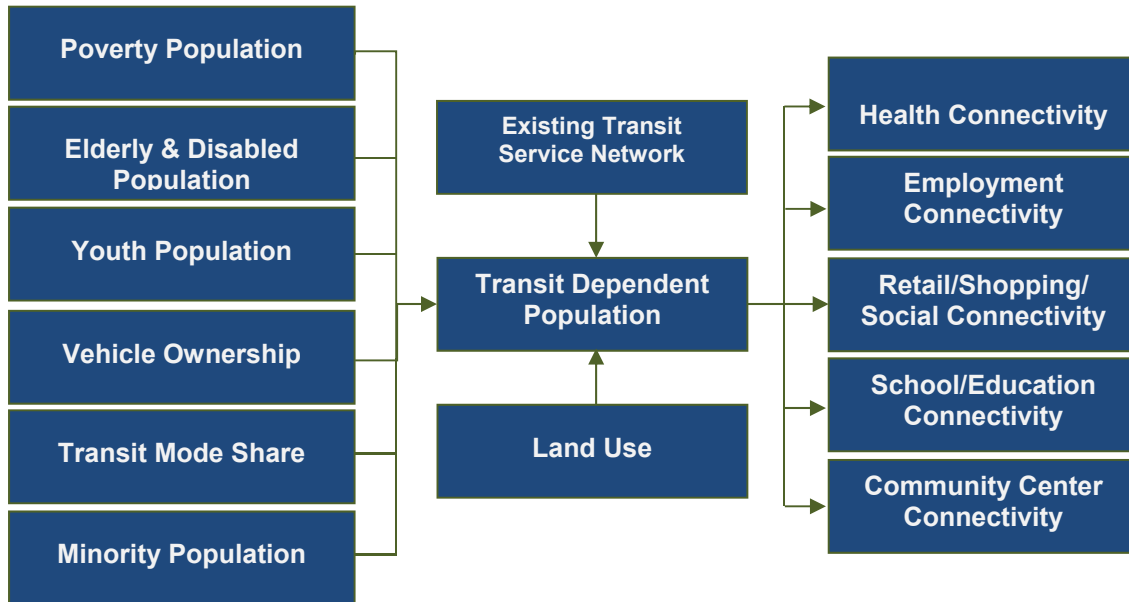
This *Task 3.2 Mobility Gaps* Technical Memorandum builds on the previously presented Task 3.1 *Existing Conditions Analysis and Policy/Literature Review* Technical Memorandum.

Identified herein are mobility gaps as informed by: (1) the profile of existing transit and mobility services; (2) community demographic/socioeconomic characteristics – factors influencing the demand for transit/mobility services; and (3) the public engagement strategy – what the community wants? As noted above, the input received through the public engagement effort will be incorporated in a subsequent update to this memorandum following the completion of these activities in summer 2021.

‘Mobility’ is a technical term used in transportation planning and is a word that can take on several different meanings depending on the use case and objectives of the transportation planning effort. For the purposes of the ESGV MAP and this technical memorandum, the definition of ‘mobility’ includes a continuum of possible transportation modes and services – both motorized and active transportation options including: pedestrian access, wayfinding and safety; bicycles and bikeshare/e-scooters; car rental; carshare; fixed route transit; microtransit; paratransit; parking; rideshare; and ridesource (TNC). Further, discussion of mobility must include consideration of next-generation technologies reflecting trip discovery and planning, trip booking and e-hailing, real-time information, mobile payment, etc.

Figure 1-2 illustrates the analysis process used to assist in understanding current demand in general and the propensity to use transit or alternate mobility services, specifically. This figure reflects consideration of demographic/socio-economic characteristics, existing transit services, and major trip attractors and generators.

Figure 1-2. Analysis Process



## 2 Transit / Mobility Demand

In determining mobility gaps, it is important to understand key factors that drive transit demand. Four factors are particularly important:

- Population and employment density: Where many people live and work close to one another, transit demand is higher.
- Socioeconomic characteristics: Characteristics such as age, income, and race correlate with transit demand.
- Special generators: Some areas are special generators for travel and transit demand. These include high schools, universities and colleges, hospitals/medical facilities, community centers, etc.
- Travel flows: Travel flows provide information on where people go and how they get there.

This section describes how these factors affect demand for transit service in the ESGV region. It also provides a commentary on how well existing services meet transit demand and informs on mobility gaps.

Further, several key elements of transit demand and access are prerequisites for core and high-capacity transit services to achieve and sustain high ridership and productivity. Depending on the location and type of service, these basic conditions can be provided by an appropriate mix of nearby land uses and densities, non-motorized infrastructure, feeder transit, and station parking. Specifically, transit needs the following conditions to thrive:

- **Critical mass of potential transit patrons.** Total potential ridership for transit is first and foremost a function of the amount of activity—residential, employment, commercial, institutional—within the transit service area. However, the sum of land uses and activities, even uses within close proximity of transit corridors and stations, is not necessarily sufficient. Other factors, listed below, are also necessary. Further, it is worthy to note that when there is no critical mass to sustain/support traditional transit services/infrastructure, there are other strategies (e.g. microtransit) and alternatives for people who can't drive or may not want to drive.
- **Travel demand throughout the day.** Where transit service is provided along a corridor with moderate to high frequency throughout the day, activities and land uses that generate all-day trip making, during both peak and non-peak hours, are highly desirable from the standpoint of transit efficiency. Bi-directional trip making throughout the day makes it possible for transit agencies to attain high ridership while accommodating a variety of mobility needs and choices.
- **Local connectivity to transit via multiple modes.** The service area for transit is defined based on proximity to the station with a distance factor that varies by mode of travel to the station. Typically, walk distance is assumed to be  $\frac{1}{4}$  to  $\frac{1}{2}$  mile, bike distance approximately 3 miles, and feeder bus and auto access to transit over longer distances. While a critical mass of activity may be present within those service areas, lacking sufficient infrastructure, such as sidewalks, bikeways, transit connections, and parking, the land uses present within them will generate limited ridership.
- **Regional connectivity to high-demand destinations.** At the scale of an individual transit station or stop, a critical mass of activity may be present within a well-connected

service area, but it won't produce high ridership if the transit system does not provide connections to key high-demand destinations. Major employment centers are the most important anchors for the transit system, including both central business districts as currently served for the most part, and secondary employment concentrations in outlying ESGV neighborhoods and suburbs. The latter are served less frequently and experience less coverage. Also, important, especially for all-day travel, are educational institutions, hospitals, and cultural, entertainment, or civic centers.

## 2.1 Population and Employment

For transit to be most effective, it must be frequent, fast, reliable, and easily accessible. More than any other factor, population and employment density determine transit's effectiveness, for several reasons:

- Transit needs to serve enough passengers to be cost effective and more density means more potential passengers. The reach of transit is generally limited to within one-quarter to one-half mile of the transit route or stop. Transit's market is therefore directly related to development density.
- To attract travelers who have other options, such as cars, transit must be relatively frequent – at least every 30 minutes, and preferably every 10 to 15 minutes. Below these frequencies, transit can be expected to serve only those who do not drive or cannot drive.
- In addition, population and employment levels and densities provide an indication of the types of riders that transit will serve. In general, there are two types of transit riders:
  - Riders with many choices, who have sufficient resources and the ability to operate private vehicles but choose to use transit for some or all trips. These riders may choose transit to avoid driving in congested roadways, the high cost of long commutes and parking, or other reasons.
  - Riders with limited choices, who use transit because they do not have a car available or cannot drive a car. These riders rely more on transit than those with many choices. Riders with fewer choices are also more likely to use transit to get to appointments, shop, and visit friends and family.

### 2.1.1 Population and Employment Density

Multiple research studies have attempted to quantify density thresholds for transit. At somewhere around 3,000 people per square mile, it makes sense to operate some level of infrequent local bus service. This level of density is common in US cities, both in prewar neighborhoods and postwar car-oriented suburbia. Here, while an hourly bus will get ridership, transit will never be the most convenient mode, and most people will choose to drive. Somewhere around 10,000 people per square mile, though, transit reaches a tipping point. Here, the sheer number of people are enough to justify frequent service. Moreover, walking and biking become useful for short trips, which makes it easier for people to live without cars and makes transit more desirable. As densities further increase, more and more transit is justified. The transit-oriented neighborhoods of older cities have over 15,000 people per square mile, and even newer car-oriented cities like those in the ESGV have some neighborhoods at these densities.

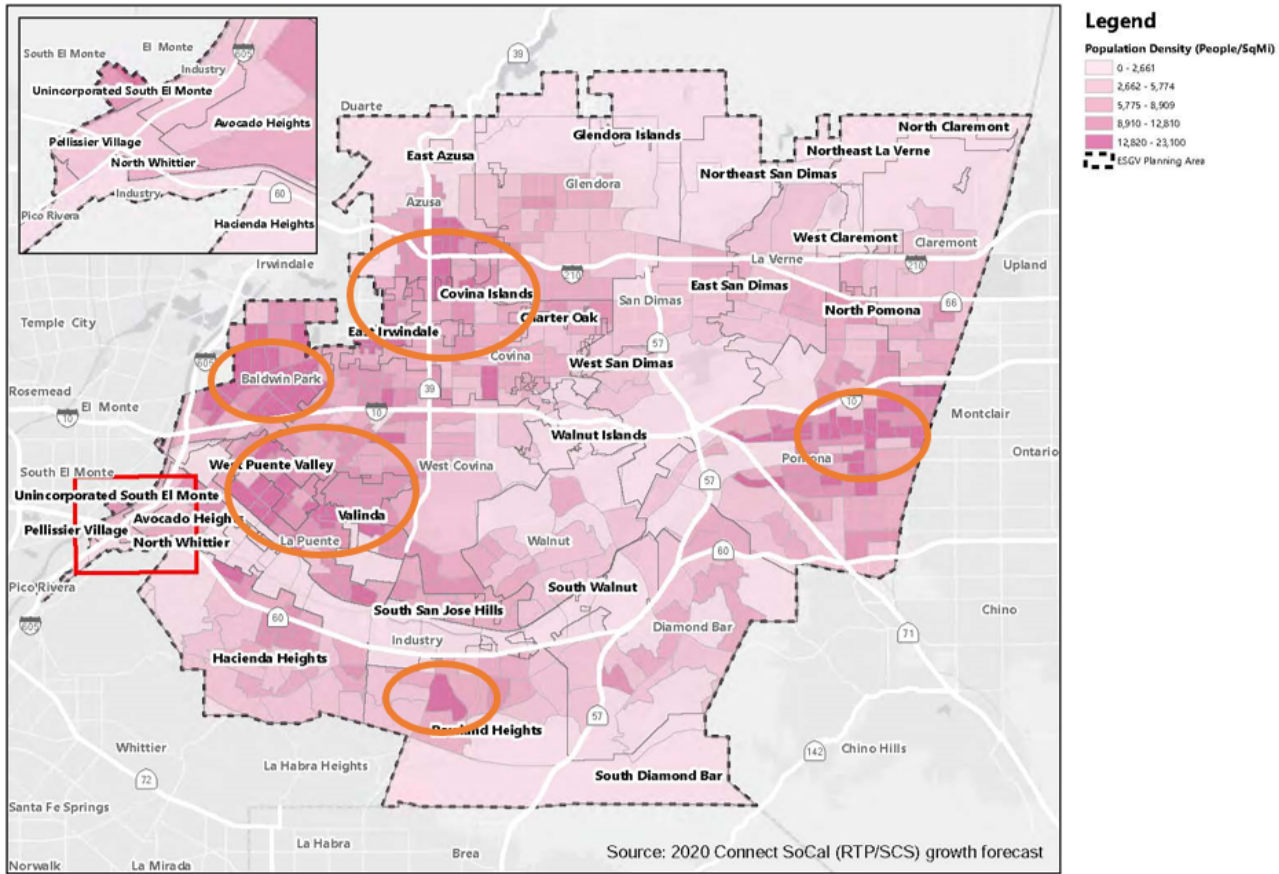
Using the 2020 Connect SoCal (RTP/SCS) growth forecast adopted by the Southern California Association of Governments (SCAG), Figure 2-1 presents the population density in general and



highlights areas of greater population density specifically for the ESGV planning area by traffic analysis zone (TAZ). The most densely populated areas (and those served by regular/varied frequency Foothill Transit service) can be found in the western portion of the study area near I-10 and SR-39. This includes the unincorporated communities of West Puente Valley, Valinda, East Irwindale, and Covina Islands, as well as the cities of Baldwin Park and La Puente. Other densely populated areas can be found in the eastern portion of the study area in and around the city of Pomona as well.

The location, type and number of jobs is another strong indicator of transit demand, as traveling to and from work accounts for the largest single segment of transit trips in most markets. According to the 2020 Connect SoCal (RTP/SCS) growth forecast, high concentrations of employment can be found along SR-60, particularly in the cities of La Puente and Industry (Figure 2-2). Other areas of high employment include the communities in the cities of Covina, West Covina, La Verne, Claremont, and Pomona. This may indicate that many residents of unincorporated communities may travel to these cities for work.

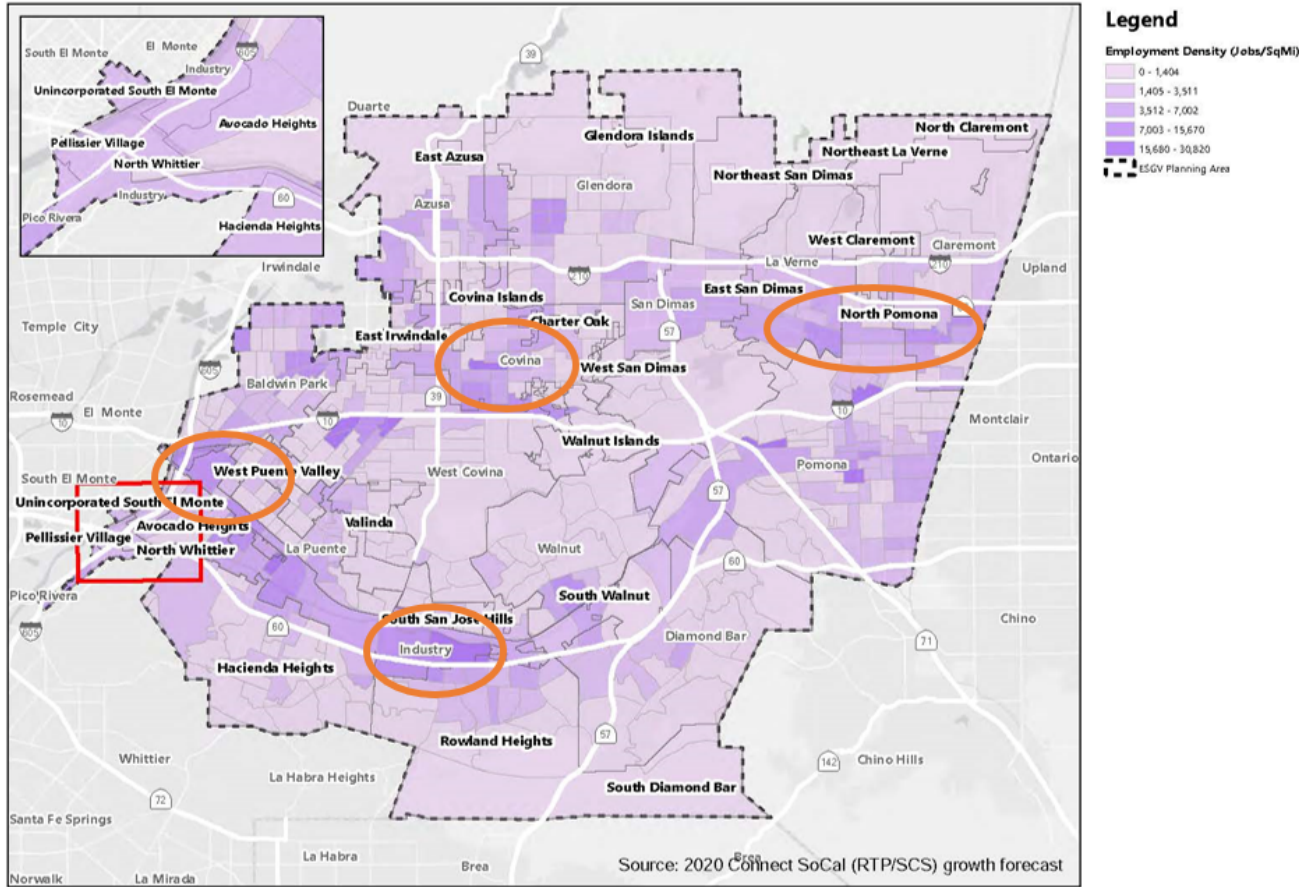
Figure 2-1. Population Density



**East San Gabriel Valley Mobility Action Plan**  
 Existing Population Density 2020



Figure 2-2. Employment Density



The density measurement of 6,400 persons per square mile is equal to 10 persons per acre gross. This density can be suitable for an intermediate level of public transit service (1 bus every half hour) under present-day conditions and assumptions. Foothill Transit serves much of the areas presented in the darker purple (3,500+ jobs per square mile) noted on the above employment density map.

Low-wage jobs, as defined as those with annual incomes under \$40,000, are generally concentrated in the same areas as employment in general.

### 2.1.2 Mode Share

The majority of commuters of employment age (16 years and older) in the East San Gabriel Valley travel by vehicle, with 81% of trips taken by driving alone, 12% carpooling, and even less taking transit or walking to work (Table 2-1).

Residents' choice in travel mode throughout the region can reflect the region's infrastructure and connectivity, as well as cultural attitudes toward automobile use. With almost 90% of commuters using an automobile to get to work, travel by automobile is the most prevalent mode of travel in the East San Gabriel Valley. Higher automobile use in the East San Gabriel Valley, as compared to Los Angeles County overall, demonstrates that the existing network may encourage increased automobile usage.

**Table 2-1. Mode Share**

MODE	TOTAL # OF TRIPS (ESGV)	% OF TOTAL TRIPS (ESGV)	TOTAL # OF TRIPS (LA COUNTY)	% OF TOTAL TRIPS (LA COUNTY)
Drove Alone	357,381	81%	3,366,853	77%
Carpool	53,393	12%	448,785	10%
Transit	14,435	3%	300,361	7%
Walked	9,432	2%	128,872	3%
Other	7,130	2%	106,967	3%
<b>Total</b>	<b>441,771</b>	<b>100%</b>	<b>4,351,838</b>	<b>100%</b>

Source: American Community Survey 5-Year Estimates (2016)

As previously presented in the Task 3.1 (*Existing Conditions Analysis*) Technical Memorandum, areas where a high percentage of trips to work are taken by a mode other than driving alone (around 50 percent or less) include the communities around Walnut Islands, parts of Pomona, and the communities around La Puente. The need for alternative modes of travel, especially for work, may be higher in these areas.

## 2.2 Socio-economic Characteristics

In addition to population and employment density, socio-economic characteristics correlate with transit use and the identification of mobility gaps (or unmet needs). National research shows that some population groups tend to use transit more than others. These include:

- People of color use transit at higher rates than people who are white and not Hispanic. Part of the differences in transit use are attributable to differences in income. Based on

the Title VI of the Civil Rights Act of 1964, the Federal Transit Administration (FTA) requires “the level and quality of public transportation service is provided in a nondiscriminatory manner... without regard to race, color, or national origin.”

- People with low incomes tend to use transit at high rates, because it is cheaper than owning and operating a car. The FTA requires that federally funded transit agencies take all practicable actions to avoid policies and activities that would have a “disproportionately high and adverse effect” on low-income populations.
- Households without private vehicles. In large cities, many residents choose not to have a car because transit is available, car ownership creates additional responsibilities, and/or because there are options such as taxis, carsharing, and car rentals for times when a car is desired or needed. However, in urban areas that are oriented toward cars and where transit options are much more limited, people without automobiles largely consist of those with low incomes or those who do not drive.
- People with disabilities, many of whom cannot drive or have difficulty driving. Public transportation, including regular fixed-route bus and rail service as well as specialized paratransit services, is an essential resource to ensure people with disabilities can remain active, productive, and part of their communities.

When significant numbers of these populations groups cluster together, they can influence the transit demand to an extent that is not captured when only considering total population. Similarly, transit demand may be relatively low in areas with fewer of these populations.

Figures 2-3 through 2-5 illustrate the higher concentrations, including those specific to the unincorporated areas, of Senior Population, Households with No Vehicle Available, and SB 535-Designated Disadvantaged Census Tracts, respectively.

Figure 2-3. Senior Population

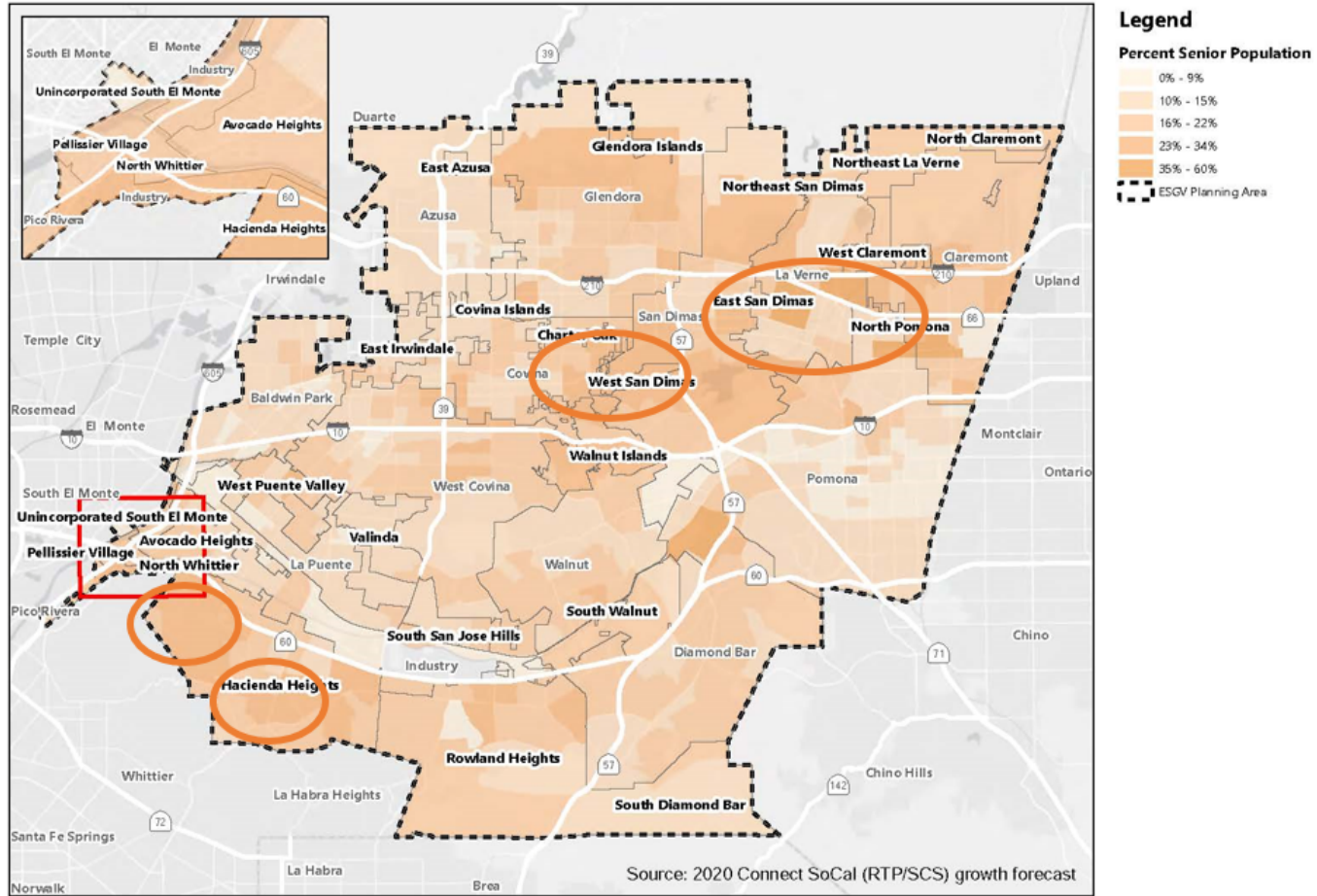
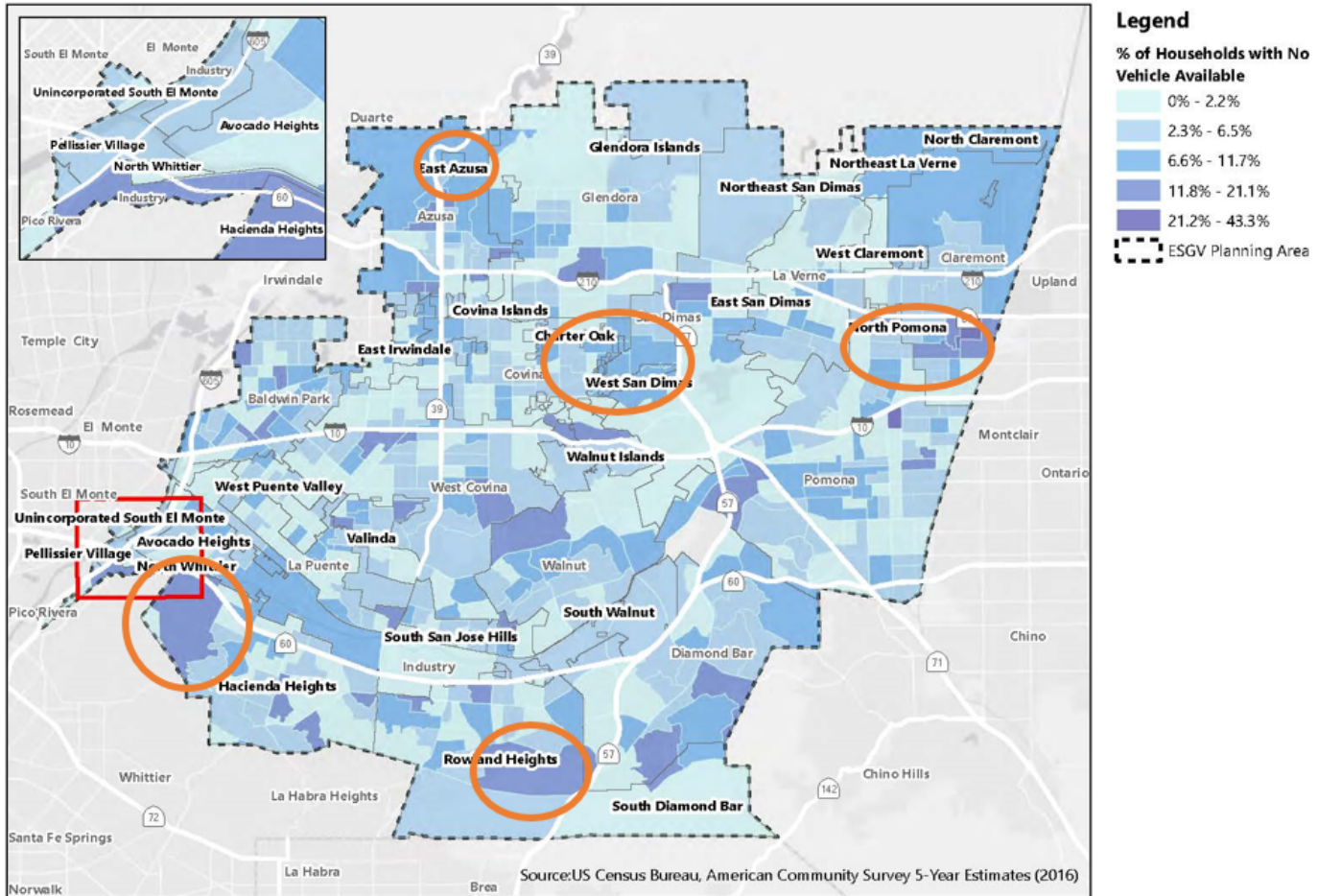


Figure 2-4. Households with No Vehicle Available

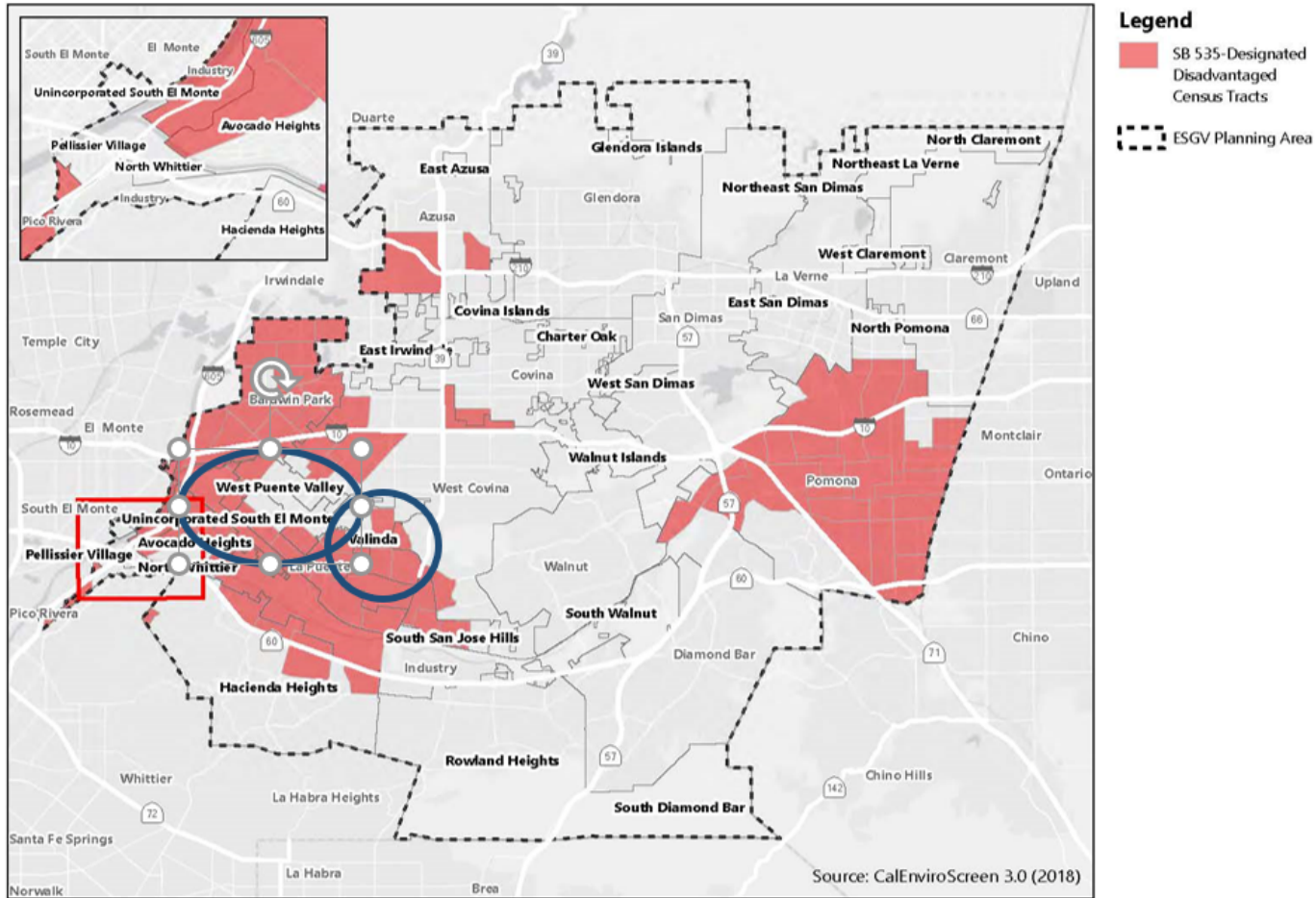


**East San Gabriel Valley Mobility Action Plan**

Households with No Vehicle Available



Figure 2-5. SB 535–Designated Disadvantaged Census Tracts





Discussion and maps in the Task 3.1 (*Existing Conditions Analysis*) Technical Memorandum concluded:

- Often, senior residents have limited ability to travel by driving and may need alternative modes of travel. Some TAZs in the study area have a percentage of senior residents as high as 60 percent of the total population.
- Generally, the residents of the East San Gabriel Valley are racially diverse and include residents who have lived in Los Angeles County for multiple generations and some who are recent immigrants. The percent of non-white population reaches over 50 percent in many areas, particularly in the central, and southern, and western areas of the study area. Areas with the highest concentrations (around 75 percent or higher up to 97 percent) of non-white population include the communities in and around the unincorporated communities of Rowland Heights and Hacienda Heights, and the cities of Walnut, West Covina, Baldwin Park, and Diamond Bar.
- In regard to household income, the percentage of low-income households (as defined by SCAG as households with an annual income of less than \$35,000) with particularly high percentages (over 50 percent) of low-income households include the communities around the unincorporated communities of Walnut Islands and Rowland Heights, as well as the cities of Pomona, Baldwin Park, La Puente, and Azusa.
- Often correlating with household income is the indicator of educational attainment. Those with higher levels of educational attainment tend to earn more than people with less education and are likely to live in communities that are less polluted and have access to the resources necessary for good health, such as health facilities, healthy grocery stores, green space, and high-quality schools. Broadly, the areas with the highest percentages of education attainment include the communities in and around the cities of Glendora, La Verne, Claremont, Walnut, and Diamond Bar, as well as the unincorporated communities of Rowland Heights and Hacienda Heights.
- Vehicle ownership is another indicator that can help identify mobility gaps and whether certain households may need alternative modes of travel to get to work, school, or to other key destinations. According to the ACS, as many as about 40 percent of all households do not own a vehicle in some areas in the East San Gabriel Valley, and therefore may rely on transit or active modes of transportation. These households are dispersed throughout the region, showcasing reliance on different travel modes throughout the region.

## 2.3 Key Activity Centers

Key community destinations informs on the potential need for mobility options to a range of destinations, and hence trip purposes including work, education, medical, social, recreational for residents of the East San Gabriel Valley.

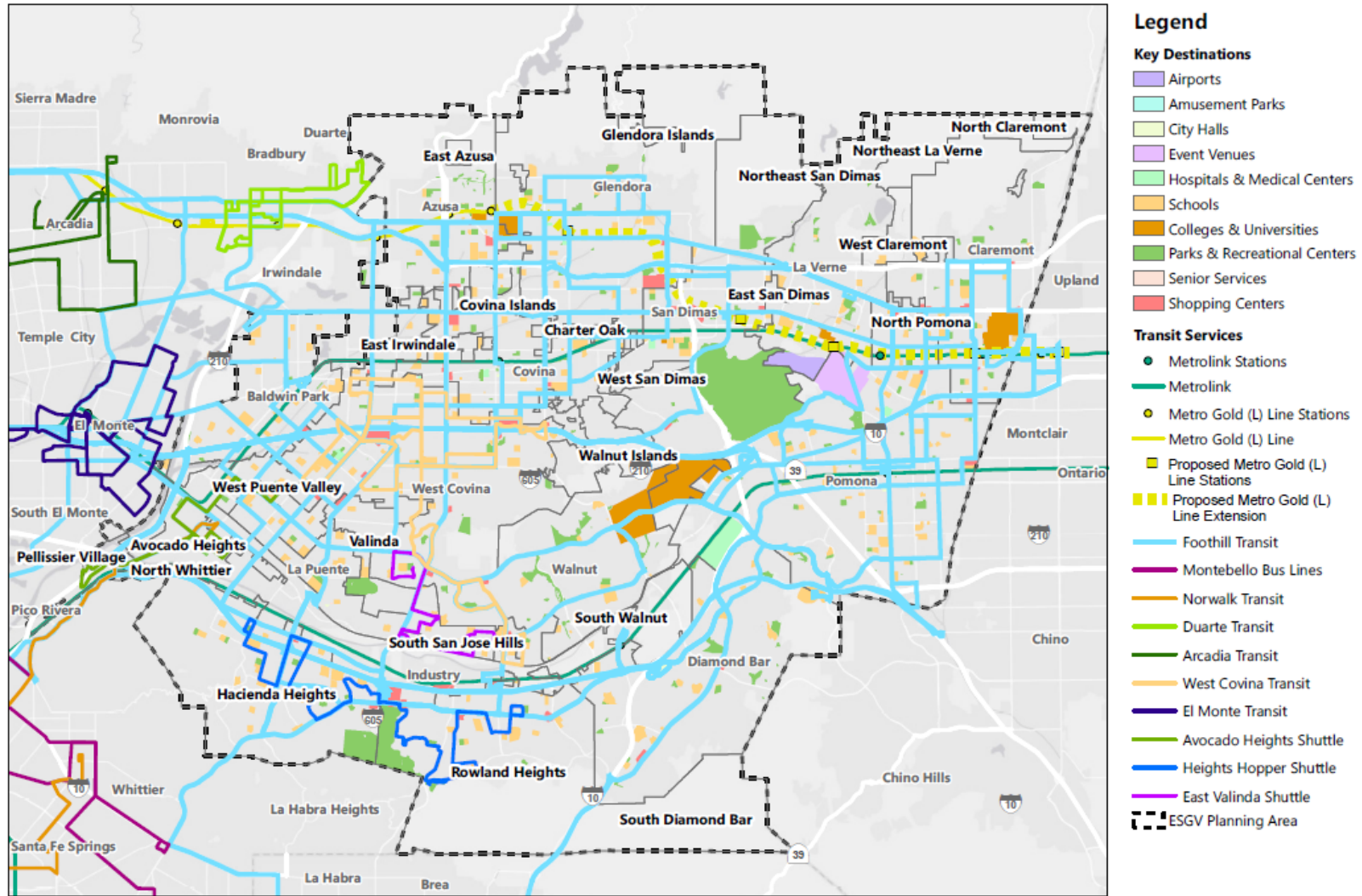
Figure 2-6 presents a map of key destinations in the study area. Included is an overlay of the transit route network of the respective transit agencies.

Figures 2-7 through 2-10 present the same data (key destinations and transit route network overlay) for each study area quadrant, NE, NW, SE, and SW respectively.

Further, an understanding of the range of trip purpose travel needs relative to available transit/mobility services, informs on mobility gaps as they may relate to area of service/catchment area, level/frequency of service, hours of service, days of week, etc.

The major colleges and universities in the area include the University of LaVerne, the Claremont Colleges, Azusa Pacific University, California Polytechnic University, Pomona, Mount San Antonio College, and Citrus Community College, with many other schools scattered throughout the area. Hospitals and medical centers are primarily located in the northern half of the region. The Pomona Fairplex, located in the eastern portion of the study area, serves as a popular event venue for shows and events, such as the Los Angeles County Fair. There are several shopping centers and recreational areas in the region, with Frank G. Bonelli Regional Park and Peter F. Schabarum Regional County Park being two of the largest regional parks.

Figure 2-6. Key Destinations and Transit – Study Area



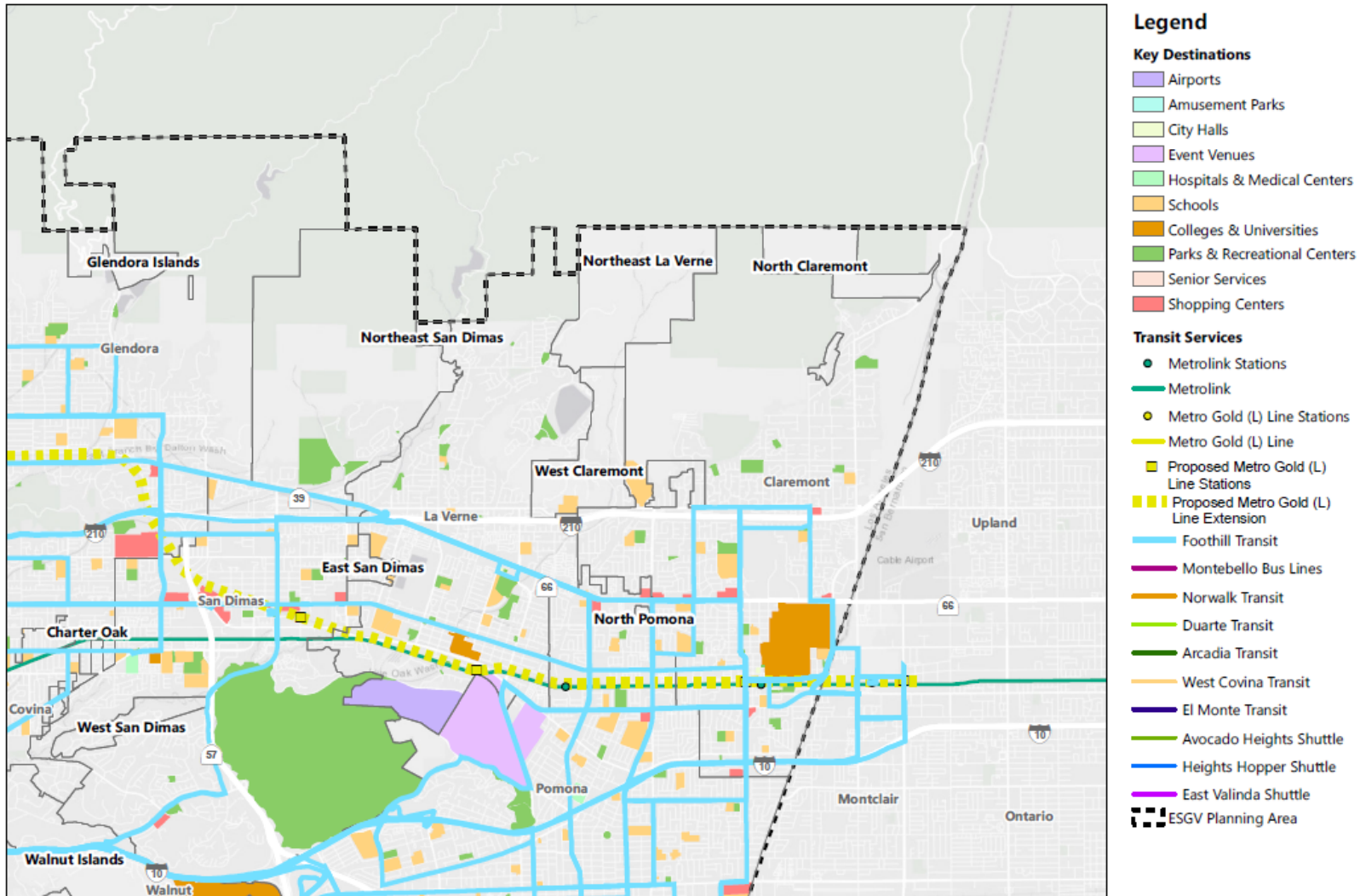
Source: County of Los Angeles, LA Metro, Metrolink, Foothill Transit, Montebello Bus Lines, City of Norwalk, City of Duarte, City of Arcadia, City of West Covina, City of El Monte



**East San Gabriel Valley Mobility Action Plan**  
 Key Destinations and Transit



Figure 2-7. Key Destinations and Transit – Northeast Quadrant



Source: County of Los Angeles, LA Metro, Metrolink, Foothill Transit, Montebello Bus Lines, City of Norwalk, City of Duarte, City of Arcadia, City of West Covina, City of El Monte



## East San Gabriel Valley Mobility Action Plan

### Key Destinations and Transit - NE Quadrant

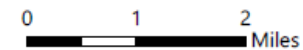
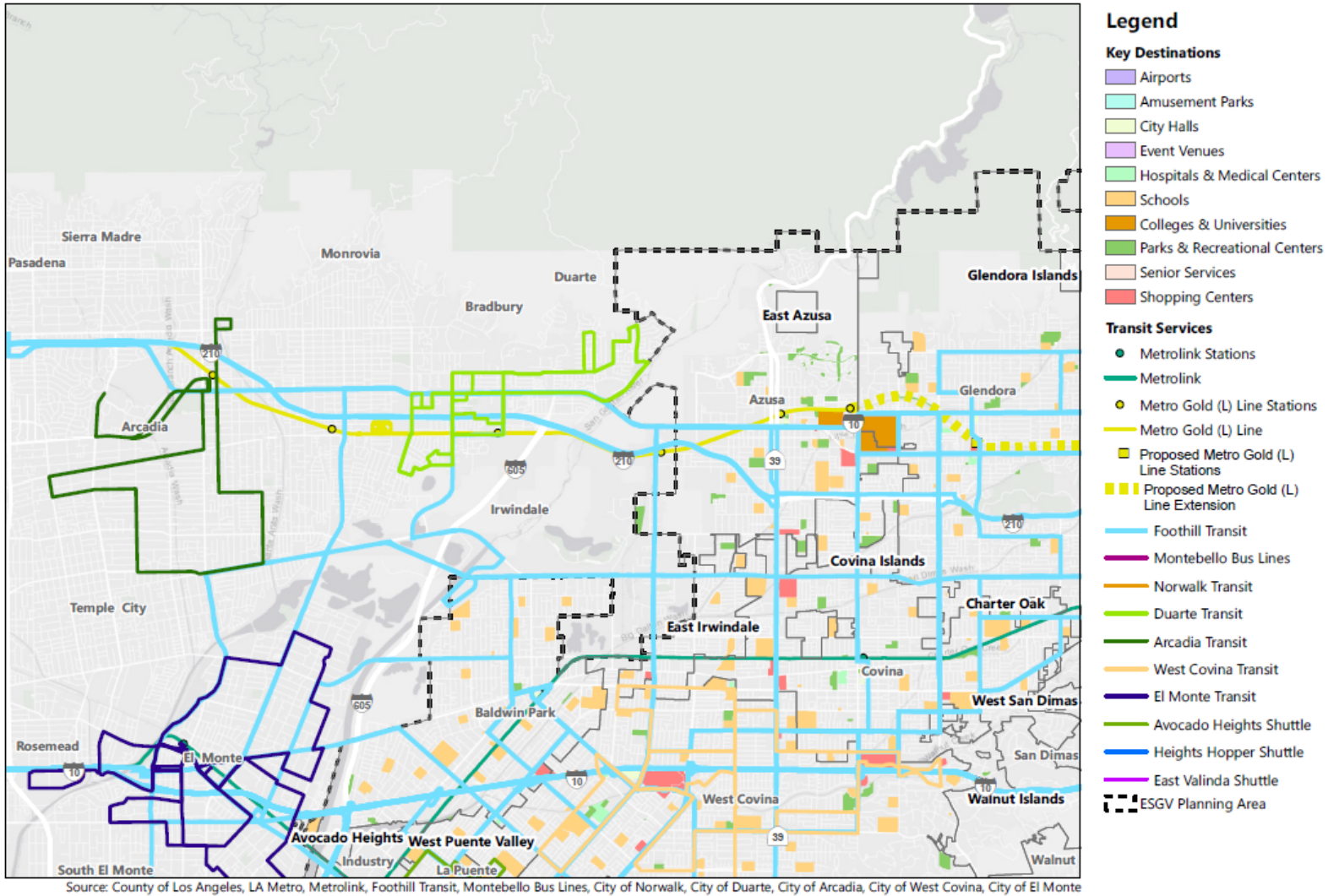
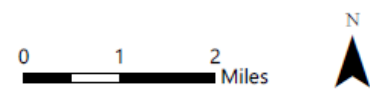


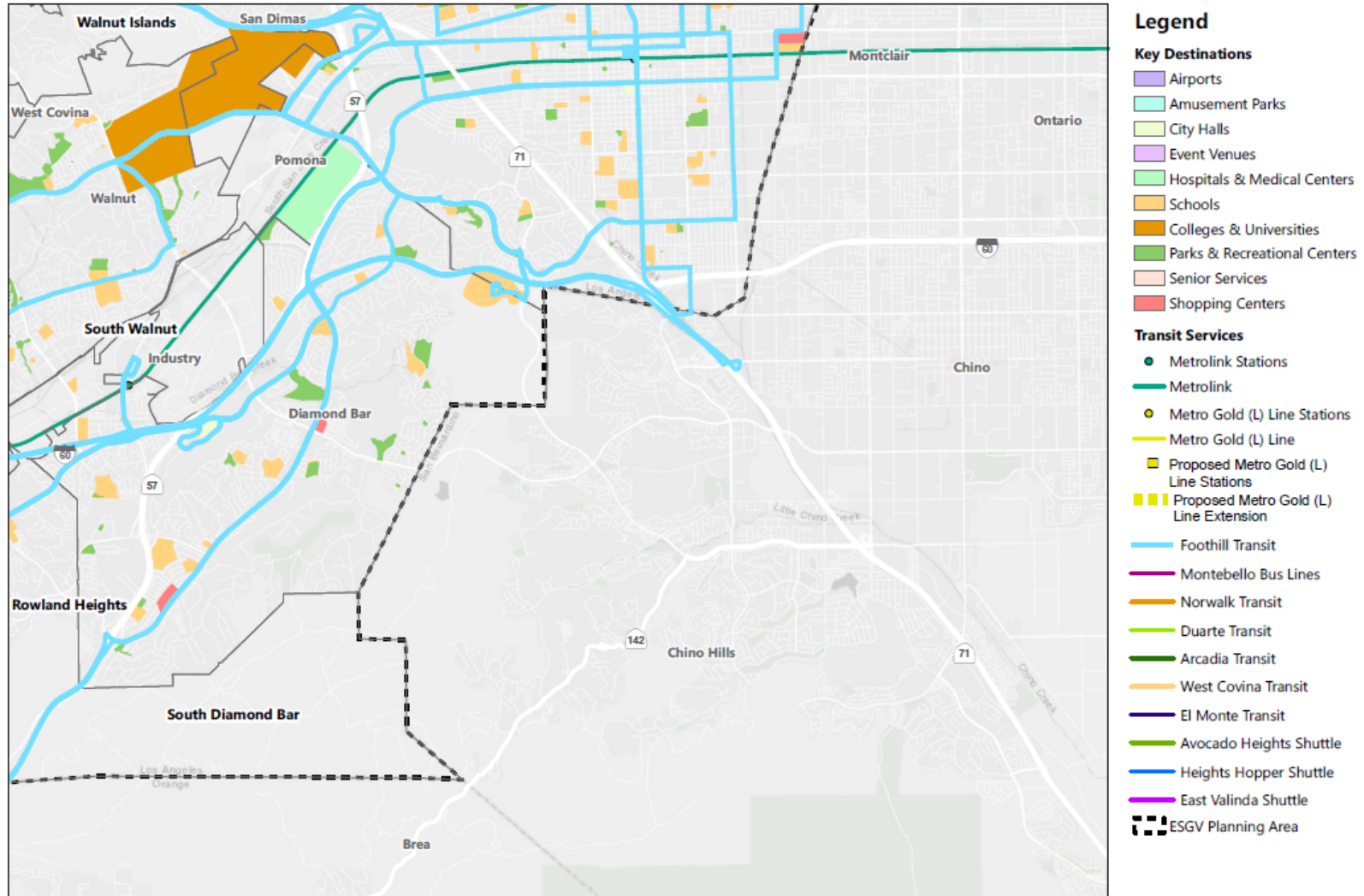
Figure 2-8. Key Destinations and Transit – Northwest Quadrant



**East San Gabriel Valley Mobility Action Plan**  
 Key Destinations and Transit - NW Quadrant



**Figure 2-9. Key Destinations and Transit – Southeast Quadrant**



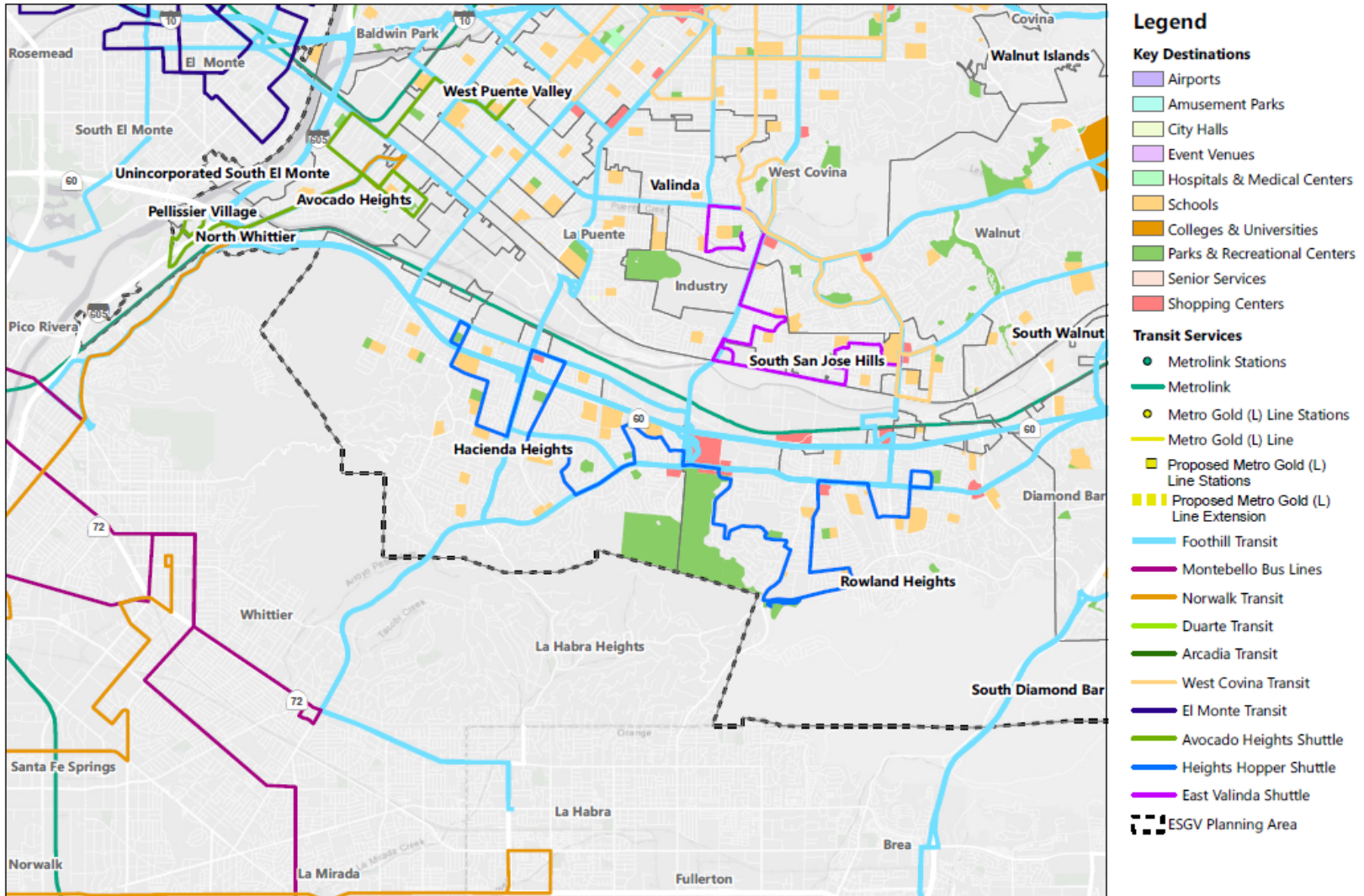
Source: County of Los Angeles, LA Metro, Metrolink, Foothill Transit, Montebello Bus Lines, City of Norwalk, City of Duarte, City of Arcadia, City of West Covina, City of El Monte



**East San Gabriel Valley Mobility Action Plan**  
 Key Destinations and Transit - SE Quadrant



Figure 2-10. Key Destinations and Transit – Southwest Quadrant



Source: County of Los Angeles, LA Metro, Metrolink, Foothill Transit, Montebello Bus Lines, City of Norwalk, City of Duarte, City of Arcadia, City of West Covina, City of El Monte



**East San Gabriel Valley Mobility Action Plan**  
 Key Destinations and Transit - SW Quadrant



## 2.4 Transit Propensity Score

Complementing the aforementioned profile of the ESGV service area is the following discussion of Metro's development of its own transit propensity index or score. The score is based on the 2010 Census, and it is updated through 2016. It includes locations of major attractors of transit ridership, including schools, shopping centers, hospitals, and other institutions.

Metro's transit propensity score (TPS) considered the following three major components of predisposition to ride transit. The higher the TPS score correlates to a higher likelihood of taking transit.

1. Elements of Demand - e.g. Population and employment densities, including seniors, persons aged 18-34, and persons that are attending grades K-12. According to a recent TCRP Study that seeks to shed light on transit propensity, transit use is significant among millennials (ages 18-34). Hence, Metro staff included the millennials as identified in the census as one of the indicators. Finally, low income workers at the jobsite are included.
2. Market Segments - e.g. characteristics relating to the reason for travel. Some people are commuters, some are transit dependent, and some are choice riders. Each one of these markets has attributes broken down as follows:
  - a) Commuters - ages 35-54, and 55 years or older, have a higher education above 12th grade, and incorporate many single individuals.
  - b) Transit dependents - comprised of individuals with zero cars available, lower income, ages 10-19, ages 55+, single mothers, individuals with disabilities and minorities.
  - c) Choice riders - comprised of individuals between the ages of 20-34, have higher education beyond 12<sup>th</sup> grade, and are single (no children).
3. Built Environment - aspects of the environment that people must navigate to travel to and from. Attributes that fall into this area of the TPS include:
  - a) An assessment of the walkability of the census tract based on the number connected street intersections.
  - b) The square footage of built development.
  - c) Housing density.

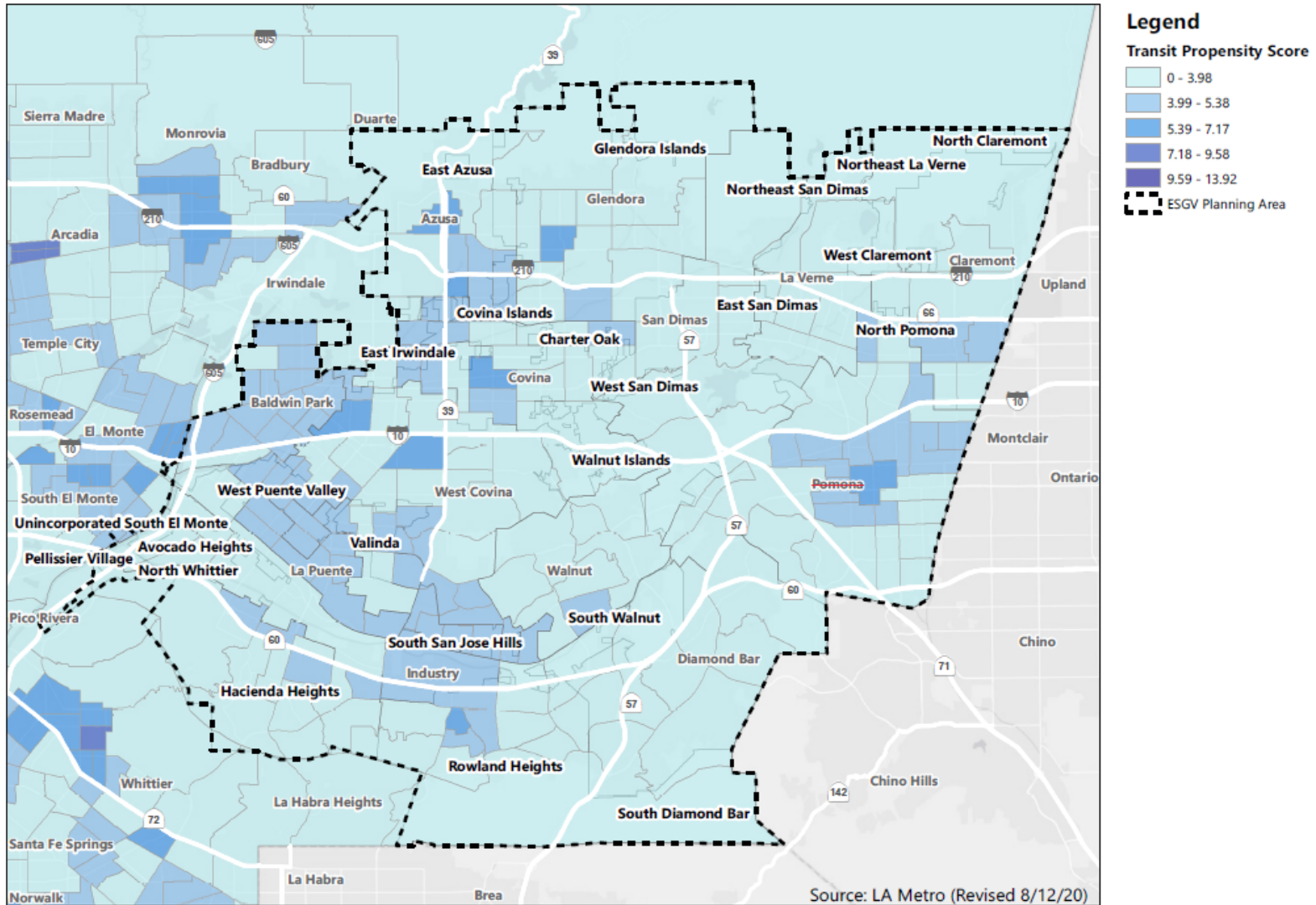
The resultant TPS by census tract for the study area is shown in Figure 2-11.

Validating the demographic and socio-economic profile of the ESGV region, Metro's TPS illustrates relatively low transit propensity scores for much of the region. Further, as discussed in the Task 3.1 Tech Memo, current high order public transit bus and rail services exist in key corridors and are supplemented by local and community based services.

It is important to note that notwithstanding relatively low transit propensity scores as developed by Metro's TPS, there are many pockets of the study area that are beyond a reasonable walking distance to transit, particularly in the unincorporated areas. Hence, these areas specifically would not only benefit by the availability of transit/mobility solutions but would also provide an opportunity to influence travel behavior by providing additional mobility options.



Figure 2-11. Transit Propensity Score



**East San Gabriel Valley Mobility Action Plan**  
 Transit Propensity Score by Census Tract



## 2.5 Transit Equity Score

The Transit Equity Score (TES) indicates where transit is of most need based on key socioeconomic indicators within Los Angeles County. TES consists of seven measures:

- Zero Car Households per Acre
- Poverty/Low Income Households per Acre
- School Age Students (age 10 -19) per Acre
- Seniors over 55 as of 2010 per Acre
- Single Mothers per Acre
- Disabled Persons per Acre
- Minorities per Acre

### The Los Angeles Story

Public transportation can offer a "ladder of opportunity", providing affordable and convenient connections to jobs, goods and services, medical care, and other essentials of daily life. But pervasive racism and discrimination in land use, transportation, and transit planning have created wide gaps in transit access across race, income, and other characteristics, worsening social inequity.

Source: TransitCenter Equity Dashboard

The data, as prepared by Metro's NextGen Data Center, for each measure comes from a combination of the 2010 Decennial Census, 2015 American Community Survey and 2017 American Community Survey compiled at the census tract level.

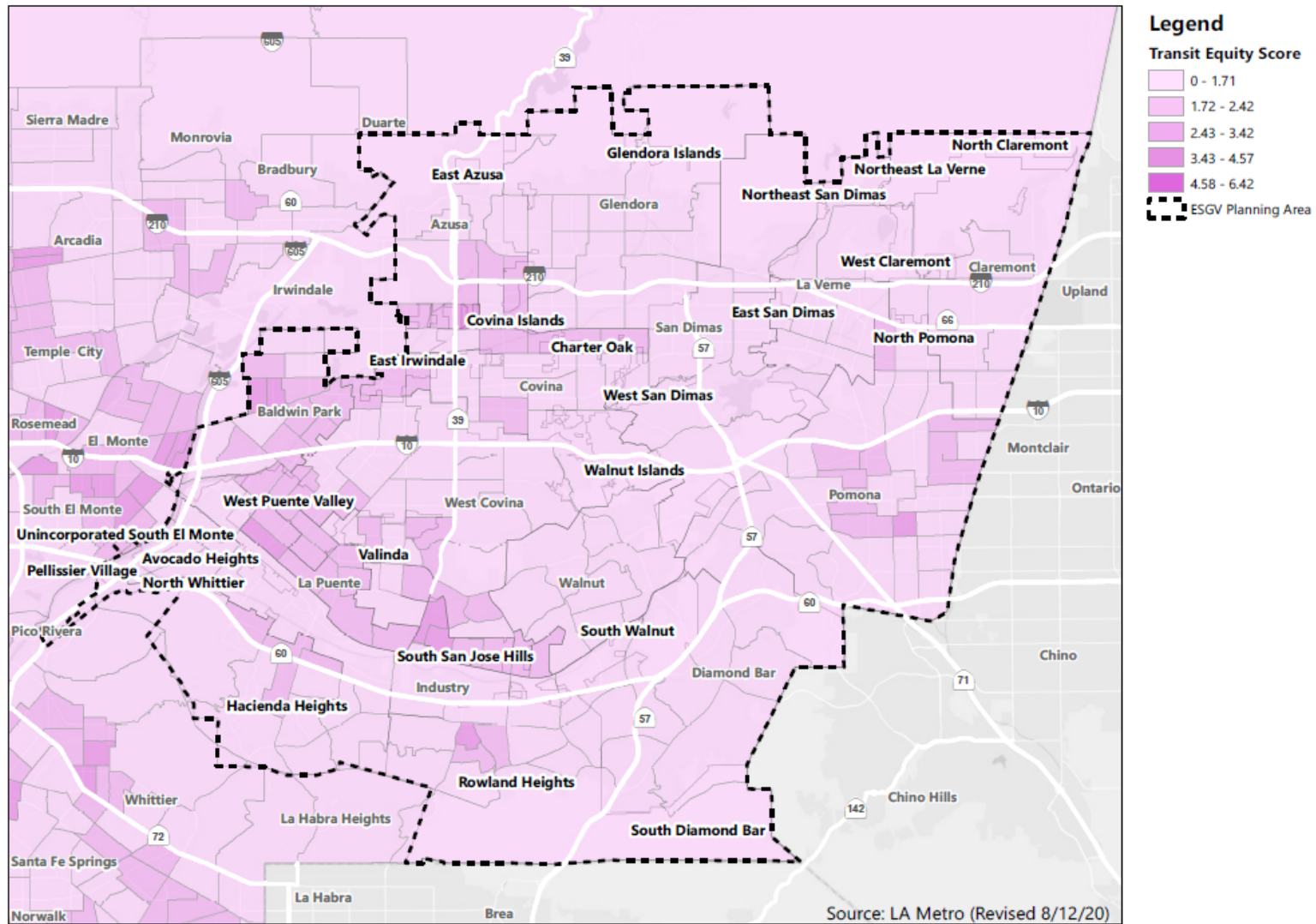
The weight of Zero Car Households and Minority Scores are doubled since past analysis by the NextGen Data Center suggests that these two categories play a more significant role in determining transit equity than the other measures.

Figure 2-12 presents the TES by census tract for the study area. Of note, communities with low TES include: Glendora Islands; Northeast San Dimas and La Verne; North Claremont; Walnut Islands; Diamond Bar and South Diamond Bar; and Hacienda Heights.

There are relatively low transit equity scores as developed by Metro's NextGen Data Center, specifically in the unincorporated areas of the study area. Transportation disadvantaged populations, as determined by the above listed seven measures are concentrated in the higher density areas of the study area. This may suggest mobility gaps reflecting availability by time of day, day of week, affordability, excessive travel times, etc. These elements will be further explored in the community engagement activities.

The correlation between Transit Propensity Score and Transit Equity Score, as well as consideration of previously discussed demographic and socio-economic factors will be reflected further in the discussion of *Recommendations and Actions to Improve Mobility* (Task 3.3 Tech Memo).

Figure 2-12. Transit Equity Score



**East San Gabriel Valley Mobility Action Plan**  
 Transit Equity Score by Census Tract



## 2.6 Major Travel Corridors

East-west regional transportation access in the East San Gabriel Valley Planning Area is provided by I-10, I-210, and State Route 60, which are heavily used corridors throughout Los Angeles County. North-south regional transportation access is provided by I-605 and State Route 57, which are utilized by travelers in both Los Angeles County and neighboring Orange County. Major surface roadways providing north-south access through the unincorporated communities in the region include Irwindale Avenue, State Route 39 (Azusa Avenue), Puente Avenue/Workman Hill Road, Citrus Avenue, Grand Avenue, Hacienda Boulevard, Fullerton Road, Nogales Street, San Dimas Avenue, and Towne Avenue. Major east-west surface roadways include Route 66, Arrow Highway, Badillo Street, Amar Road, Valley Boulevard, and Colima Road. Major east-west public transit is provided by Metrolink, offering commuter rail service between Los Angeles and San Bernardino and Riverside Counties. The Metro L Line (Gold) offers service between Los Angeles and Azusa (with an extension to Montclair under construction), and Foothill Transit offers several local and regional bus lines.

## 2.7 Existing Transit Landscape

The Task 3.1 Tech Memo presented a profile of the current transit landscape in the ESGV study area.

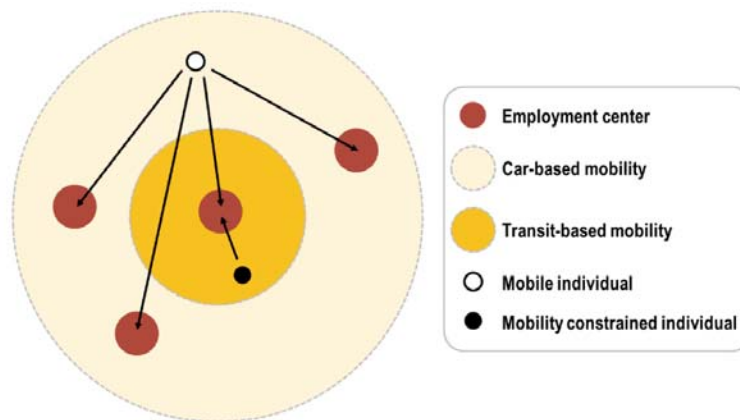
The *Baseline Conditions* section included a profile of current transit (fixed route bus, rail, and community based) operations. These baseline services include fixed route bus and rail transit services providing inter-city bus and/or rail services including LA Metro, Foothill Transit, Montebello Bus Lines and Norwalk Transit. Municipal transit/mobility services include those cities providing local fixed-route and/or dial-a-ride, including taxi/transportation network company (TNC) partnerships but typically within a prescribed service area reflecting city limits.

The description of baseline conditions includes current route structures and system operating characteristics including frequencies, fare structures, etc. For each of the transit/mobility services profiled, quantitative data reflecting salient operating characteristics (including levels of service, unlinked passenger trips/ridership, etc.) and financial performance were included in summary tables.

### 3 Mobility Gaps

Many cities have two mobility spaces, one which is transit-oriented and usually in central areas, and the other which is car-oriented and in peripheral areas. This is exemplified by Metro’s TPS illustrating high scores in the core areas of Los Angeles County and lower scores in the peripheral areas including the ESGV study area. Mobility gaps can have important impacts on employment opportunities. A mobility-constrained individual (without a car) has access to only a limited number of jobs that are within reach of public transit. This commonly corresponds to central urban areas that are better serviced by transit. Still, central areas tend to have a large labor market, but deconcentration and suburbanization have resulted in higher employment growth in peripheral areas. A mobile individual (with a car) has access to a wider array of jobs and thus have more choice and opportunities. Consequently, accessibility can be a factor of spatial opportunity as jobs may be available, but not easily accessible to a segment of the ESGV population. This is foundational to a major equity and environmental justice issue throughout Southern California. Designing car-centric communities directly and indirectly leads to demographic segregation and less access to opportunities to change someone’s economic standing and hence, an overt equity issue.

For explanatory purposes, this is represented in the illustration below.



#### 3.1 Gaps and Opportunities

Complementing the potential unmet mobility needs referenced in Section 2 and validating the demographic and socio-economic profile of the ESGV region, Metro’s TPS illustrates relatively low transit propensity scores for much of the region. Further, as discussed in the Task 3.1 Tech Memo, current high order public transit bus and rail services exist in key corridors and supplemented by local and community based services.

That said, residents in the East San Gabriel Valley are impacted by limited transit options as described below and significant amounts of traffic, resulting from the subregion’s location as a

##### What is a Mobility Gap?

- Mobility Gap - difference between the number of trips made by persons residing in households with access to a personal vehicle and those without - measured in trips per day.
- Represents the full unmet trip need compared to those with relatively free/unrestricted mobility.
- Can be used to estimate the proportion of unmet need that is served or to set goals based on proportion served.

crossroads for traffic traveling between Los Angeles County, the Inland Empire, and Orange County. This condition creates substantial negative impacts for the community in terms of traffic congestion, air quality, and noise, all of which have an adverse effect on health and quality of life.

The area's relatively concentrated pockets of population and employment density along some of the most-utilized corridors in the region implicate the need for special attention to the residents of unincorporated communities living along the major highways in the region, and particularly west of SR-39, to ensure that sufficient mobility options are planned and the mobility needs of those communities are met. Additionally, the less dense central areas implicate a potentially high usage of vehicle travel in these communities, further supported by the area's mode share being primarily vehicle-dominant.

These findings, along with the region's continuing development growth, present challenges to addressing traffic congestion. Additionally, while the Mobility Action Plan is focused on the unincorporated communities in the East San Gabriel Valley, coordination with surrounding cities will ensure a successful and cohesive regional approach to mobility. The analysis of the existing mobility conditions provided further detail about these challenges and highlighted opportunities to address them by planning for suitable land uses, expanding transit use and alternative modes of transportation, and innovative approaches to mobility services and technology.

As previously presented, there are various types of transit/mobility options available to travelers within the East San Gabriel Valley study area, but there are limitations on these mobility options due to geographic, infrastructure, and technology constraints. The profile of existing transit/mobility services informed on the identification of mobility gaps.

Pending input from the public engagement efforts, but informed by an understanding of existing conditions (demographics, socio-economic characteristics, and existing transit/community-based services) as well as familiarity with the emerging mobility landscape, the following key issues are presented for consideration during the initial public engagement phase to advance the identification and analysis of mobility gaps:

- Lack of a regional integrated mobility platform for customers to search travel options. (i.e., Foothill Transit has real-time data, for example, but not the County shuttles, on the Transit app.)
- Geographic and time gaps in the existing services leaving customers to choose non-transit options. This is a major challenge in some of the unincorporated areas of ESGV.

***Consumer preferences and expectations for personal mobility are changing. Transit customers want:***

- ***Schedule information in real time.***
- ***Direct point-to-point travel.***
- ***Convenient "first mile-last mile" options integrated into transit trips.***
- ***Ability to hail a ride and make same-day reservations.***

Time/Hours and Days of Service:

- Two bus rapid transit routes utilize the El Monte Busway: The J Line (Silver), operated by LA Metro and the Silver Streak, operated by Foothill Transit. These routes offer frequent service, 24 hours a day, seven days a week.
- Limited late-night service options, typically impacting entry-level employees the greatest.

- Limited weekend service options.

Geographic:

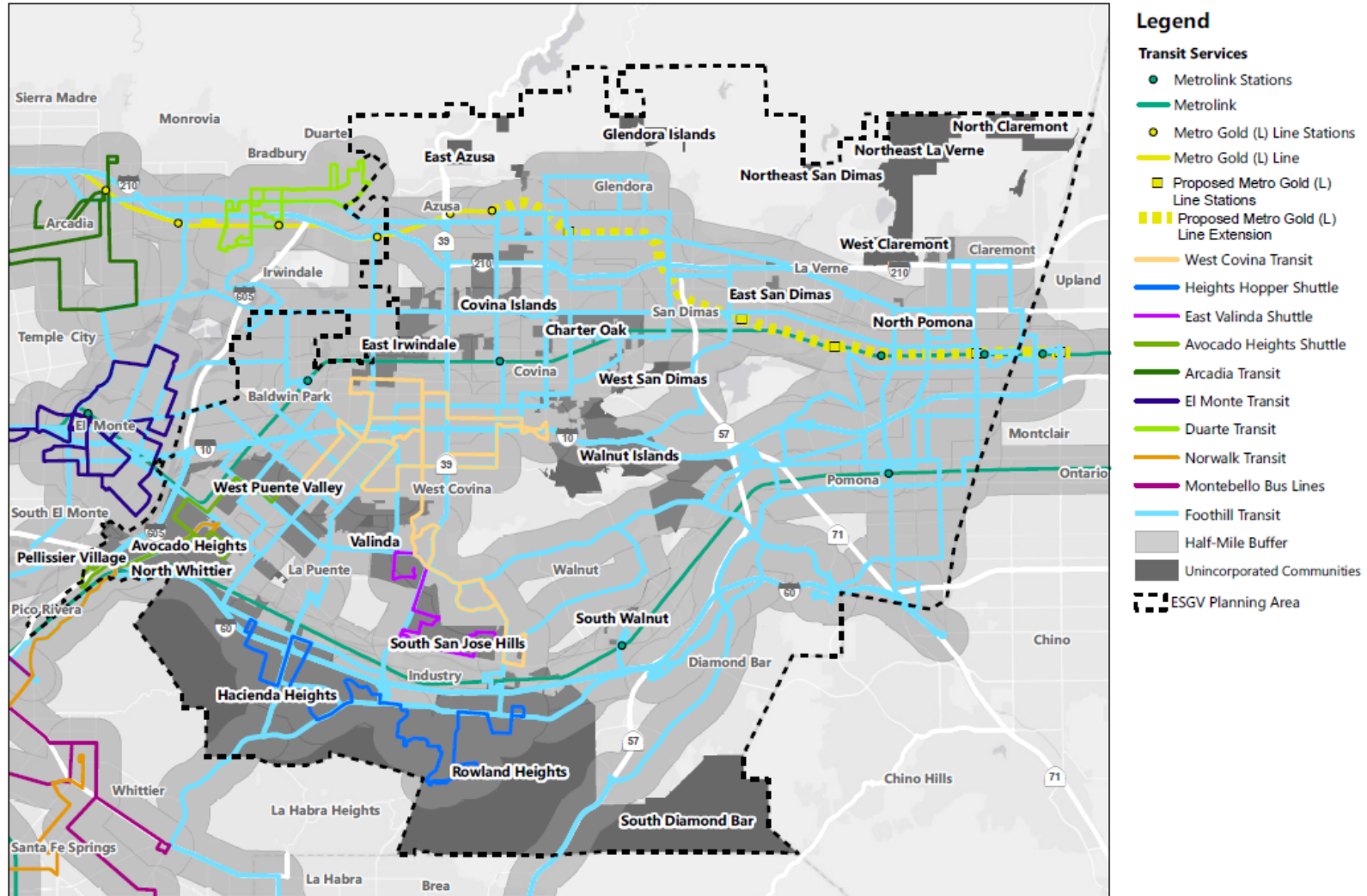
- For example, areas where a high percentage of trips to work are taken by a mode other than driving alone (around 50 percent or less) include the communities around Walnut Islands, parts of Pomona, and the communities around La Puente. The need for alternative modes of travel, especially for work, may be higher in these areas. Many residents in these areas are greater than ¼ mile<sup>1</sup> from a Foothill Transit bus route (or stop).
- Service frequencies (by time of day and/or day of week) are unattractive to 'choice' riders.
  - Metro has up to 80-minute headways and Foothill Transit has up to 90-minute headways.
- Limited or no options for short distance trips leaving customers relying on single occupancy vehicles(SOVs).
- Dial-a-ride being the only option for both short and long-distance trips to common destinations (shopping,healthcare, recreational, commercial) not served by fixed-route transit.
- Dial-a-ride services typically are provided within prescribed (restricted) service areas and/or have restricted eligibility.
- Lack of first/last mile connectivity options that may promote use of fixed route (bus and rail) transit.

For illustrative purposes, Figure 3-1 presents a half-mile buffer around the fixed route transit services in the study area. Again, of note are the communities of Glendora Islands, Northeast San Dimas, North and West Claremont, Walnut Islands, South Diamond Bar, and portions of Hacienda Heights and Rowland Heights.

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<sup>1</sup> ¼ mile is an industry norm for acceptable walking distance to a local bus stop. Up to ½ mile to higher-order (bus corridor or rail) transit service.

Figure 3-1: Half-Mile Buffer Around Fixed Route Transit



Source: County of Los Angeles, LA Metro, Metrolink, Foothill Transit, Montebello Bus Lines, City of Norwalk, City of Duarte, City of Arcadia, City of West Covina, City of El Monte



## East San Gabriel Valley Mobility Action Plan

Figure 3-1: Half-Mile Buffer Around Fixed-Route Transit





### 3.1.1 Ancillary Research

Complementing the aforementioned discussion of mobility gaps, the following research documents inform on unmet needs and mobility gaps, albeit for Los Angeles County and not specifically the East San Gabriel Valley study area.

#### Coordinated Public Transit-Human Services Transportation Plan for Los Angeles County (2021-2024)

According to the Plan, the unique and individualized needs reported and expressed through the inventory and stakeholder involvement processes were significant. These were discussed in two dimensions. First, in relation to consumer-oriented characteristics of need, including those of frail and able-bodied seniors, persons with a variety of disability-types, and low-income individuals, including families and homeless persons. Secondly, organizationally-oriented characteristics of need include the trip types needed, the importance of on-time performance, transit pass and bus token issues, expanded hours and days of service, information needs, and bus facility requirements of safe transfer locations and bus shelter amenities, including bathrooms. Gaps in service were characterized as follows:

- Institutional Communication Gaps exist, contributing to the difficulties of working between two very distinct service systems. For public transit, operating transportation services are its core business, around which significant infrastructure has been built. For human services agencies, transportation is a support service and often viewed as a distraction from agencies' primary purposes.
- Regional Mobility Management – There is a need for better networking between transit providers in order to tackle issues of countywide coordination, fragmented service, and connections between cities. Jurisdictional limits and service parameters continue to create barriers and confusion for customers.
- Service Capacity is an issue where certain trip needs of the target populations are not being met, despite a significant Los Angeles County network of public transportation.
- Meeting Individualized Needs remains a critical characteristic of the unmet specialized transportation need of this region. Providing service to those difficult-to-serve groups or difficult-to-meet trips are the challenges of this planning effort.
- Improving Performance of Demand Response Services is critical to consumers and their agency and organization representatives, as are issues related to service quality. These include addressing on-time performance, late pick-ups, late arrivals, too-long travel times and no-show vehicles. Reliability of paratransit services is an important issue where problems can translate into critical situations for frail, vulnerable and dependent populations.
- Improving Communication between Drivers, Dispatchers and Passengers is critical to improving the capability of services to address consumers' mobility needs. This includes expanding transit's ability to meet the diverse language needs of Los Angeles' populations, evident particularly among frail elderly persons who do not speak English.
- Information Gaps – Agencies/organizations that offer transportation services and accessibility services need to communicate their services to better guide those using the application. The target population users need to clearly understand the full extent of

services offered before they attempt to use them. This includes providing step-by-step travel training for transfers, changes in modes, scheduling, payments and fare collections, travel options at destinations and end-to-end travel times.

- Non-emergency Medical Trips and Inter-Community Medical Trips surfaced as the consistently difficult to meet trip types needed across all groups. This is exacerbated in California by state-level policy related to Medical reimbursement and in Los Angeles particularly where medically oriented trips are typically long trips to distant regional facilities.
- Need for Expanded Services – Target populations had been at even greater risk due to COVID-19, services for seniors and persons with disabilities need to be expanded and coordinated among providers. A comprehensive network of services is needed to safely serve these vulnerable populations. This includes support in transporting essential goods such as food delivery services, pharmacy and household items which are all crucial for these target populations.
- Safety Measures – Additional and robust protocols and communication of safety measures for all customers (English as a Second Language, disabled, equitable communities) is now needed more than ever. Target populations need to be assured vehicles are utilizing safety precautions and encouraged to follow safety rules on vehicles.
- Access to On-demand Transportation Services – There is a greater need for on-demand and Dial-A-Ride services. There are opportunities for agencies and accessibility-based private companies to partner and comprehensively provide better access to services. If services like smaller “hopper” vans can connect and provide access or private companies like RideCo, Lyft and Uber partnered with local agencies and non-profits, on-demand and First/Last Mile trips can serve critical medical and same-day trips.
- Communication – Personalized interaction among seniors and persons with disabilities is needed. While online and digital communication is valuable, in-person interaction is most effective with a large majority of this target population. Targeted outreach is required for equitable user groups. This includes access to Wi-Fi, communicating safety precautions via new technologies, and explanation of costs, services and schedules.
- Connectivity and Reliability – Gaps and issues include travel time of current services due to transfers and schedule limitations. Trips during COVID-19 had taken longer than normal. Connections and mobility continue to be difficult outside of service areas. There is a need to promote a variety of services with education on how to access transit. There is also a need to provide better options for essential trips.

### **Metro Title VI Program (Update 2019)**

The purpose of the Title VI Program Update (2019) is to document the steps Metro has taken and will take to ensure that Metro provides services without excluding or discriminating against individuals on the basis of race, color and national origin. In addition to the Title VI protected categories, Metro will take steps to ensure that their programs and activities do not exclude or discriminate against low-income individuals or other classes protected by Federal or State law.

In the Record of Title VI Investigations, Complaints, or Lawsuits section of the plan, there is a (multiple page) table listing complaints virtually all of which related to race, color or place of origin

and allegations against drivers/operators. There is little in the plan to inform on unmet needs or mobility gaps.

The Plan reports that Metro is in compliance with the following Service Policies and Standards for FY2017 – FY2019:

1. Service Availability
2. Classification of Services
3. Headway Standards
4. Loading Standards
5. On-Time Performance Standards
6. Passenger Amenities Standards
7. Vehicle Assignment Standards






There were no lawsuits filed against Metro pertaining to Title VI violations during this reporting period.

### 3.1.2 Cost of Living - Los Angeles area – June 2021

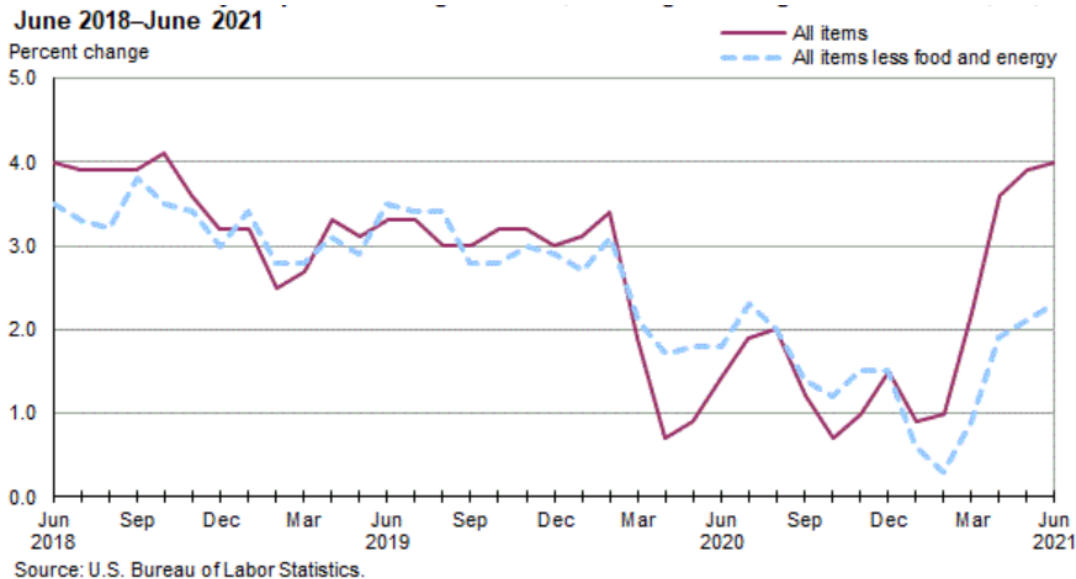
As of June 2021, area prices were up 0.6 percent over the past month, up 4.0 percent from a year ago. Prices in the Los Angeles area, as measured by the Consumer Price Index for All Urban Consumers (CPI-U), advanced 0.6 percent in June, according to the U.S. Bureau of Labor Statistics.

Over the last 12 months, the CPI-U advanced 4.0 percent. (Figure 3-2) Food prices advanced 3.5 percent. Energy prices jumped 27.6 percent, largely the result of an increase in the price of gasoline. The index for all items less food and energy rose 2.3 percent over the year.

The table below illustrates the cost of living in Los Angeles compared to the national average by expense category.

CATEGORY	COMPARED TO NATIONAL AVERAGE
Energy	+ 32.4% 
Food	+ 2.8% 
Healthcare	-1.9% 
Housing	+ 27.9% 
Transportation	+ 3.2% 

**Figure 3-2: Percentage Change in CPI-U**



### 3.1.3 Efficiency and Traffic Congestion Issues

According to CalEnviroScreen 3.0, East San Gabriel Valley census tracts that have interstates running through them have some of the highest traffic density in the state. Although the County of Los Angeles does not have jurisdiction over freeways or interstates, the impacts of traffic congestion and related efforts to improve to the efficiency of traffic flows on freeways may inform recommendations for mobility improvements on connecting arterial streets. The two most significant and relevant interstate projects in the area are:

- Caltrans San Bernardino Freeway (I-10) High Occupancy Lane Project:** Once completed, this project will add 11.3 miles of new HOV lanes, sound walls, and ramp and bridge improvements on Interstate 10 between Interstate 605 and State Route 57. As a result, Interstate 10 will have a continuous 40-mile long HOV lane from downtown Los Angeles to Interstate 15 in San Bernardino County. Construction is expected to finish in Summer 2021. This project is an example of how many planning efforts for the ESGV have focused on east-west travel through it or to the downtown core, rather than movement within the ESGV or to areas outside of downtown.
- Caltrans I-210 Connected Corridors Pilot Project:** Although this project ends at the western edge of the ESGV MAP study area, it deserves mention for its holistic and integrated approach to transportation planning and multi-jurisdictional coordination. The project is led by Caltrans with assistance from LA Metro and California Partners for Advanced Transportation Technology (PATH) at UC Berkeley. Jurisdictions involved include the County of Los Angeles, the cities of Pasadena, Arcadia, Monrovia, Duarte, the San Gabriel Valley Council of Governments, the Southern California Association of Governments, and Foothill Transit. It involves the integration of traffic control and transit management systems, upgrades to travel monitoring and communications infrastructure, and programs to improve collaboration between agencies and jurisdictions. Construction is expected to finish in late 2022 or early 2023. This pilot project may serve as an example

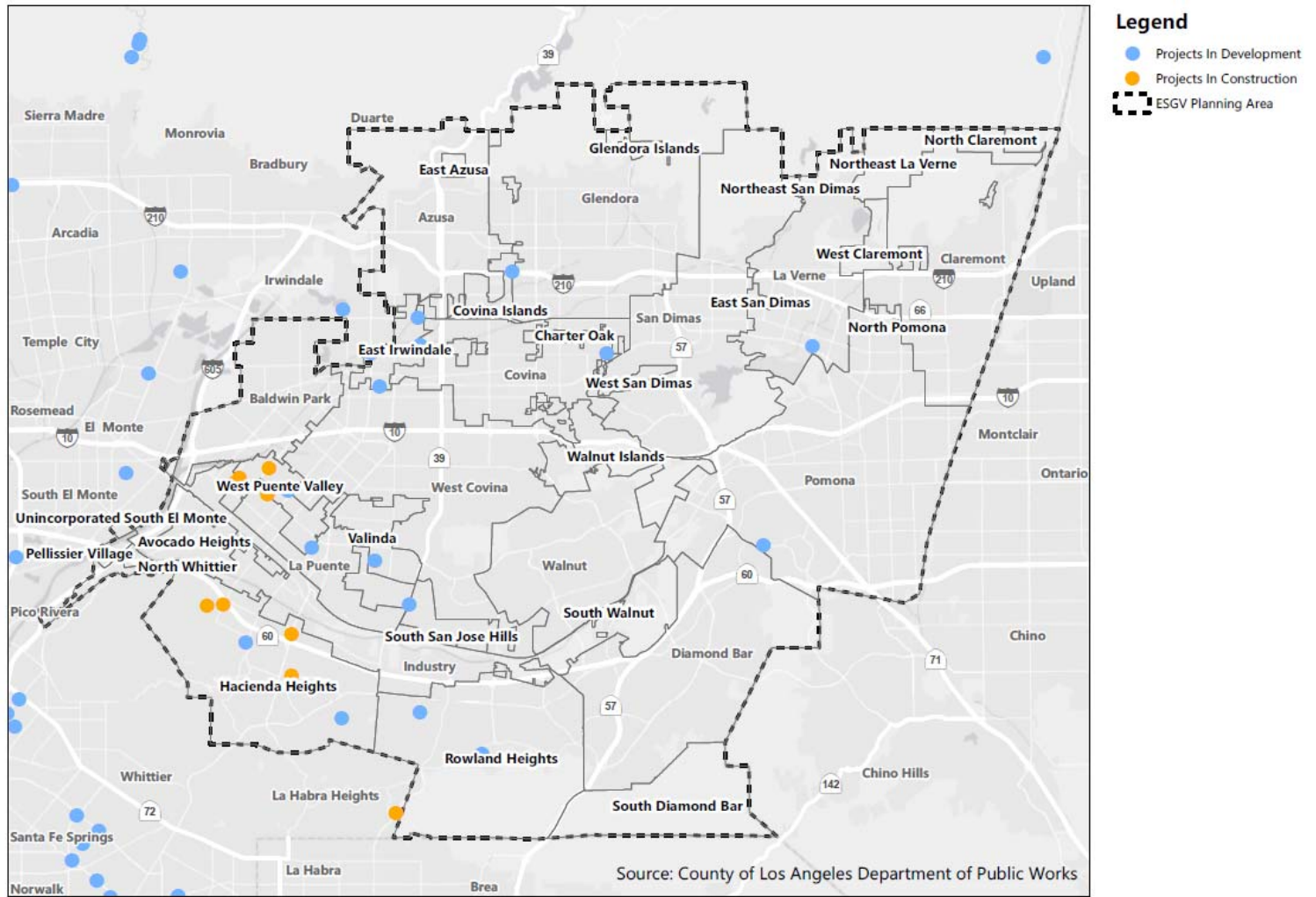
of how future mobility planning can utilize a coordinated approach to make more efficient use of existing roadways and systems.

The County of Los Angeles is currently coordinating, planning, and constructing a number of other multi-jurisdictional projects for arterials and neighborhood streets designed to address efficiency, traffic congestion, and safety throughout the East San Gabriel Valley. The projects generally fall into one of five categories.

- **Traffic Signal Synchronization** – Infrastructure that adjusts signal timing to the flow of traffic to reduce the time motorists are stopped at red traffic signals.
- **Bus Signal Prioritization** – Infrastructure that adjusts signal timing to reduce the delay of transit vehicles.
- **Signal Upgrades/Additions** – New traffic signals or modifications to existing signals such as left-turn phasing.
- **Traffic Calming Measures** – Infrastructure designed to slow traffic, such as speed cushions.
- **Walking and Bicycling Improvements** – New crosswalks, lighting, street trees, curb ramps, bicycle lanes, and other improvements that make it easier for walkers and bicyclists to travel.

A list of under construction and in development roadway projects led by the County are shown in the map (Figure 3-3) and table (Table 3-1) below. For the purposes of this report, general repaving, maintenance, and drainage projects are excluded. Projects currently under construction are mostly concentrated in the southwestern portion of the project study area in the communities of Hacienda Heights and Valinda. Planned projects are distributed around project study area, with larger corridor improvements expected along Peck Road, Valley Boulevard, Arrow Highway, Ramona Boulevard, and Azusa Road/Los Angeles Street. As illustrated in the table, these projects are expected to be completed in the next three to four years, and therefore may offer opportunities for other collaborative mobility improvements in these corridors. The community engagement process may provide further input on where congestion issues frequently occur and what improvements may be needed beyond what is currently being planned.

Figure 3-3 County Roadway Projects



**East San Gabriel Valley Mobility Action Plan**  
 County Roadway Projects



**Table 3-1: County-Led Roadway Projects in the ESGV**

PROJECT NAME	LOCATION	PROJECT SCOPE	EXPECTED COMPLETION DATE
Bridge Preventive Maintenance Program - Group 6	Diamond Bar, Industry, La Puente, Vernon, Avocado Heights, Valinda	Bridge Preventive Maintenance	01/11/20
Hacienda Heights Community - Hacienda Boulevard at Shadybend Drive	Hacienda Heights	Install a New Traffic Signal	08/20/20
Hacienda Heights Community - Halliburton Road at Stimson Avenue	Hacienda Heights	Install Protected LT Phasing	07/31/20
West Valinda- Amar Road at Willow Ave (ABO)(LAP)	La Puente, Valinda	Traffic Signal Improvement	08/01/20
West Valinda- Vineland Av at Giordano St	Industry, Bassett	RRFB	08/31/20
Rowland Heights - Fullerton Rd at Harbor Blvd	Rowland Heights	Install Traffic Signal	07/05/20
West Valinda- Amar Rd at Vineland Av	Industry, Valinda, West Puente Valley	Traffic Signal Upgrade	08/23/20
Puente Avenue Landscaping and Community Monument	Bassett	Median Landscaping	06/28/20
7th Avenue Community Improvements	Hacienda Heights	Beautification improvements	05/08/20
West Valinda- Fairgrove Avenue at Sandia Avenue	Valinda	Install Flashing Beacons	11/30/20
South Whittier - Telegraph Road at Victoria Avenue	South Whittier	Install Protected LT Phasing	05/03/20
Unincorporated Covina - Sunflower Av at Cypress St	Covina, Covina	Upgrade Traffic Signals	10/14/20
South Whittier-Leffingwell Road at Stamy Road	South Whittier	New Traffic Signals	07/30/20
Covina Islands - Cypress st at Irwindale Av	Irwindale, Covina Islands	Upgrade Traffic Signals	09/30/20

PROJECT NAME	LOCATION	PROJECT SCOPE	EXPECTED COMPLETION DATE
Covina Islands - Arrow Hwy at Lark Ellen Av	Covina Islands	Traffic Signal Upgrade	07/23/2023
South Whittier - Mulberry Dr at Calmada Av	South Whittier	Traffic Signal Upgrade	10/26/2022
Azusa - Barranca Av at Baseline Rd	Glendora, Azusa, Glendora	Upgrade Traffic Signal	10/22/2022
West Valinda-West Puente Valley - Unruh Av at Giordano St	La Puente, West Puente Valley	TS Plan review	TBD
Colima Rd - City of Whittier Boundary to Fullerton Rd	Industry, Hacienda Heights, Rowland Heights	Reconst Median, T/S Upgrade	12/29/2023
Carmenita Rd and Telegraph Rd Intersection Improvements	Santa Fe Springs, South Whittier	Intersection improvements	03/31/2022
Mulberry Dr and Painter Av Intersection Improvements	Whittier, South Whittier	Intersection improvements	08/07/2023
Norwalk Bl and Whittier Bl Intersection Improvements	Whittier, Los Nietos, West Whittier	Intersection improvements	03/04/2024
Washington Bl, et al.	Santa Fe Springs, Whittier, South Whittier, West Whittier	Road Resurfacing	03/31/2023
Santa Anita Canyon Rd-CA FLAP LA CR2N40(1) (ABO)	Arcadia, Monrovia, Sierra Madre, Angeles National Forest	Reconstruction	06/05/2023
Vincent Community Bikeways	Azusa, Irwindale, West Covina, Covina Islands	Install bike Facilities.	08/28/2024
Rosemead Boulevard Interim Complete Streets	Whittier Narrows	Install Bikeway	07/21/2022
Puente Creek Bikeway	Industry, La Puente, Valinda	Bikeway improvements	TBD
Los Nietos Safe Routes to School - Phase 2	West Whittier/Los Nietos	SRTS Infrastr Improvement	05/02/2024
South Whittier Community Bikeway Access Improvements	La Mirada, Santa Fe Springs, South Whittier	Bikeway	02/22/2024



PROJECT NAME	LOCATION	PROJECT SCOPE	EXPECTED COMPLETION DATE
Michillinda Avenue Intersections Improvement Project	Arcadia, Pasadena, East Pasadena	Intersection Improvement.	10/07/2022
Avenida Del Canada, et al.	Rowland Heights	Road Reconstruction	01/11/2025
Brea Canyon Cutoff Rd, et al.	Industry, Hacienda Heights, Rowland Heights	Road Resurfacing	12/21/2023
West Whittier-Los Nietos - Norwalk Bl at Reichling Ln	Los Nietos, West Whittier/Los Nietos	Traffic Signal Upgrade	10/31/2022
East Valinda/San Jose Hills - Gemini St at Azusa Av	Valinda	Signing/Striping modification	06/30/2022
Hacienda Heights - Turnbull Cyn Rd at Vallecito Dr	Hacienda Heights	Restrict northbound left turns	05/30/2023
Angeles National Forest - Mt Baldy Rd - Angeles National Forest Boundary Line to Glendora Ridge Rd	Angeles National Forest, Claremont	Traffic safety improvements	06/28/2022
Lower Azusa Road/Los Angeles Street TSSP - Rosemead Boulevard to Maine Avenue	Baldwin Park, Caltrans, El Monte, Rosemead, Temple City	TSSP	09/17/2025
Valley Boulevard/Holt Avenue TSSP - Lemon Avenue to Mills Avenue	Caltrans, Industry, Pomona, Walnut, Rowland Heights	TSSP	11/19/2026
Myrtle Avenue/Peck Road TSSP - Huntington Drive to Clark Street	Arcadia, El Monte, Industry, Irwindale, Monrovia, South El Monte, Arcadia, Monrovia	TSSP	04/29/2025
Ramona Boulevard/Badillo Street/Covina Boulevard TSSP - Santa Anita Ave to the 57 Fwy, and BSP - Tyler Ave to Grand Ave	Baldwin Park, Covina, El Monte, San Dimas, West Covina, Covina	TSSP and BSP	04/02/2025
Peck Road TSSP - Hemlock Street to Workman Mill Road	El Monte, South El Monte, Puente Hills	TSSP	10/21/2025

PROJECT NAME	LOCATION	PROJECT SCOPE	EXPECTED COMPLETION DATE
Arrow Highway TSSP - Rennell Avenue to Claremont Boulevard/Mills Avenue	Claremont, La Verne, Pomona, San Dimas	TSSP	03/19/2025
Las Tunas Drive/Live Oak Avenue/Arrow Highway TSSP - Baldwin Avenue to Valley Center Avenue	Azusa, Baldwin Park, Glendora, Irwindale, Temple City, Azusa, Charter Oak, Covina, Monrovia	TSSP	04/01/2026
Bridge Preventive Maintenance Program	Diamond Bar, Industry, La Puente, Vernon, Avocado Heights, Valinda	Bridge Preventive Maintenance	01/11/2022

### 3.1.4 Summary of Mobility Gaps

The following are potential mobility gaps that will need to be validated with input received through the public engagement process.

#### Enhanced Fixed Route Transit Services

For persons who can and do use the fixed route transit system, there may be a need for additional service in areas of the unincorporated areas of the ESGV study area not currently served, and for more direct service to key activity centers needing to be accessed by older adults and persons with disabilities as well as the general public.

#### Enhanced (Access) Paratransit Services

Paratransit users may need a level of service above and beyond what is required by the ADA, such as service provided on the same day it is requested (e.g. taxis or TNCs), where and when the fixed route service does not operate, or the ability to accommodate “uncommon” wheelchairs or other mobility devices. Some paratransit users who are parents may note that it is difficult to transport children to school and other activities via ADA paratransit.

#### Connectivity

The need for better connectivity between service providers, both for inter-regional and intra-ESGV travel, whether using paratransit or fixed-route service. To promote more seamless travel, customers may need better shelters and bus stops as well as other amenities at transfer sites. Some persons with wheelchairs may have difficulty making effective use of the system due to accessibility barriers and may have a need for enhanced accessibility of vehicles and related infrastructure, such as shelters and stops. The cost of transferring between systems may be noted as an issue for both paratransit and fixed-route service. In addition, there may be a need for loading and waiting zones at transit stations for taxis, TNCs, or vans, and facilities at stations drivers of such vehicles can use while they wait for their passengers.

#### Transit Service

Gaps related to transit service may be identified (or validated), including hours of operation (some transit service may not run early enough in the morning, late enough at night, or on the weekends); frequency (some transit riders may prefer more frequent service than currently provided); reliability (some transit routes may not stay on-schedule or are overcrowded); connections (transit routes may not always transfer or connect with other services); spatial gaps (transit may not always serve destinations that people need to reach, such as schools, employment, medical care or grocery stores); and travel time (travel time between stops and to destinations may be too long, particularly when transfers are required to complete the trip).

#### Transit Experience

Potential issues related to transit amenities, including bus shelters, bus stop seating if a bus stop cannot accommodate a shelter, and lighting to promote safety at bus stops and at rail stations, especially at night. Safety on transit vehicles may be raised as a concern.

## Transit Alternatives

For those who need transportation where public transit (fixed-route or complementary ADA paratransit) is unavailable or unsuitable, alternatives may be needed that enable people to live independently, such as ride-sharing, volunteer-driver programs, short-term medical transportation, or mobile programs that bring support services to people's homes.

## Information and Other Assistance

Determine if there is a need for education and information in a variety of formats (including signage) so that older adults and persons with disabilities can learn how to use public transit and its accessible features. Similarly, to determine if there is a need to ensure drivers, dispatchers, other transit personnel, and the general riding public, are sensitive to passenger needs, and know how to provide assistance on-board the vehicle as needed.

Similarly, determine if there are any problems with the accuracy of transit route schedules, lack of information at bus stops, lack of transit information in languages other than English, unclear information about fares, transfer policies, and routes, and lack of well-publicized information about local shuttle services, or ease of obtaining and/or using modes of fare payment.

## Transportation for Youth and Children

Transportation gaps specifically related to youth and children may include the cost of transportation for youth, and particularly for a family with multiple children; Buses may be overcrowded - additional service may be needed in the morning before school starts, and after school; safety for some students who ride the bus; and, if no school bus service is available, working parents using transit who drop children off at school or daycare before work can have lengthy and costly trips.

## Affordability and Access to Autos

Low-income individuals and families may report that transportation, whether using transit or owning a car, is costly. Fares, monthly passes requiring high-up front costs, and certain transit transfer policies, may be cited as expensive, especially for families with children who rely mainly on transit. Taxi or TNC fares may be cited as unaffordable. Cost is the primary barrier to auto ownership for low-income individuals and families.

## Pedestrian Access

Determine the need to improve accessibility to and from bus stops and transfer centers (sidewalks, curb cuts, curb ramps, crosswalks) – accessible paths of travel.

## Land Use

Transportation decisions typically affect land use patterns and resulting economic, social and environmental impacts. These include direct impacts on land used for transportation facilities, and indirect impacts caused by changes to land use development patterns.

County land use strategies in past decades have contributed to mobility gaps. The lack of a vibrant, mixed community nodes is partially to blame for the lack of transit use.

## 4 Conclusion and Next Steps

As discussed in Section 3, residents in the East San Gabriel Valley are impacted by limited transit options as described herein and significant amounts of traffic, resulting from the subregion's location as a crossroads for traffic traveling between Los Angeles County, the Inland Empire, and Orange County.

The area's relatively concentrated pockets of population and employment density along some of the most-utilized corridors in the region implicate the need for special attention to the residents of unincorporated communities living along the major highways in the region, and particularly west of SR-39, to ensure that sufficient mobility options are planned and the mobility needs of those communities are met. Additionally, the less dense central areas implicate a potentially high usage of vehicle travel in these communities, further supported by the area's mode share being primarily vehicle-dominant. These findings, along with the region's continuing development growth, present challenges to addressing traffic congestion.

The analysis of the existing mobility conditions provided further detail about these challenges and highlighted opportunities to address them by planning for suitable land uses, expanding transit use and alternative modes of transportation, and innovative approaches to mobility services and technology.

While there are various types of transit/mobility options available to travelers within the East San Gabriel Valley study area, they are not without their limitations reflecting geographic/spatial, temporal, infrastructure, and technology constraints.

### 4.1 Next Steps

#### Process Input from Public Engagement

Input from public engagement efforts will be incorporated into the subsequent Task 3.3 memo, which will also be informed by an understanding of existing conditions (demographics, socio-economic characteristics, and existing transit/community-based services) as well as familiarity with the emerging mobility landscape, key issues are presented herein for consideration during the initial public engagement phase to advance the final identification and analysis of mobility gaps.

#### Recommendations and Actions to Improve Mobility (Task 3.3)

This task will include the development of alternative mobility strategies by building on the findings from the Existing Conditions and Mobility Gaps tasks.

Further informed by Best Practices research outcomes, the development, analysis and deployment strategies will go beyond service delivery scenarios and include technology elements. Such technology may include platforms for alternate delivery schemes, enhance the fixed route and paratransit customer experience, provide for next generation customer information and trip planning capabilities, etc.

*Recommendations – A Way Forward:* A clear path forward strategy will be developed from the comparative analysis, cost model, and technical review and form the basis for the development of a blueprint for implementation.

Prioritized recommendations (integrated mobility solutions) will provide the foundation of the Task 4 preparation of a Mobility Plan in general and inform on the development of a Mobility Vision and Strategy, specifically.

The principal question at the heart of the work is “What type and where should transit/mobility services be provided?”