Chapter 1
Purpose and Need

1.1 History and Background

The East San Fernando Valley Transit Corridor has been studied extensively for more than 12 years. In 2000, the California State Legislature made funds available through a Traffic Congestion Relief Program (TCRP). The grant specified the following:

> Los Angeles-San Fernando Valley Transit Extension: (A) Build an East-West Bus Rapid Transit system in the Burbank-Chandler corridor, from North Hollywood to Warner Center. One hundred forty-five million dollars ($145,000,000). (B) Build a North-South corridor bus transit project that interfaces with the foregoing East-West Burbank-Chandler Corridor Project and with the Ventura Boulevard Rapid Bus Project. One hundred million dollars ($100,000,000). The lead applicant for both extension projects is the Los Angeles County Metropolitan Transportation Authority.[1]

1.1.1 San Fernando Valley North–South Transit Corridor Regional Significant Transportation Investment Study (2003)

In May 2003, the Los Angeles County Metropolitan Transportation Authority (Metro) Board received and filed staff's recommendation for the advancement of the *San Fernando Valley North/South Transit Corridor's, Regional Significant Transportation Investment Study (RSTIS)*. This study found that due to the geographic width (east-west distance) of the Valley, a single north/south transit corridor project would be of limited benefit to the community. The RSTIS recommended a series of bus efficiency improvements on five north/south corridors:

- On Reseda Boulevard, Sepulveda Boulevard, Van Nuys Boulevard, and Lankershim Boulevard/San Fernando Road in the San Fernando Valley.
- Adjacent to the Canoga Avenue corridor in the west San Fernando Valley. The corridor is located on a former rail right-of-way (ROW) jointly owned by Metro and the City of Los Angeles. Metro environmentally cleared that corridor, and construction was completed on the Metro Orange Line (MOL) Canoga Extension Project in July 2012.

1.1.2 LADOT East San Fernando Valley North/South Transit Corridors Bus Speed Improvement Project (2010)

In March 2010, LADOT completed a bus speed improvement study for the four East San Fernando Valley North/South Transit Corridors – Reseda, Sepulveda, Van Nuys, and Lankershim/San Fernando. The study recommended a range of near-term, mid-term, and long-term bus speed and service improvements, including a new interlined bus service for Van Nuys, signal timing adjustments, traffic striping improvements, street widenings, concrete bus pads, bridge widening, bus stop relocations, transit station enhancements, and a median busway on Van Nuys Boulevard.

[1] California State Legislature. 2000. *The Traffic Congestion Relief Act of 2000*. Chapter 4.5. Available: <http://www.catc.ca.gov/programs/tcrp/TCRP_Statutes.pdf>.

In April 2010, the Los Angeles City Council approved the study's recommendations and directed LADOT to 1) work with Metro to develop a scope, schedule, and budget for environmental clearance and public outreach for the three phases of the East San Fernando Valley/North South Rapidways Project; 2) include three busway alternatives for the Van Nuys Corridor between Burbank Boulevard and Plummer Street (median busway, median busway with grade separations at major streets, and median busway with grade separations and a tunnel segment between the Metro Orange Line and Vanowen Street); and 3) work with Metro to develop a scope, schedule, and budget for an Alternatives Analysis (AA) of expanded north–south passenger rail in the San Fernando Valley.

1.1.3 East San Fernando Valley Transit Corridor Alternative Analysis (2012)

In 2011, Metro authorized preparation of an AA, Draft Environmental Impact Statement/ Environmental Impact Report (EIS/EIR), and conceptual engineering for transit alternatives in the East San Fernando Valley Corridor. Building on the findings of the aforementioned previous studies, an AA was carried out and completed in December 2012.[2] The AA evaluated 26 build alternatives plus Transportation Systems Management (TSM) and No-Build Alternatives. Route segments were also evaluated to determine feasible alignments in the study area. A segment was deemed infeasible if the right-of-way (ROW) width was insufficient to accommodate the considered project modes, even with roadway widening or if a segment failed to contribute to a reasonable route alignment. Some segments that are considered crucial to maintain a viable alignment, like San Fernando Road between the Sylmar/San Fernando Metrolink Station and Van Nuys Boulevard, were considered feasible even if buses must operate in mixed-flow operation.

This study enabled Metro, the City of Los Angeles, and the City of San Fernando to evaluate a range of new public transit service alternatives that can accommodate future population growth and transit demand, while being compatible with existing land uses and future development opportunities. The study considered the Sepulveda Pass Corridor, which is another Measure R project, and the proposed California High Speed Rail Project. Both of these projects may be directly served by the East San Fernando Valley Transit Corridor Project. The Sepulveda Pass Corridor could eventually link the West Los Angeles area to the east San Fernando Valley and the California High Speed Rail Project via the project corridor. As part of the Alternatives Analysis, most of Sepulveda Boulevard was eliminated as an alignment option. As a result of the Alternatives Analysis, modal recommendations were for bus rapid transit (BRT) and light rail transit (LRT) to be carried forward for analysis in the Draft EIS/EIR.

1.1.3.1 Draft EIS/EIR Scoping and Alternatives

During the March 2013–May 2013 Draft EIS/EIR scoping period, four public scoping meetings were held, and 258 scoping comments were received. Many of the comments reflected the following:

- Strong Preference for LRT;
- Support for bicycle facilities; and
- Opposition to a dedicated guideway south of the Metro Orange Line.

In June 2013, Metro held meetings with the Cities of Los Angeles and San Fernando to review the alternatives being analyzed in light of the scoping comments received, and the alternatives being carried

[2] The NEPA statute allows for incorporating relevant analysis into the current NEPA document, provided that the studies are, in most cases, not older than 5 years. The technical studies in the appendices of this Draft EIS/EIR, including the AA, is less than 5 years old as of the date of this publication. The analysis in most of the sections of this document builds upon the initial analysis in these technical documents.

forward for analysis in this Draft EIS/EIR were finalized for the Alternatives Analysis and refined following the scoping meetings based on public comment and further analysis. The refined alternatives were received by and filed with the Metro Planning and Programming Committee in November 2013.

As a result of the alternatives screening process and feedback received during the public scoping period, a curb-running BRT, median-running BRT, median-running Low-Floor LRT/Tram, and a median-running LRT, were identified as the four build alternatives, along with the Transportation Systems Management (TSM) and No-Build Alternatives to be carried forward for analysis in this Draft EIS/EIR.

In addition, based on scoping comments and further review of transit options, Metro is now considering a phased approach for the development of the East SFV Corridor in coordination with other planned transit projects in the southern end of the Corridor. Under this scenario, exclusive bus and/or rail guideways would be constructed between the MOL and San Fernando Road over a distance of 6.7 miles. Service would be provided south to Ventura Boulevard and north to the Sylmar/San Fernando Station in mixed-flow operation as a part of the current project. In the future, and in coordination with other planned projects, exclusive guideway bus or rail service could be extended to those areas.

1.1.3.2 Southern Terminus Connection with the Sepulveda Pass Transit Corridor

Transit improvements along Van Nuys Boulevard will need to consider a future connection to a transit line in the Sepulveda Pass. Options in that corridor range from BRT in HOV/Express Lanes in the 1-405 Freeway to a full transit/highway tunnel extending under the Pass from the MOL to the future Metro Purple Line and/or Metro Expo Line Stations in West Los Angeles. Per Board direction, the East SFV Corridor is being analyzed for Public Private Partnership delivery method in conjunction with the Sepulveda Pass Transit Corridor Project.

Analysis of travel boardings on buses along the Van Nuys Boulevard shows very heavy transfer activity between the buses on Van Nuys Boulevard and the MOL. Ridership south of the MOL is approximately half of the ridership north of the MOL and it is therefore not warranted to extend exclusive guideways south of the MOL until sometime in the future when there is a connection through the Sepulveda Pass to the Westside.

In order to provide for this future connection, Metro is now identifying the MOL Van Nuys Station as the initial southern terminus of the East SFV Transit Corridor for exclusive bus and rail guideways.

1.2 Description of Project Area/Corridor

The East San Fernando Valley Transit Corridor Project alignment is located in the San Fernando Valley in the County of Los Angeles. Generally, the project study area extends from the City of San Fernando and the Sylmar/San Fernando Metrolink Station in the north to the Van Nuys Metro Orange Line Station within the City of Los Angeles in the south.[3] The eastern San Fernando Valley includes the two major north-south arterial roadways of Sepulveda and Van Nuys Boulevards, spanning approximately 10 to 12 miles and the major north/west arterial roadway of San Fernando Road.

[3] The study areas for the environmental impact analyses presented in this report may vary from this general study area, depending on the needs of the analyses.

Several freeways traverse or border the eastern San Fernando Valley. These include the Ventura Freeway (US-101), the San Diego Freeway (Interstate [I] 405), the Golden State Freeway (I-5), the Ronald Reagan Freeway (State Route [SR] 118), and the Foothill Freeway (I-210). The Hollywood Freeway (SR-170) is located east of the project area. In addition to Metro Local and Metro Rapid bus service, the Metro Orange Line (MOL) BRT service, the Metrolink Ventura Line commuter rail service, Amtrak inter-city rail service, and the Metrolink Antelope Valley Line commuter rail service are the major transit corridors that provide interregional trips in the area.

Land uses in the study area include neighborhood and regional commercial land uses, as well as government and residential land uses. Specifically, land uses in the study area include government services at the Van Nuys Civic Center, retail shopping along the project corridor, and medium- to high-density residential uses throughout the area. Notable land uses in the eastern San Fernando Valley include: The Village at Sherman Oaks, Sherman Oaks Hospital, Sherman Oaks Galleria (Photo 1-1), Panorama Mall, Whiteman Airport, Van Nuys Airport, Mission Community Hospital, Kaiser Permanente Hospital, Van Nuys Auto Row, and several schools (Valley College shown in Photo 1-2), youth centers, and recreational centers.

Photo 1-1: Sherman Oaks Galleria

Source: Metro, 2016.

Photo 1-2: Los Angeles Valley College

Source: Metro, 2016.

1.2.1 Study Area Demographics

1.2.1.1 Existing Economic and Land Use Conditions

Socioeconomic indicators include: average household income, low income households, low vehicle ownership households, and transit dependent population per acre (see below for definitions). These indicators were based on the 2009-2013 American Community Survey (ACS) 5-year characteristics at the census tract level. These distributions were then applied to 2010 population and household Southern California Association of Governments (SCAG) Tier 2 control totals. Economic data including employment, and wage and payroll distribution estimates for 2010 were obtained from the SCAG Regional Transportation Plan (RTP) and the California Employment Development Department (EDD).

The 2010 TAZ level data from SCAG was used for the initial socio-economic analysis. More recent (2016) data has been collected and has been reviewed to determine whether any significant changes to study area demographics have occurred subsequent to the initial analyses conducted for this EIS/EIR. Data for this recent analysis was gathered from the Southern California Association of Governments (SCAG) and is based on their latest Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Tier 2 forecasts for 2016 at the transportation analysis zone (TAZ) level. The 2016 data has been compared with the 2010 data to determine whether any significant changes have occurred over this time period.

For the overall Study Area and Corridor, the changes in population and households appear to be relatively small at less than 5.0 percent. For the overall Study Area, the employment change is also less than 5.0 percent, while the change for the overall Corridor is slightly higher at 7.3 percent, because of the greater concentration of employment within ¼ mile of the proposed transit line. In conclusion, the demographic data from 2016, compared to that from 2010, is similar with only minor changes, and characteristics of the existing conditions are consistent between 2010 and 2016.

1.2.1.2 Route Alternatives and Basic Units of Analysis

Complete Tier 2 Transportation Analysis Zones (TAZs) that intersected quarter- mile buffer areas on either side of the transit corridor and East San Fernando Valley (ESFV) study area were selected, as shown in Figures 1-1 through 1-3.

1.2.1.3 Population, Households, and Employment

Information developed by SCAG for the Tier 2 TAZs includes total population, household, and employment numbers for 2010 and 2016.[4,5]

1.2.2 Demographic Estimates

The following section includes a discussion of population, household, and employment estimates for the transit corridor and the ESFV study area.

1.2.2.1 Estimated Population

As shown in Table 1-1, in 2010, the transit corridor's total population (167,834) was about 37 percent of the ESFV study area's total population (458,379). The estimated household population (excluding group quarters[6] population) for the transit corridor (167,093) and for the ESFV study area (454,525) was relatively close to the total population estimates for these two areas, indicating a very small estimate for Group Quarters population. As shown in the map on Figure 1-1, the highest concentrations of population tend to focus in Panorama City north of Roscoe Boulevard on either side of Van Nuys Boulevard. The transit corridor is identified by the SCAG Tier 2 TAZs outlined in blue on Figure 1-1.

1.2.2.2 Estimated Households

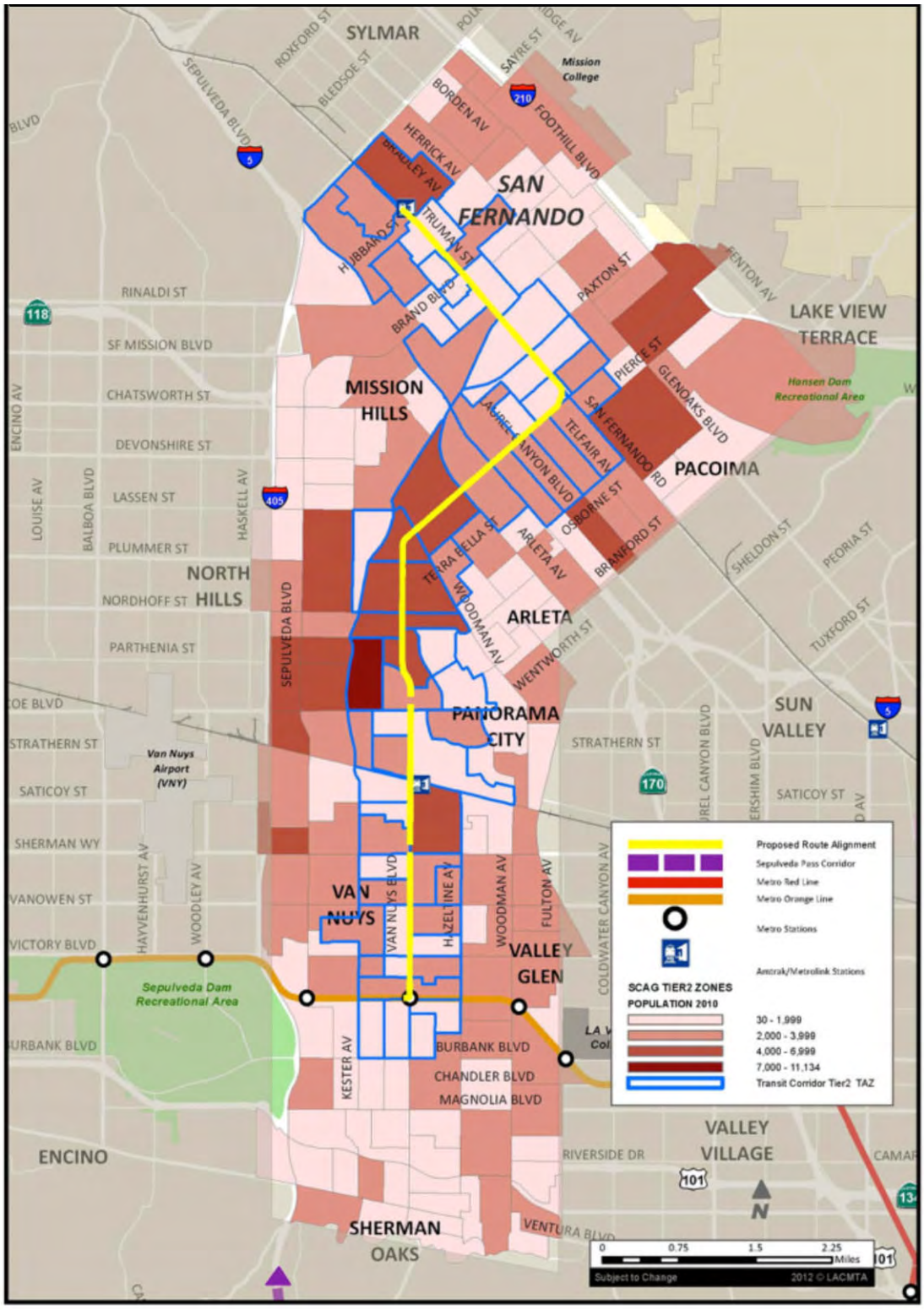
As shown in Table 1-1, in 2010, the transit corridor household count (42,859) was about 32 percent of the study area's household count (134,023). However, the persons per household estimate was slightly higher for the transit corridor, at about 3.90, compared to the ESFV study area, which was about 3.39, with the highest household concentrations similar to those for the population north of Roscoe Boulevard along either side of Van Nuys Boulevard. The transit corridor is similarly identified by the Tier 2 TAZs outlined in blue on Figure 1-2.

1.2.2.3 Estimated Employment

As shown in Table 1-1, in 2010, employment in the transit corridor (41,610) was about 30 percent of the employment in the ESFV study area (140,915). The estimated jobs per household were slightly lower for the transit corridor at about 0.97 compared to the ESFV study area's estimate of 1.05. Along the transit

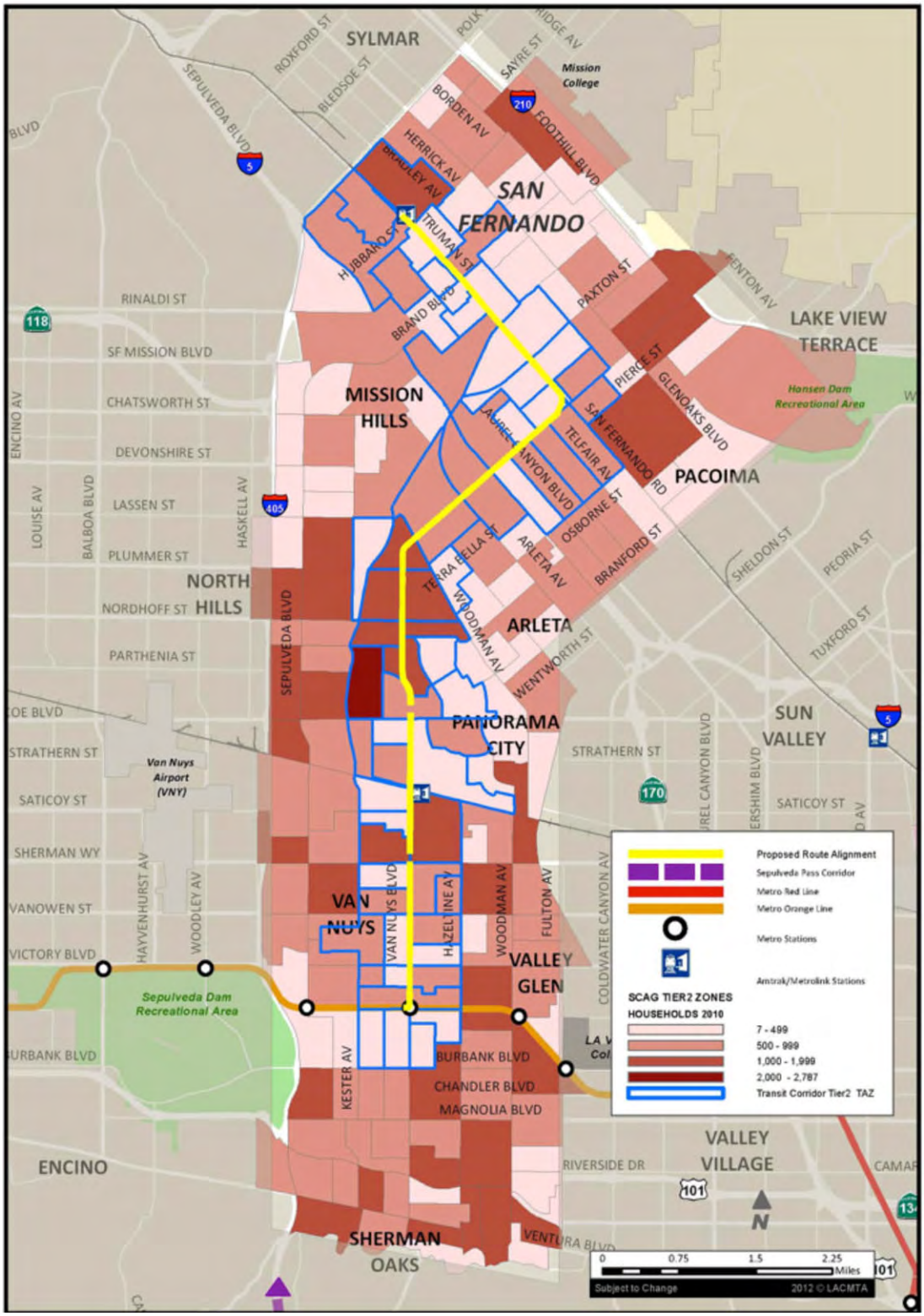
[4] Southern California Association of Governments, *2012 Regional Transportation Plan.* Available: <http://rtpscs.scag.ca.gov>. Accessed: March 25, 2013.
[5] Southern California Association of Governments, *2016 Regional Transportation Plan/Sustainable Communities Strategy.* Available: <http://scagrtpscs.net>. Accessed: June 6, 2017.
[6] Group Quarters (GQ) are places where people live or stay, in a group living arrangement, which is owned or managed by an entity or organization providing housing and/or services for the residents. This is not a typical household-type living arrangement. These services may include custodial or medical care as well as other types of assistance, and residency is commonly restricted to those receiving these services. People living in group quarters are usually not related to each other. Group quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, and workers' dormitories. Available: https://ask.census.gov/faq.php?id=5000&faqId=1681. Accessed : March 22, 2016.

Figure 1-1: Population Concentrations in Transit Corridor



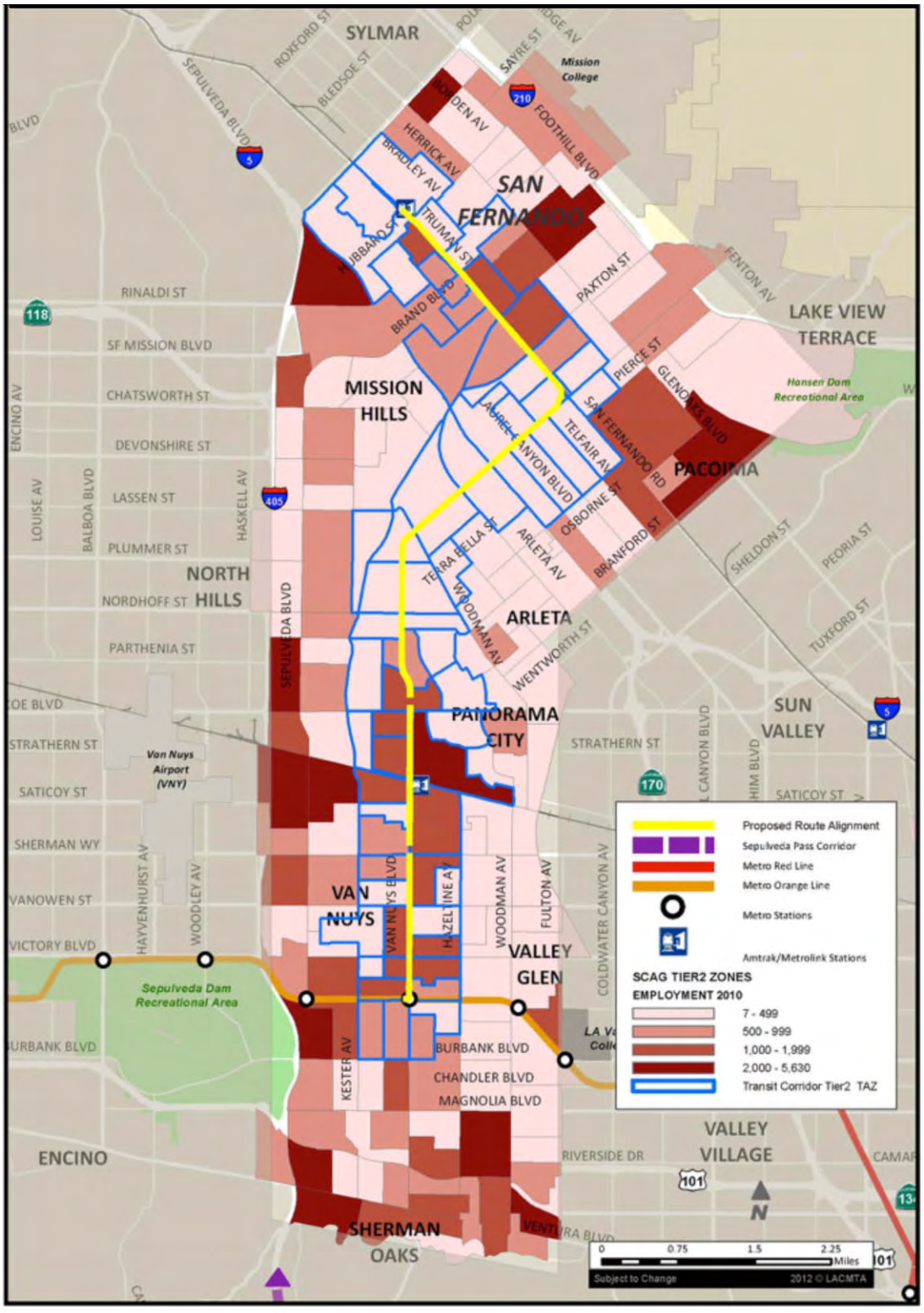
Sources: Stanley R. Hoffman Associates, Inc.; Southern California Association of Governments, *2012 Regional Transportation Plan and 2016 Regional Transportation Plan/Sustainable Communities Strategy.*

Figure 1-2: Households Concentrations in Transit Corridor



Sources: Stanley R. Hoffman Associates, Inc.; Southern California Association of Governments, *2012 Regional Transportation Plan and 2016 Regional Transportation Plan/Sustainable Communities Strategy.*

Figure 1-3: Employment Concentrations in Transit Corridor



Sources: Stanley R. Hoffman Associates, Inc.; Southern California Association of Governments, *2012 Regional Transportation Plan and 2016 Regional Transportation Plan/Sustainable Communities Strategy.*

Table 1-1: Population, Households, and Employment (2010)

	Transit Corridor	ESFV Study Area	Corridor as % of Study Area
Estimated Population	167,834	458,379	36.6%
Estimated Household Population	167,093	454,525	36.8%
Estimated Households	42,859	134,023	32.0%
Estimated Employment	41,610	140,915	29.5%
Estimated Persons per Household	3.90	3.39	115.0%
Estimated Jobs per Household	0.97	1.05	92.3%

Sources: Stanley R. Hoffman Associates, Inc. Southern California Association of Governments, *2012 Regional Transportation Plan, Tier 2 Socioeconomic Data.*

corridor—outlined in blue in the map on Figure 1-3—the highest concentrations of employment were within the Van Nuys Civic Center, along Van Nuys Boulevard just north of the Metro Orange Bus Line, and also within the Panorama City area adjacent and near the intersection of Van Nuys Boulevard and Roscoe Boulevard. Additionally, there are relatively higher concentrations of employment at the northern end of the route alignment in the downtown area of the City of San Fernando. The transit corridor is similarly identified by the Tier 2 TAZs outlined in blue on Figure 1-3.

1.2.3 Census Socioeconomic Variables

Socioeconomic variables, including average household income, persons in poverty, and indicators of transit dependency (by age structure) and ownership of vehicles per household were developed from the 2009-2013 American Community Survey 5-year estimate at the census tract level for each alignment. Census tracts that closely matched the SCAG Tier 2 selections were assembled for the transit corridor and the study area to develop these variables.[7] Density and ratio calculations were based on the acreage information at the census tract level.

1.2.3.1 Average Household Income

As shown in Part A of Table 1-2, average household income across the transit corridor and ESFV study area ranges from $53,224 (transit corridor) to $64,038 (ESFV study area), in constant 2010 dollars, based on the 2010 American Community Survey (ACS) 5-year Estimates. The transit corridor's average household income was about 83.1 percent of the ESFV study area's household income. In contrast, the average household income for urbanized Los Angeles County is higher than both of these, at about $79,658.

[7] Southern California Association of Governments. *2012 Regional Transportation Plan.* Available: <http://rtpscs.scag.ca.gov>. Accessed: March 25, 2013.

1.2.3.2 Adult Persons below Poverty Line

Adult persons are defined as persons 18 years and over. As shown in Part A of Table 1-2, the ESFV study area had a lower proportion of its population in poverty at an estimated 13.8 percent (63,093 persons) compared to the transit corridor at about 15.4 percent (25,846 persons). The persons below the poverty line in the transit corridor were about 12 percent higher than the percentage in the ESFV study area.

Table 1-2: Transit-Dependent Populations (2010)

	Los Angeles County	Transit Corridor	ESFV Study Area	Corridor as % of Study Area
A. Low Income Households				
Average Household Income	$79,658	$53,224	$64,038	83.1%
Adult Persons below Poverty Line	1,307,606	25,846	63,093	41.0%
Percent of Population in Poverty	15.7%	15.4%	13.8%	111.9%
Adult Persons below Poverty Line per Census Tract Acre[a]	1.08	3.5	2.7	128.5%
B. Low Vehicle Ownership Households				
Vehicles per Household	1.67	1.76	1.75	99.6%
Zero Vehicle Households per Census Tract Acre[a]	0.3	0.4	0.3	120.3%
C. Transit Dependent Population				
Transit Dependent Population	3,486,554	62,390	164,506	37.9%
Transit Dependent Population as Percent of Population	35.7%	37.2%	35.9%	103.6%
Transit Dependent Population per Census Tract Acre[a]	3.2	8.5	7.1	119.0%

[a] Intensity measures for adult persons below poverty line, zero vehicle households, and transit dependent population per census tract acre are measured against total acreage of census tracts.

Sources: Stanley R. Hoffman Associates, Inc.; *American Community Survey 2009–2013, 5-Year Estimates*.

1.2.3.3 Adult Persons below Poverty Line per Census Tract Acre

As shown in Part A of Table 1-2, the transit corridor had a higher concentration of persons below the poverty line per census tract acre estimated at 3.5 compared to the ESFV study area's estimate of 2.7. In contrast, there were an estimated 1.08 adult persons below the poverty line per census tract acre in urbanized Los Angeles County.

1.2.3.4 Vehicles per Household

As shown in Part B of Table 1-2, the transit corridor and the ESFV study area have almost equal estimates for vehicles per household of 1.76 (transit corridor) and 1.75 (ESFV study area). These averages are similar to urbanized Los Angeles County at 1.67.

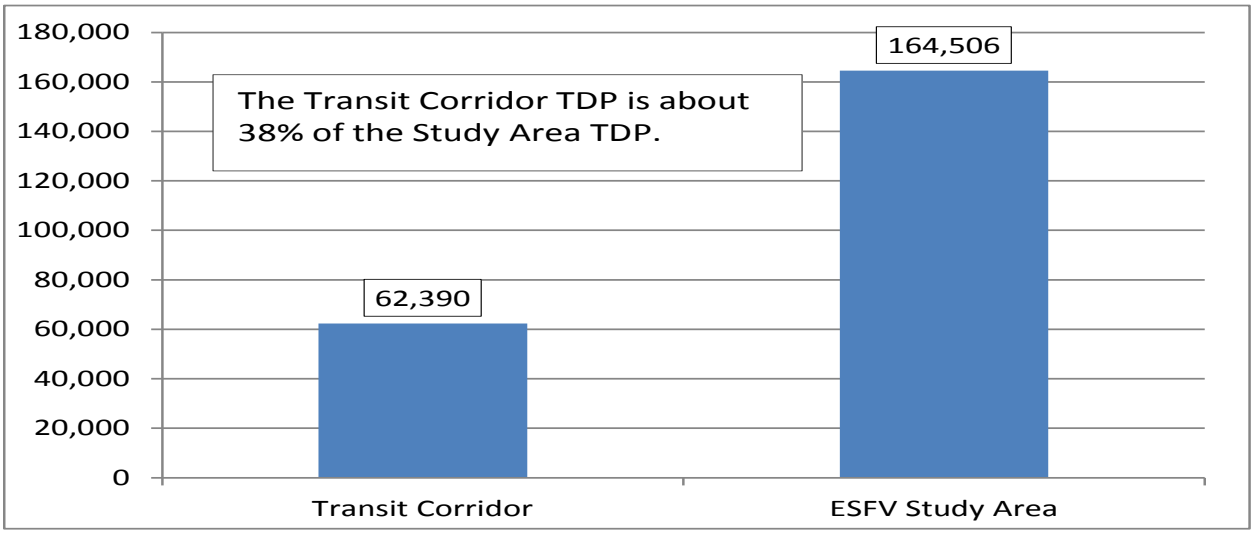
1.2.3.5 Zero-Vehicle Households per Census Tract Acre

This intensity measure for zero vehicle households per census tract acre is also measured against total acreage of census tracts. As shown in Part B of Table 1-2, the transit corridor has an estimated 0.4 zero-vehicle households per census tract acre, while the ESFV study area has 0.3 zero-vehicle households per acre. These estimates are very similar to the average for urbanized Los Angeles County, which averages 0.3 zero-vehicle households per census tract acre.

1.2.3.6 Transit-Dependent Population

The transit dependent population is defined as total persons equal to or below the age of 18 years and 65 years and older. For the transit corridor, the transit dependent population (62,390) is about 38 percent of the ESFV study area's transit dependent population (164,506), as shown in Part C of Table 1-2 and in Figure 1-4. The transit-dependent population is evenly distributed at about 37 percent of the study area population and about 36 percent of the transit corridor population.

Figure 1-4: Transit-Dependent Population (TDP)[a] (2010)



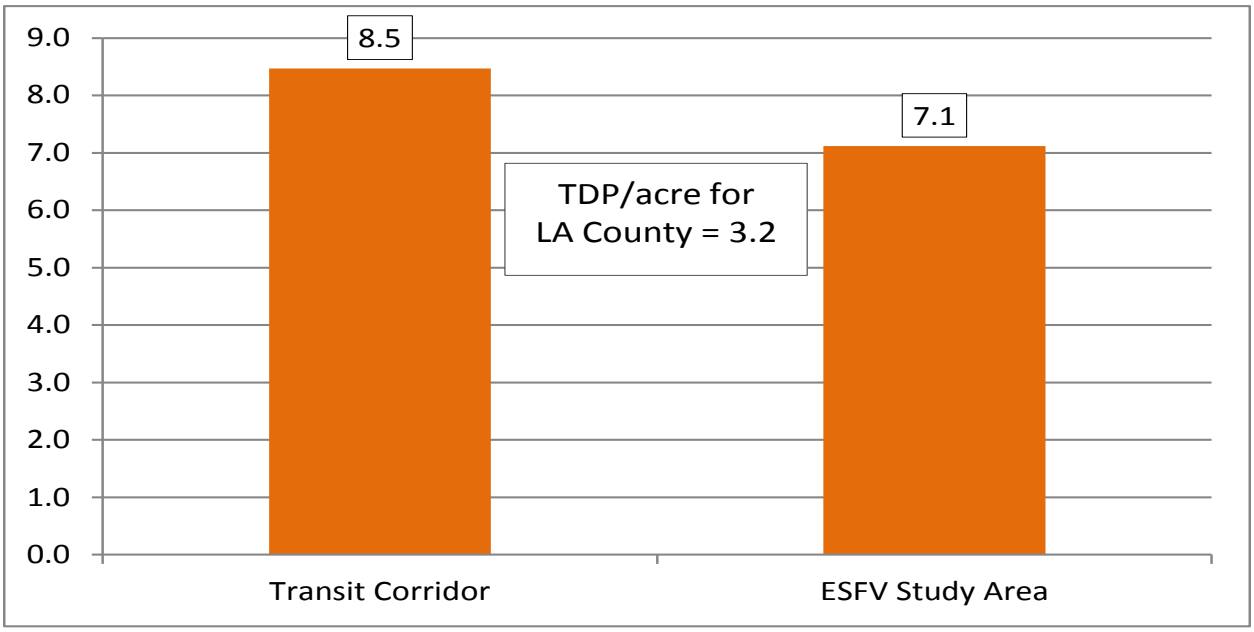
[a.] TDP is defined as persons ≤ 18 or ≥ 65 years old.

Sources: Stanley R. Hoffman Associates, Inc.; *American Community Survey, 2009–2013, 5-Year Estimates;* Southern California Association of Governments, *2012 Regional Transportation Plan, Tier 2 Socioeconomic Data.*

1.2.3.7 Transit-Dependent Population per Census Tract Acre

This intensity measure for transit dependent population per census tract acre is measured against total acreage of census tracts within each route alternative. Transit dependent population per census tract acre ranges from 8.5 in the transit corridor compared to 7.1 in the ESFV study area, as shown in Part C of Table 1-2 and Figure 1-5. In comparison, these averages are greater than the urbanized Los Angeles County average of 3.2 transit dependent population per census tract acre.

Figure 1-5: Transit-Dependent Population per Acre (2010)



Sources: Stanley R. Hoffman Associates, Inc.; *American Community Survey, 2009–2013, 5-Year Estimates*; Southern California Association of Governments, *2012 Regional Transportation Plan, Tier 2 Socioeconomic Data*.

1.2.4 Employment Distribution

Table 1-3 shows employment distribution by industry categories for the transit corridor and the ESFV study area for 2010.[8] The total estimated employment in the transit corridor (41,610) is about 30 percent of the total estimated employment in the ESFV study area (140,915). Education and Health jobs constitute the largest share of employment in each area at about 28 percent for the transit corridor and about 25 percent for the ESFV study area. The next two largest employment sectors in the transit corridor are Professional Services (12.8 percent) and Retail (12.4 percent). The next two largest employment sectors in the ESFV study area are also Professional Services (14.8 percent) and Retail Trade (12.6 percent). Together these three employment sectors—Education and Health, Professional Services and Retail—constitute about 52–53 percent of the total employment in both areas.

Table 1-4 shows the percentage of each employment sector for the transit corridor as a percentage of the ESFV study area to show relative employment concentrations. These percentages are then compared against the total employment percentage estimate for the transit corridor, about 30 percent of the ESFV study area. As shown in Table 1-4, Public Administration is relatively concentrated in the transit corridor—representing primarily the Van Nuys government center—and has about 60 percent of the total Public Administration employment in the study area. The Information sector is about 37 percent of Information employment in the ESFV study area. For the other sectors above the 30 percent overall average for the study area, Manufacturing (34 percent), and Education and Health (33 percent), and Other Services (33 percent) are only slightly higher. For Agriculture and Mining (84 percent), this higher percentage is out-weighted by the relatively small size of this sector in the study area.

[8] Southern California Association of Governments, *2012 Regional Transportation Plan.* Available: <http://rtpscs.scag.ca.gov>. Accessed: March 25, 2013.

Table 1-3: Distribution of Employment by Sector (2010)

	Transit Corridor	% Distribution	ESFV Study Area	% Distribution
Agriculture and Mining	234	0.6%	277	0.2%
Construction	2,119	5.1%	7,443	5.3%
Manufacturing	3,652	8.8%	10,636	7.5%
Wholesale Trade	1,723	4.1%	9,524	6.8%
Retail Trade	5,141	12.4%	17,724	12.6%
Transportation, Warehousing and Utilities	1,758	4.2%	5,929	4.2%
Information	1,741	4.2%	4,725	3.4%
FIRE	1,807	4.3%	7,716	5.5%
Professional Services	5,310	12.8%	20,890	14.8%
Education and Health	11,470	27.6%	35,079	24.9%
Arts, Ent, Recr, Accom and Food	3,163	7.6%	12,154	8.6%
Other Services	2,160	5.2%	6,612	4.7%
Public Administration	1,332	3.2%	2,206	1.6%
Total	***41,610***	***100.0%***	***140,915***	***100.0%***

Source: Stanley R. Hoffman Associates, Inc.; Southern California Association of Governments, *2012 Regional Transportation Plan, Tier 2 Socioeconomic Data.*

Table 1-4: Employment by Sector as Percent of Study Area (2010)

	Transit Corridor	ESFV Study Area	Corridor as % of Study Area
Agriculture and Mining	234	277	84%
Construction	2,119	7,443	28%
Manufacturing	3,652	10,636	34%
Wholesale Trade	1,723	9,524	18%
Retail Trade	5,141	17,724	29%
Transportation, Warehousing and Utilities	1,758	5,929	30%
Information	1,741	4,725	37%
FIRE	1,807	7,716	23%
Professional Services	5,310	20,890	25%
Education and Health	11,470	35,079	33%
Arts, Ent, Recr, Accom and Food	3,163	12,154	26%
Other Services	2,160	6,612	33%
Public Administration	1,332	2,206	60%
Total	***41,610***	***140,915***	*30%*

Source: Stanley R. Hoffman Associates, Inc.; Southern California Association of Governments, *2012 Regional Transportation Plan, Tier 2 Socioeconomic Data.*

1.2.5 Transit Supportive Land Use

Table 1-5 shows indicators for jobs-generating (Part A) land uses and residential (Part B) land uses by density; the indicators are discussed below.[9]

Table 1-5: Job-Generating and Residential Land Uses by Density (2010)

	ESFV Study Area	Transit Corridor
A. Jobs-Generating Land Uses by Density		
Commercial Employment Density (jobs per commercial acre)	30.6	32.7
Industrial Employment Density (jobs per industrial acre)	19.4	18.4
Total Jobs per Household	1.1	1.0
B. Residential Land Uses by Density		
Population Density (persons per residential acre)	38.1	47.4
Persons per Household	3.4	3.9
Households per Acre	11.2	12.2

Sources: Stanley R. Hoffman Associates, Inc.; Southern California Association of Governments, *2012 Regional Transportation Plan, Tier 2 Socioeconomic Data*; Los Angeles County Assessor's Parcel Data, 2014.

1.2.5.1 Commercial Employment Density (Jobs per Developed Commercial Acre)

In 2010, commercial employment density for the transit corridor at 32.7 jobs per developed acre was slightly higher than that for the study area at 30.6 jobs per developed acre.

1.2.5.2 Industrial Employment Density (Jobs per Developed Industrial Acre)

Similarly, industrial employment density for the transit corridor at 18.4 jobs per developed acre was slightly lower compared to that for the study area at 19.4 jobs per developed acre.

1.2.5.3 Jobs per Household

In 2010, the transit corridor had an estimated job per household ratio of about 1.0, very similar to the study area ratio of 1.1 jobs per household.

1.2.5.4 Population Density (Population per Developed Acre)

In 2010, population density, estimated as a ratio of residential population per developed residential acre, was estimated relatively higher at 47.4 persons per acre within the transit corridor compared to 38.1 persons per acre in the study area.

[9] Land use data for this section obtained from Los Angeles County Assessor's Parcel data for 2014, while demographic and employment information was obtained from the SCAG 2012 RTP Tier 2 dataset.

1.2.5.5 Persons per Household

In 2010, household size within the corridor at 3.9 persons per household was relatively higher compared to the study area at 3.4 persons per household.

1.2.5.6 Households per Acre

In 2010, households per developed residential acre were slightly higher within the transit corridor at 12.2 households per acre compared to 11.2 households per acre within the study area.

1.3 Transportation System and Performance

The regional and study-area public transit system and the highway and roadway network are described in detail in Appendix E, the Purpose and Need Report.

The San Fernando Valley has a vast freeway, arterial, and transit network which connects it to the greater Southern California region. Within the study area, an extensive transportation network provides mobility via major freeways, arterials, and railroad infrastructure that serve the project corridor and the surrounding communities.

The traffic and transit data from the Metro model and the larger SCAG travel demand model indicates that traffic conditions in the study area will become more congested and trip speeds will become slower as the region grows through the year 2040.

Existing bicycle facilities along the Project alignment are as follows:

- Van Nuys Boulevard – A Class II bicycle lane exists between Chandler Boulevard and the MOL. More recently, a Class II bicycle lane has been striped from Parthenia Street to Beachy Avenue.
- San Fernando Road – A Class I bicycle path exists from Roxford Street to Hubbard Street. A multi-use path exists from Hubbard Street to Wolfskill Street/La Rue Street.
- Metro Orange Line (Class I) – This east-west bicycle path is located within the MOL ROW and intersects Van Nuys Boulevard (Photo 1-3).

Per the 2010 City of Los Angeles Bicycle Plan, new bicycle striped roadway lanes and dedicated paths will be added to the study area. The addition of new bicycle lanes (Class II) on the Van Nuys Boulevard, and the Phase 2 of the San Fernando Bicycle Path (Class I), recently completed along a 2.75-mile segment extending from Wolfskill Street/La Rue Street to Branford Street, have been considered in Project conceptual engineering and implementation planning.

Van Nuys Boulevard is designated by the Bicycle Plan as a segment of the "Backbone Network," and therefore is targeted for future implementation of bicycle lanes, for the entire length of the Project alignment. San Fernando Road is also designated as part of the "Backbone Network" as a bicycle lane, as well as the "Green Bikeway Network" as a bicycle path (separated, but parallel to the roadway) with a future lane designation.

Photo 1-3: Metro Orange Line Class I Bicycle Path

Source: Metro, 2016.

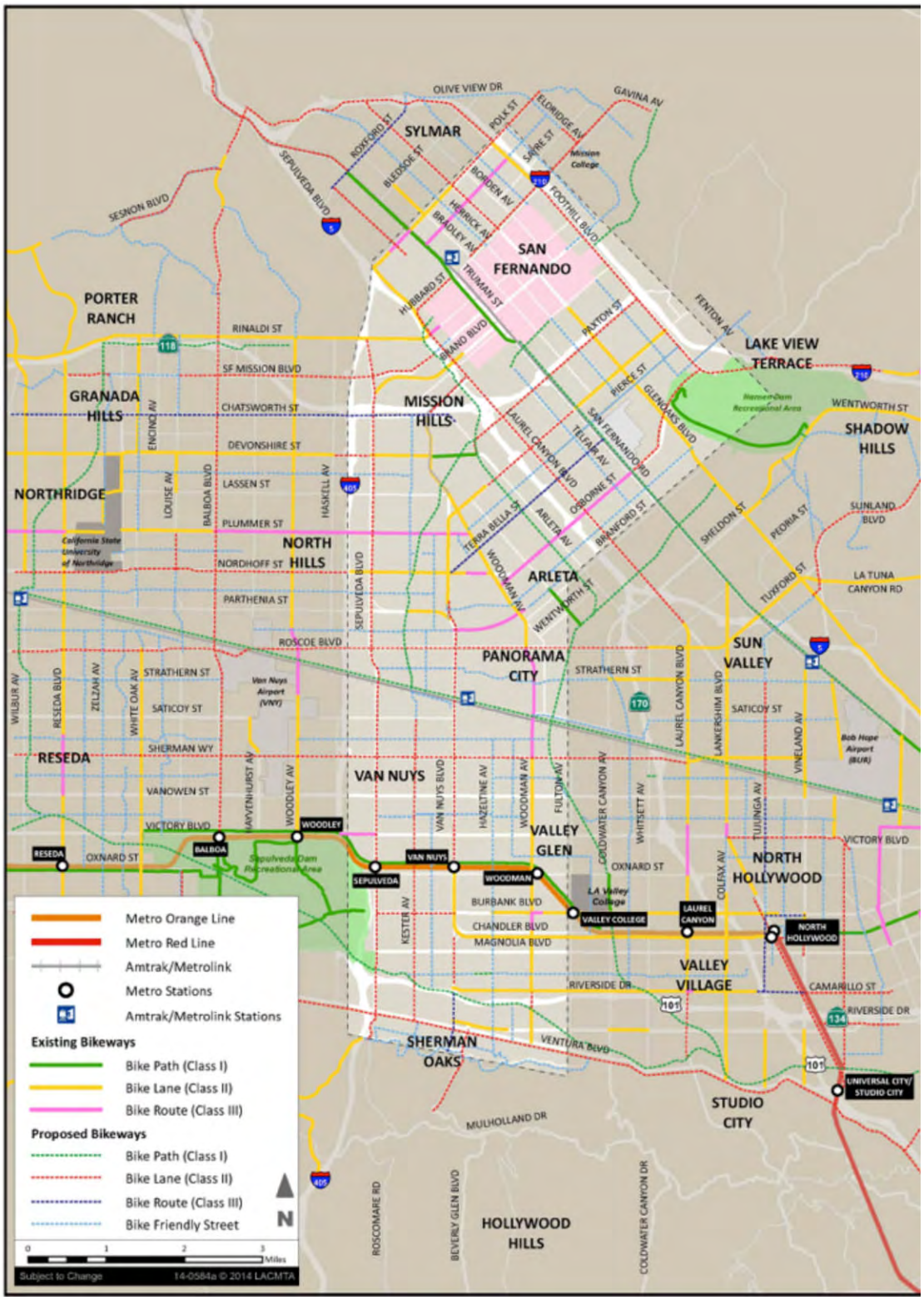
The existing and planned bicycle facilities in the study area are illustrated in Figure 1-6.

1.3.1 Existing Trip Patterns

Metro model data for the study area indicates that 50 percent of person-trips stay within the study area. By 2040, this trip pattern is expected to remain roughly the same. These local trips, however, will remain a significant contributor to traffic and transit trends.

Of the approximately 2,954,963 daily trips that either originate or are destined to the study area, approximately 1,487,397 (around 50 percent) stay within the study area, with a large portion of trips occurring between the northern communities of the City of San Fernando and Pacoima and the southern communities of Mission Hills and Panorama City. These southern communities have a higher number of activity centers that include Kaiser Permanente, several high schools, and the Panorama Mall. Additional significant trip distribution is to and from the Van Nuys Civic Center area, with a large number of study area trips (52 percent) occurring between Mission Hills, Panorama City, and Sherman Oaks. These general trip trends are expected to remain similar in 2040 and represent high trip distribution attraction between the central study area and the Civic Center.

Figure 1-6: Study Area Bicycle Facilities



Source: LADOT, KOA, 2014.

Existing Metro service boarding data generally supports these estimated trip patterns. The boarding activity is higher along the Van Nuys Boulevard corridor, at the MOL Van Nuys Station, Vanowen Street, Roscoe Boulevard, and Nordhoff Street stops. These locations are all located within the central study area and the Civic Center area. The higher level of passenger activity in the central study area and the Civic Center area could be attributed to the connectivity to east-west bus services and also activity centers that are located in these areas.

1.3.2 Transit Passenger Activity

1.3.2.1 Bus Passenger Boardings

The Van Nuys Boulevard corridor has the seventh-highest total transit boardings in the Metro system. The San Fernando Road corridor also has some of the highest transit boardings in the San Fernando Valley. Figure 1-7 illustrates existing transit boardings for all bus lines and the MOL within the study area.

Boardings and alightings in the study area are generally highest along the MOL (7,500 per day) and along Van Nuys Boulevard between Nordhoff Street and the MOL Busway. Van Nuys Boulevard north of Nordhoff Street also has higher boardings, especially between Laurel Canyon Boulevard and Glenoaks Boulevard. The San Fernando Road and Truman Street corridors do not have high boardings and alightings, in comparison to the Van Nuys Boulevard corridor.

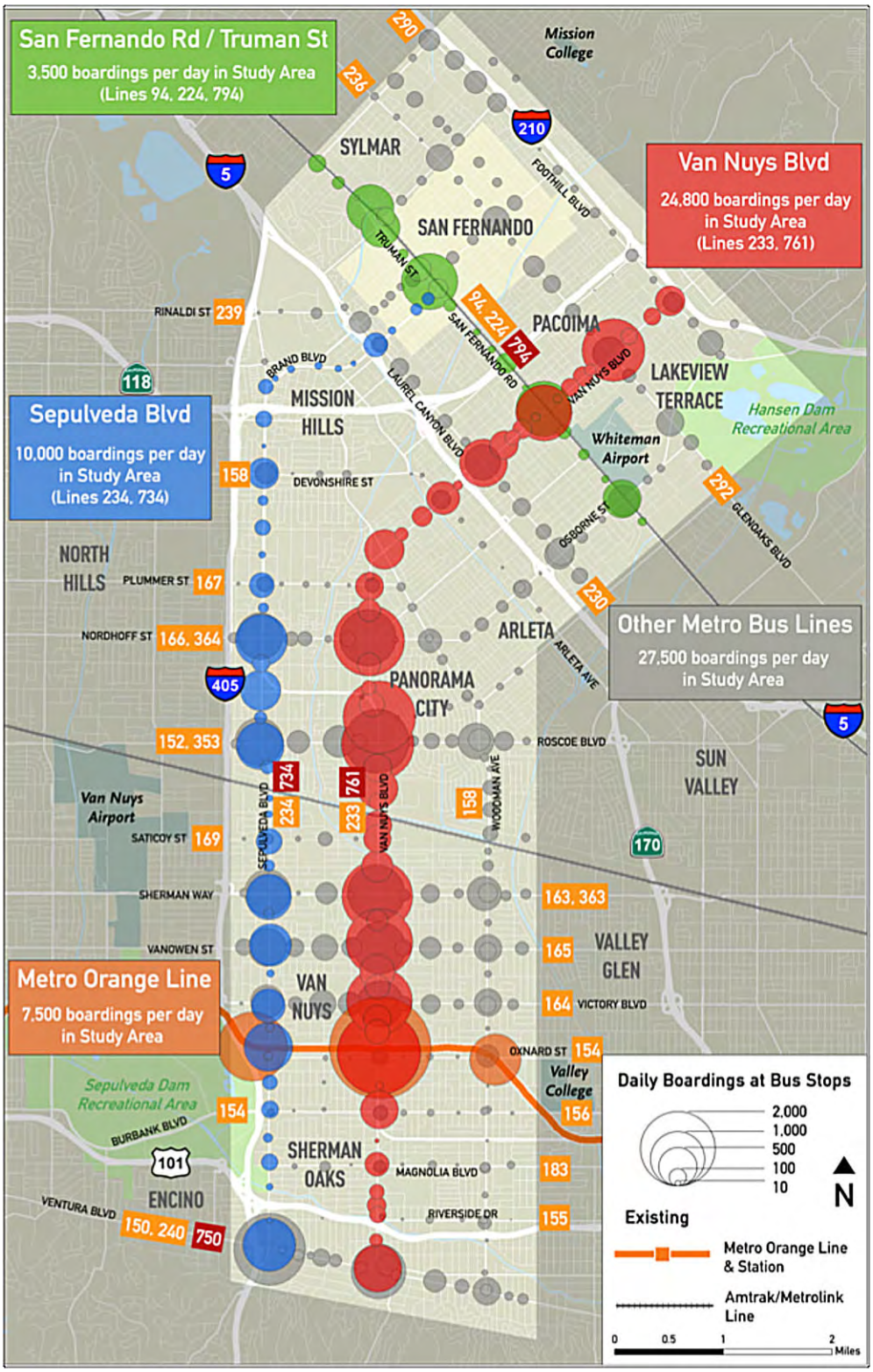
Existing transit boardings on Van Nuys Boulevard are some of the highest in the Metro system, when compared to other higher-density areas of the region. The Van Nuys Boulevard corridor has the second-highest boardings total in the San Fernando Valley (about 24,800 per day), just behind the MOL Busway (about 25,500 per day). Local Line 233 has higher boardings than Rapid Line 761, due to the number of stops (supporting shorter trips and higher throughput of passengers per mile) served by the local service.

It should be noted that modifications were made in December 2014 to one of the primary Metro bus routes operating on Van Nuys Boulevard after this project analysis was already underway. Metro Rapid Line 744 was added connecting Pacoima in the east to Northridge in the west, and traveling for a large portion of the route (north-south) along Van Nuys Boulevard, and replacing the Metro Rapid Line 761. For the purposes of this study, the evaluation was based on the routes (Metro Rapid Line 761 and Metro Local Line 233) that were already in place in 2012 when the transportation modeling for this study began.

Only a few changes were made to Metro's bus system between 2012 and 2017 within the study area. These include:

1. Combining the Van Nuys Boulevard portion of the Line 761 with Line 741 to form Line 744.
2. Combining the non-Van Nuys Boulevard portion of Line 761 with Line 734 and then extending it to the Exposition Rail Station.
3. Combining the non-Van Nuys Boulevard portion of Line 233 during the late night/weekend service period to Line 234 and extending it to the Exposition Rail Station.
4. Separating Line 237 from Line 236 and combining it with Line 156.
5. Adding Line 788 which runs from Arleta to Westwood during just the weekday peak periods.

Figure 1-7: Existing Transit Boardings



Source: Metro, 2011.

Aside from adding Line 788, the rest of the changes were limited to a reorganization of seven lines. Transit service levels in 2017 for the study area are very similar to those in 2012. Over the same time period, the number of bus stops changed from 1,089 to 1,093, a net increase of only four stops.

1.3.2.2 Rail Passenger Boardings

Based on Metrolink data from 2011, the Antelope Valley Line has an average weekday boardings total of 5,885, of which 509 occur at the Sylmar/San Fernando Metrolink Station. The Ventura County Line has an average weekday boardings total of 4,141, of which 184 boardings occur at the Van Nuys station.

According to Amtrak, the Pacific Surfliner route is the second busiest corridor in the United States, with approximately 200 daily boardings at the Van Nuys Station, in addition to those accessing Metrolink at this location.

1.3.3 Bus Crowding Issues

Bus overcrowding is defined by Metro as passenger demand that exceeds bus seating capacity for a particular trip by the corresponding load factor for buses, which is based on the maximum average ratio of passengers to available seating per vehicle size (i.e. 40-foot, 45-foot, and 60-foot buses. This set of load factors considered frequency of service as well as seated capacity of a 40-foot, 45-foot, or 60-foot vehicle. The revised policy also accounted for differences between peak and non-peak operations. The rationale for this change was to recognize that a single load factor does not cover the full range of circumstances confronting a passenger. For example, on routes where the frequency of service is 60 minutes, accepting a load factor of 130% of a seated load at all times throughout the day means that the passenger may experience severe overcrowding or worse, be unable to board the bus and be forced to wait another hour for service[10]. Table 1-6 shows the revised loading standards.

Table 1-6: Loading Standards with Approximate Passengers per Seat Equivalence

Weekday AM and PM Periods				
		Bus Types		
Frequency Range (min.)	Psgrs. / Seat	40 ft.	45 ft.	60 ft.
		Average Peak Loads		
1 - 10	1.40	56	65	80
11 -20	1.30	52	60	74
21 - 40	1.20	48	55	68
41 -60	1.10	44	51	63
60+	1.00	40	46	57

Off-Peaks and Weekends				
			Bus Types	
Frequency Range (min.)	Psgrs. / Seat	40 ft.	45 ft.	**60 ft.**
		Average Peak Loads		
1 - 10	1.30	52	60	74
11 -20	1.25	50	58	71
21 - 40	1.10	44	51	63
41 -60	1.00	40	46	57
60+	0.75	30	35	43

Shaded area presents current load factor standard applicable at all times. This table replaces 0% standard with one that varies by peak / off-peak and schedule frequency.

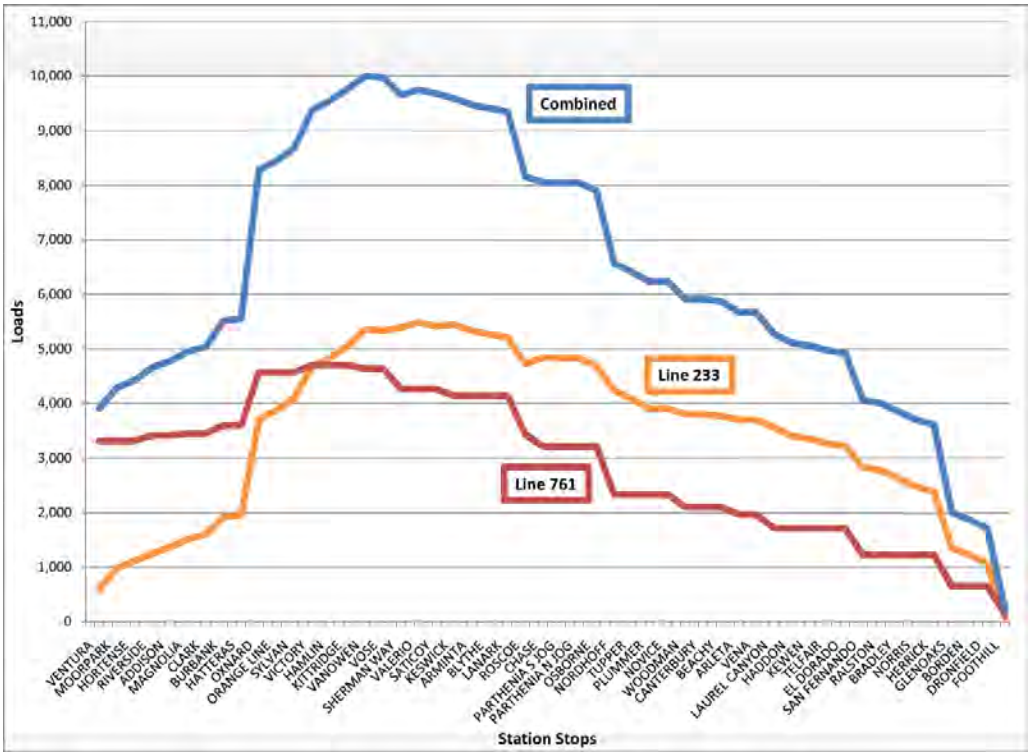
[10] The 2011 Transit Service Policy, as adopted by the Metro Board in January 2011, increased the Load Factor from 1.2 to 1.3. At the end of the Consent Decree in 2010, load factors were changed from 1.0 to 1.2. Even at that, Metro Load Factors were below other North American operators. The standards have been modified in the 2016 Policy document to be more in line with the accepted standards exemplified by other large metropolitan operators.

Since population and employment are forecast to grow, this is expected to result in increases in boardings, resulting in bus overcrowding, as the load factor standards will likely be exceeded on many trips.

1.3.4 Passenger Loads

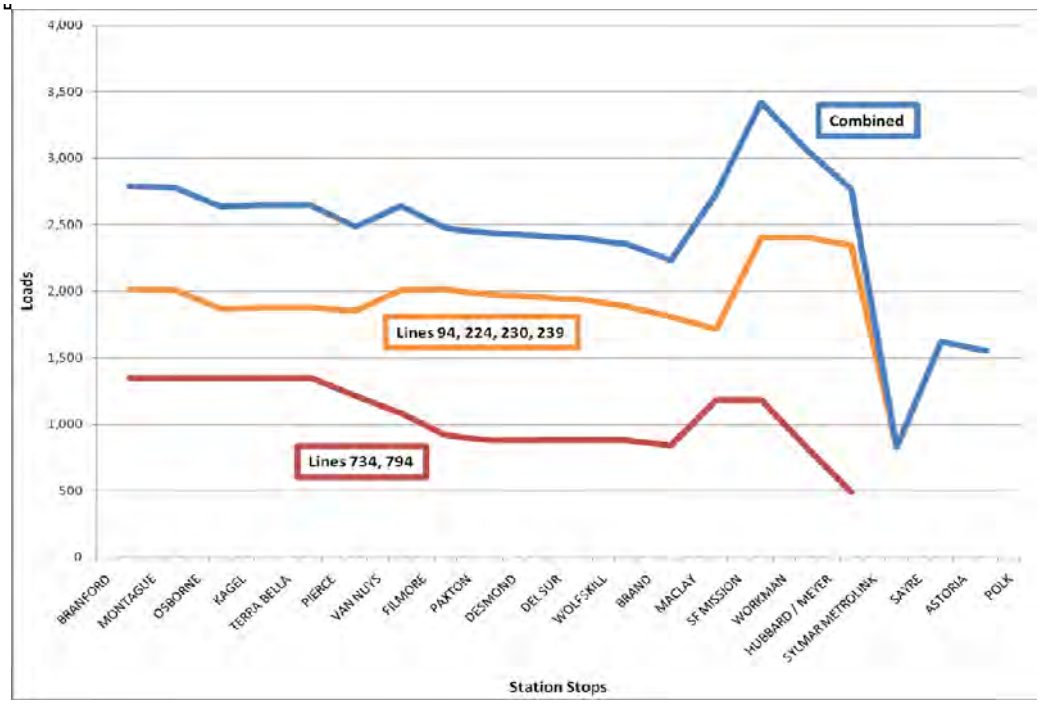
Passenger loading is a measure of how many patrons are using a transit service at any point along a designated route. The data presented here is an average of all weekday trips within a month of service. Figures 1-8 and 1-9 illustrate the total loads for each bus line (northbound and southbound) that operates along Van Nuys Boulevard and San Fernando Road (the two main transit corridors in the study area). These figures also show the total combined loading, which is a sum of the passenger activity from all of the bus lines at each point along each of the corridors.

Figure 1-8: Total Passenger Loading – Van Nuys Boulevard



Note: Time points are from south to north.
Source: Metro, 2011.

Figure 1-9: Total Passenger Loading – San Fernando Road



Note: Time points are from south to north.
Source: Metro, 2011.

1.3.4.1 Van Nuys Boulevard

Figure 1-8 illustrates the total passenger loading (northbound and southbound) for Metro Rapid Line 761 and Metro Local Line 233 along Van Nuys Boulevard. The combined total is the sum of these two lines at each point along Van Nuys Boulevard.

Passenger loads on Metro Rapid Line 761 peak between the MOL and Sherman Way in the Van Nuys Civic Center area. Passenger loading near Ventura Boulevard is high because the Metro Rapid Line 761 provides service into and out of the San Fernando Valley, with a southern terminus at the major activity center of Westwood. Existing headways on Metro Rapid Line 761 are 10 minutes in the peak period and 17.5 minutes in the off-peak period.

Total passenger loads on Metro Local Line 233 tend to peak north of the MOL transfer point, particularly in the vicinity of Valerio, Saticoy and Keswick Streets. Existing headways on Metro Local Line 233 are 12 minutes in the peak period and 20 minutes in the off-peak period.

For both lines, passenger loads decline as they approach their northern termini in the vicinity of Van Nuys Boulevard and Foothill Boulevard. A substantial number of passengers – nearly 10,000 at the combined total peak load – are using transit service along the more southern portion of the Van Nuys Boulevard corridor during an average day.

Transit improvements in the Van Nuys Boulevard corridor (especially between the MOL and Panorama City) should realize substantial increases in discretionary riders, while providing benefits for the high number of existing riders, which includes a high concentration of transit dependent populations, on Metro bus lines.

1.3.4.2 San Fernando Road/Truman Street

Figure 1-9 illustrates the total loads (northbound and southbound) for the numerous lines that operate along San Fernando Road and Truman Street. The combined total is the sum of the loads on these lines at each point.

Figure 1-9 illustrates that passenger loads on the Metro Rapid Lines 734 and 794 remain generally consistent throughout the San Fernando Road corridor, although loads decrease north of the San Fernando Mission Boulevard stop. Loads on the Metro Local Lines 94 and 224 also remain steady for the length of the corridor until they peak between the San Fernando Mission Boulevard stop and Sylmar/San Fernando Metrolink Station, as Metro Local Lines 230 and 239 serve this segment of the corridor, which is within the downtown area of the City of San Fernando. Loads on these local lines then drop off dramatically to the north of the Metrolink station stop, where only Line 224 continues north along San Fernando Road. A combined peak load of 3,400 transit patrons near the Sylmar/San Fernando Metrolink Station and downtown San Fernando makes this a very good area to improve transit service and secure better connections to these existing transit hubs.

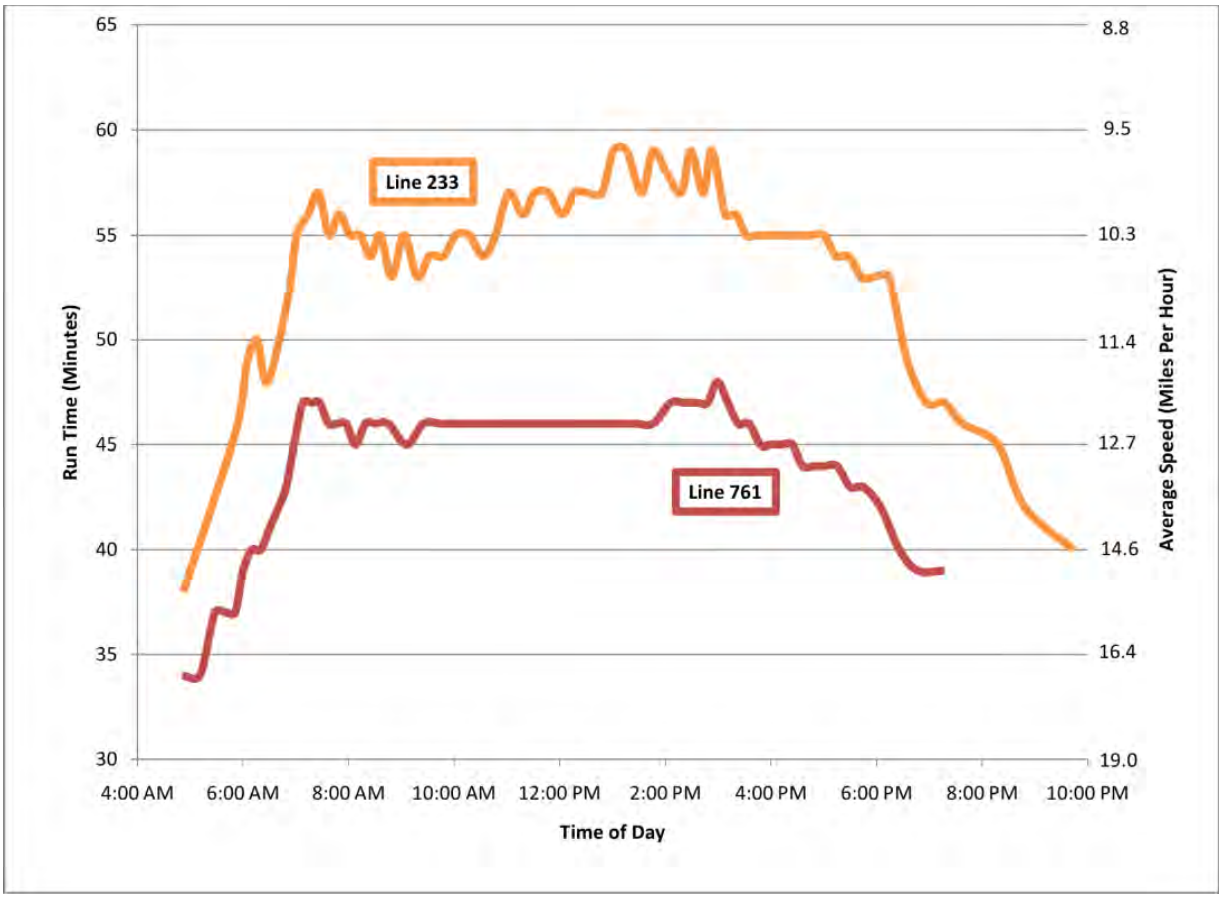
1.3.5 Congestion Effects on Bus Speeds

Based on existing Metro bus schedules and recent monthly summary data (May 2011) provided by Metro Bus Operations, an analysis of existing bus schedule runtimes and bus speeds on the Van Nuys Boulevard and San Fernando Road/Truman Street corridors was conducted. Only a few changes were made to Metro's bus system between 2012 and 2017 within the study area. Aside from adding Line 788, the rest of the changes were limited to a reorganization of seven lines. Transit service levels in 2017 for the study area were checked, validated, and are very similar to those in 2012.

1.3.5.1 Van Nuys Boulevard

The existing Metro Rapid Line 761 and Metro Local Line 233 operate the length of Van Nuys Boulevard from Foothill Boulevard in Pacoima to Ventura Boulevard in Sherman Oaks. As illustrated by Figure 1-10, Metro Rapid Line 761 operates in the southbound direction from Van Nuys/Glenoaks to Ventura/Sepulveda with a runtime of less than 40 minutes in the early morning hours and a runtime of over 50 minutes during the morning peak period. Likewise, speeds in the early morning can reach close to 15 miles per hour, but then slow to just over 10 miles per hour in the peak period.

Figure 1-10: Scheduled Runtimes and Speeds – Van Nuys Boulevard - Southbound



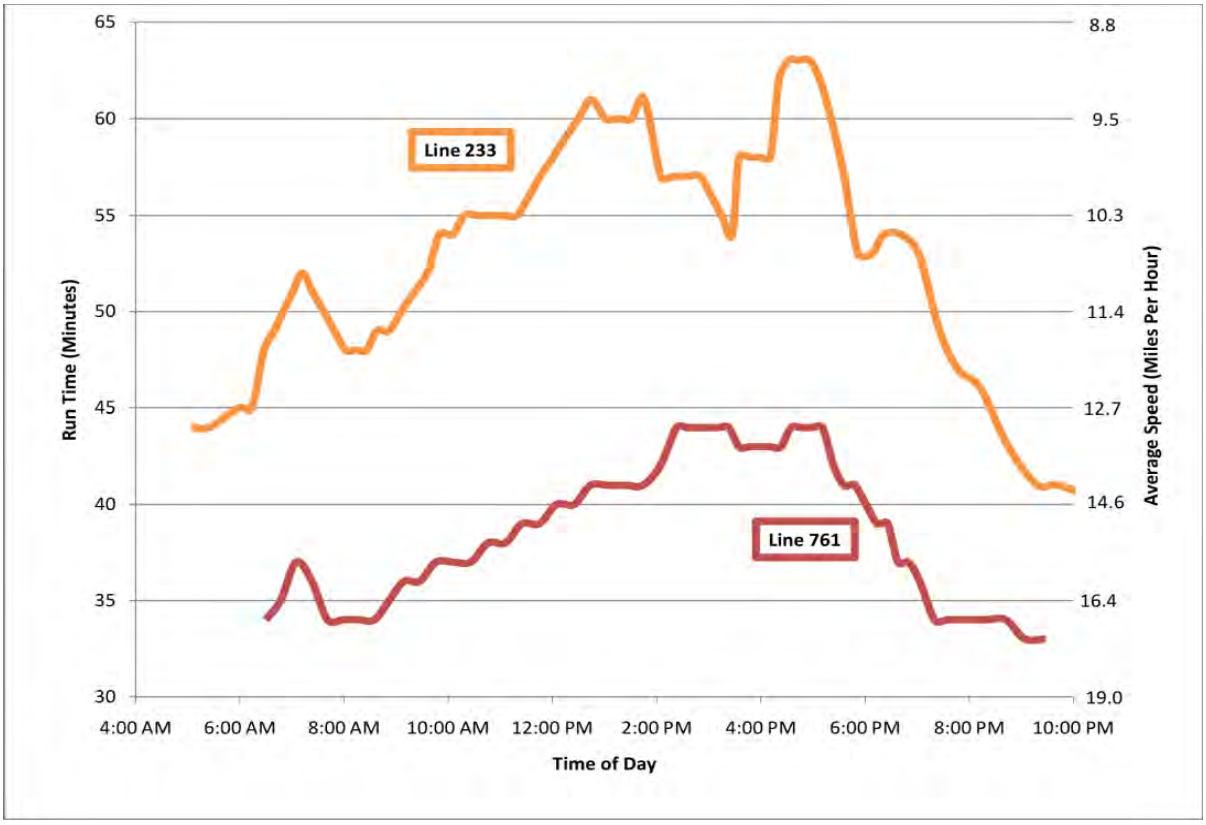
Source: Metro, 2011.

The southbound trips of Metro Local Line 233 have runtimes of five to ten minutes longer to travel a distance similar to that of the Metro Rapid Line due to more frequent stops, with speeds slowing to less than 10 miles per hour.

As illustrated by Figure 1-11, there is a similar situation northbound on Van Nuys Boulevard, with Metro Rapid Line 761 scheduled runtimes of ten to 15 minutes less to cover the route from Ventura Boulevard to Foothill Boulevard in the peak period than Metro Local Line 233. Similar to the southbound direction of travel, the Metro Local Line 233 averages speeds fewer than 10 miles per hour in the peak, while the Metro Rapid Line 761 averages speeds closer to 12 miles per hour. Where the lines deviate near termini points, the relevant data has been excluded on the graphs in order to illustrate equal comparisons of operations within shared corridors.

The significantly longer travel times and slower speeds during the peak hours for Metro buses along Van Nuys Boulevard support the need for a transit improvement including, but not limited to, an exclusive bus or rail guideway.

Figure 1-11: Scheduled Runtimes and Speeds – Van Nuys Boulevard - Northbound



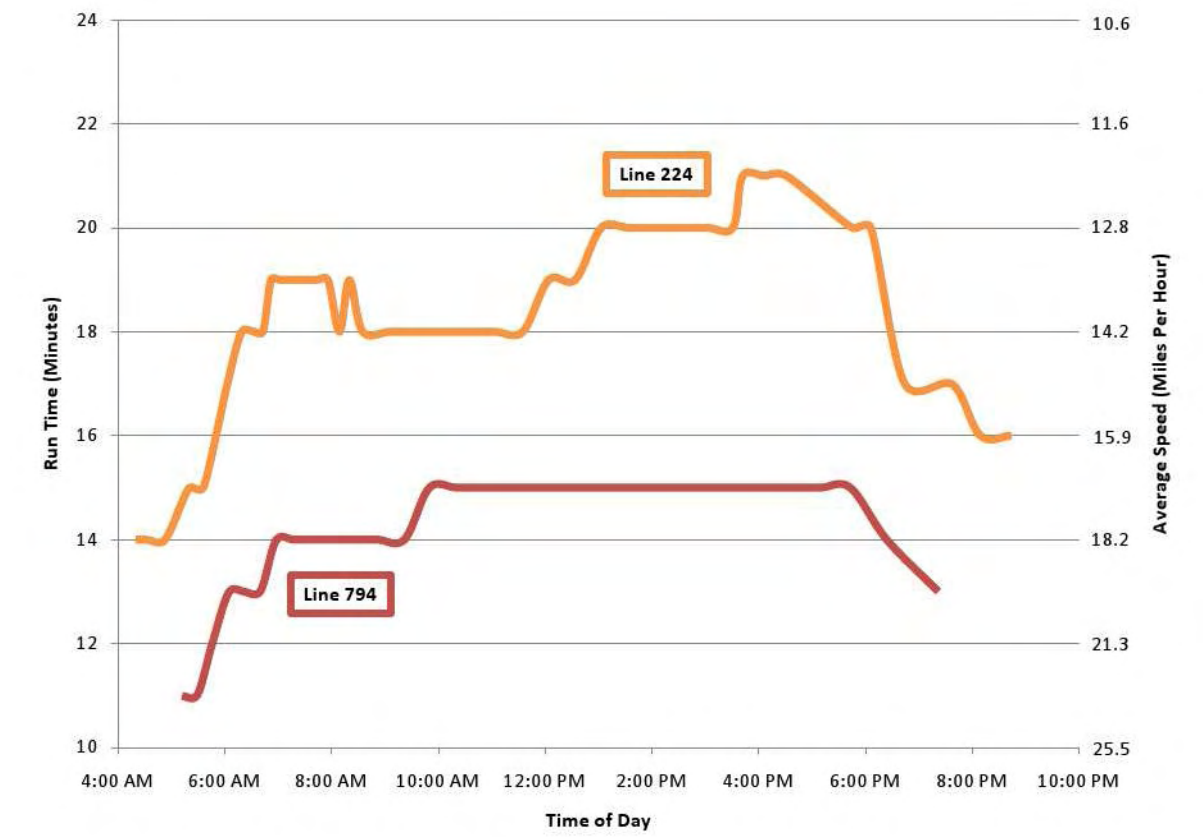
Source: Metro, 2011.

1.3.5.2 San Fernando Road/Truman Street

The existing Metro Rapid Line 794 operates along Truman Street and San Fernando Road from the Sylmar/San Fernando Metrolink Station in Sylmar, to Figueroa Street in Glassell Park. Within the study area, Metro Rapid Line 794 is examined from Sylmar/San Fernando Metrolink Station to Osborne Street in Sun Valley. The existing Metro Local Line 224 operates along Truman Street and San Fernando Road from Polk Street in Sylmar to Branford Street in Sun Valley. The analyzed portions of these routes are about half the length of the bus routes analyzed for Van Nuys Boulevard – each just under five miles in length.

As illustrated by Figure 1-12, the Metro Rapid Line 794 has a runtime along San Fernando Road/Truman Street in the southbound direction from the Sylmar/San Fernando Metrolink Station to Osborne Street that is just over 10 minutes in the early morning hours, but this same trip is scheduled with a runtime of nearly 15 minutes during the morning peak period. Likewise, speeds in the early morning can reach 23 miles per hour while speeds are closer to 18 miles per hour during the peak period. The southbound Metro Local Line 224 has a runtime that is ten to 15 minutes slower for a similar distance as the Metro Rapid Line 794. Speeds along the Metro Local Line 233 are reduced to approximately 12 miles per hour during the peak period.

Figure 1-12: Scheduled Runtimes and Speeds – San Fernando Road – Southbound



Source: Metro, 2011.

As illustrated by Figure 1-13, there is a similar situation traveling northbound on San Fernando Road and Truman Street, with the Metro Rapid Line 794. This line has a runtime that is five minutes more to cover the route from Osborne Street to the Sylmar/San Fernando Metrolink Station in the peak period. In the southbound direction of travel, the Metro Local Line 224 has a runtime that is almost 10 minutes higher than the Rapid Line 794 in the northbound direction, and speeds are reduced to just over 10 miles per hour.

Metro Rapid Line 794 generally has good performance along San Fernando Road, with a substantial travel time savings compared to Metro Local Line 224 and only a small increase in runtimes during peak periods. Transit improvements including, but not limited to, bus or rail guideway would have a positive benefit for riders.

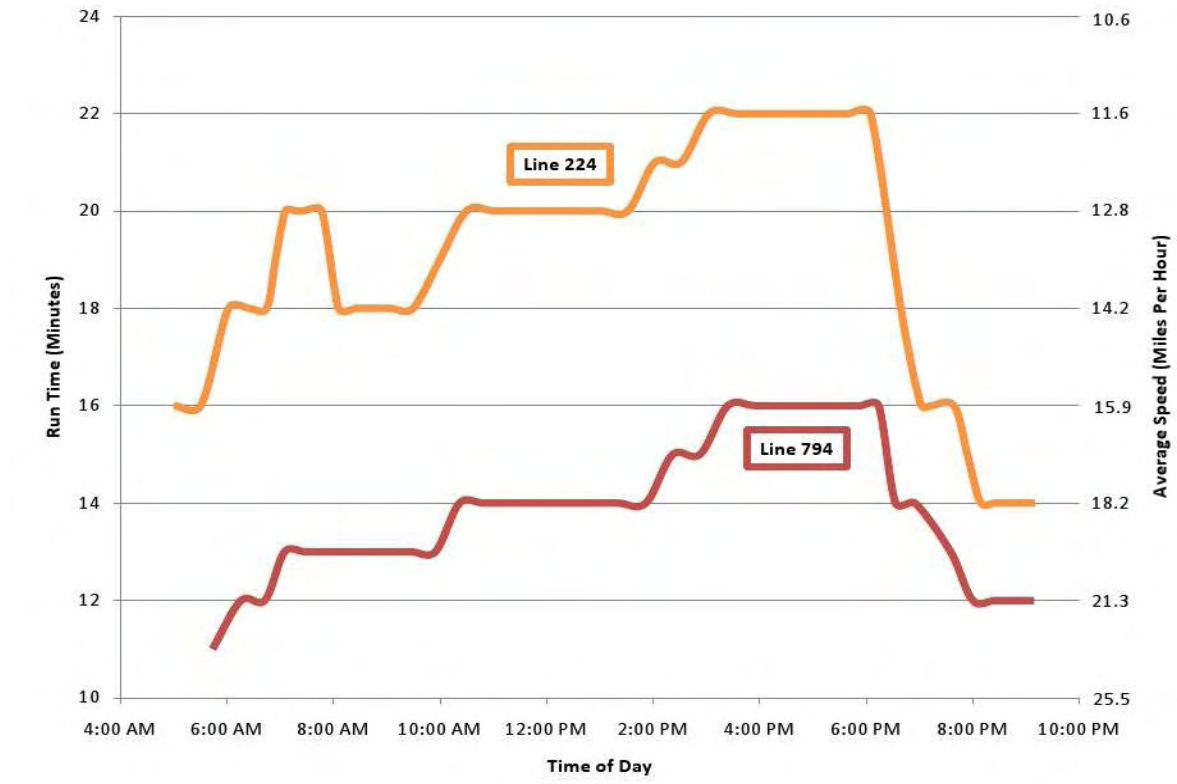
Overall, the large differences between peak and off-peak scheduled runtimes (ranging from approximately 25 percent to 50 percent) and speeds (ranging from approximately 33 percent to 50 percent) show that separating transit and auto traffic may have a significant benefit for Van Nuys Boulevard and San Fernando Road travelers.

1.3.6 Transit On-Time Performance and Reliability

1.3.6.1 Van Nuys Boulevard

An examination of on-time performance statistics for the Metro Rapid Line 761 and the Metro Local Line 233 indicates that the lines are not currently meeting the on-time performance goal of 80 percent.

Figure 1-13: Scheduled Runtimes and Speeds – San Fernando Road – Northbound



Source: Metro, 2011.

Figure 1-14 and Figure 1-15 below illustrate on-time performance at select service locations along the Van Nuys Boulevard corridor in both the north and southbound directions.

The Metro Local Line 233 performs better than the Metro Rapid Line 761, but the Metro Local Line 233 still rates below 80 percent on-time performance at almost every time-point examined (excluding San Fernando in the southbound direction and Victory in the northbound direction). The Metro Rapid Line 761 performs particularly poorly in terms of reliability in the northbound direction, where on-time performance is less than 50 percent at all time-points examined. While both the Metro Local Line 233 and Metro Rapid Line 761 perform poorly in terms of reliability the Metro Rapid 761 performs worse because it is a Rapid line with fewer stops and faster expected travel through the corridor than the local line with many more stops and a longer expected trip time. However, since the Metro Rapid Line 761 travels in the same mixed-flow lanes with a considerable amount of traffic congestion, its speed is hindered and thus the total trip time is not much shorter than on the Local Line 233, thus performing worse than expected due to it being a Rapid Line versus the speed and travel time expectations of the Local line.

Figure 1-14: On-Time Performance – Van Nuys Boulevard - Southbound

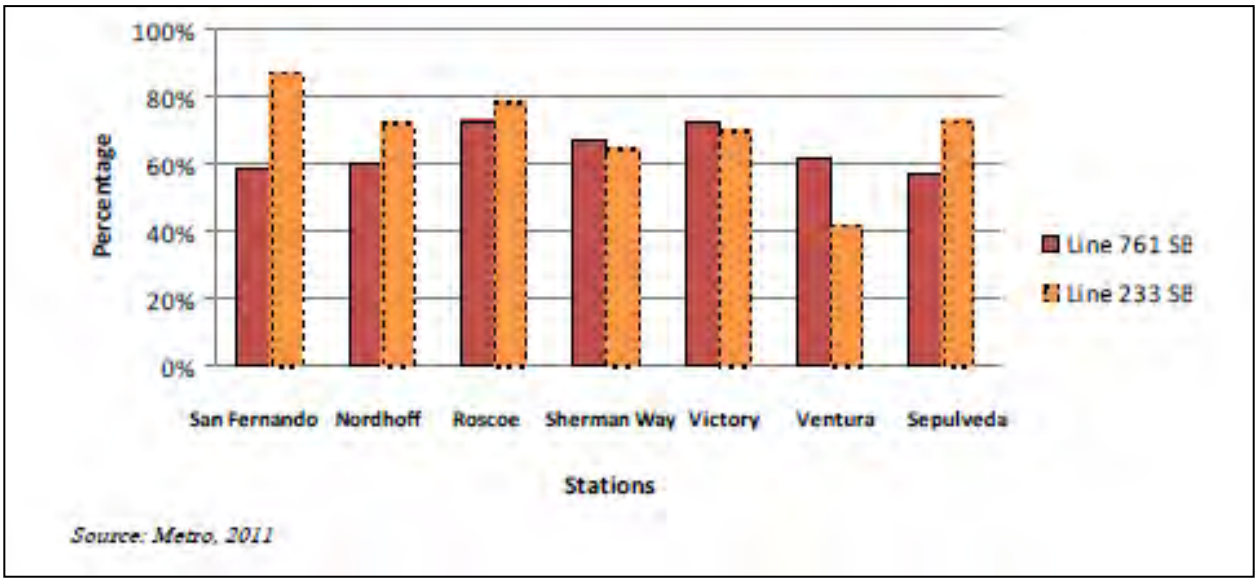
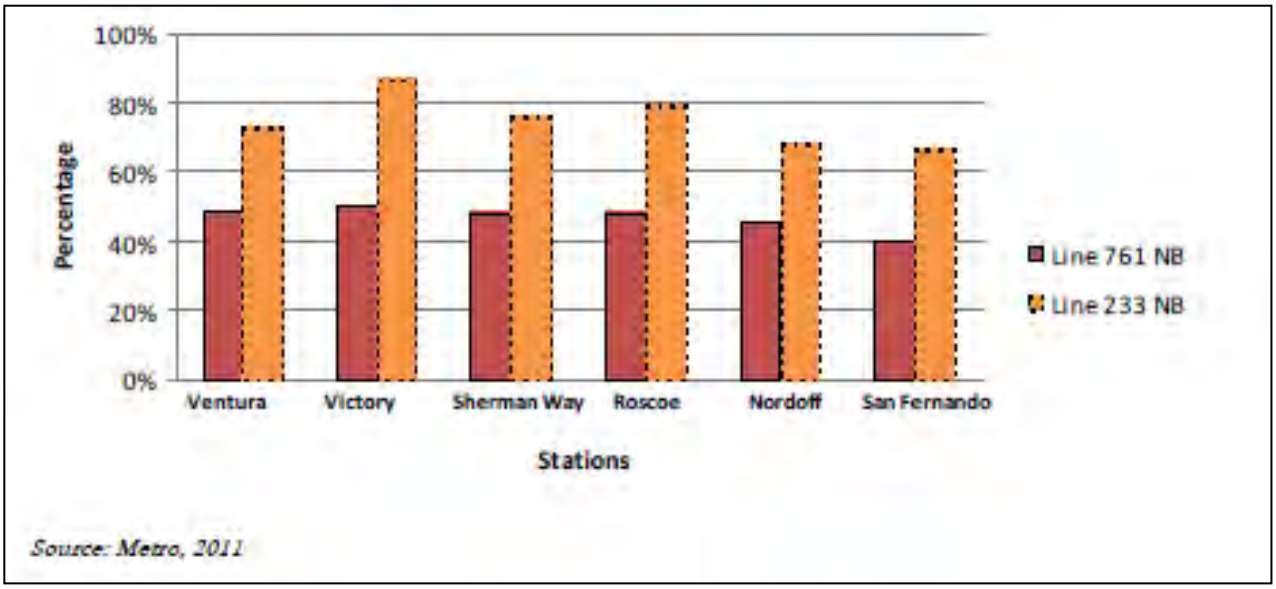


Figure 1-15: On-Time Performance – Van Nuys Boulevard - Northbound



Transit service that is physically separated from auto traffic would allow for much more improved reliability of operations in this corridor, especially with the clear lack of advantage in reliability with the Metro Rapid Bus service.

1.3.6.2 San Fernando Road

An examination of on-time performance statistics for the Metro Local Lines 94, 224, 230 and 234 indicate that the lines are not currently meeting the on-time performance goals of 80 percent.

Figure 1-16 and Figure 1-17 below illustrate on-time performance at select service locations along San Fernando Road in both the northbound and southbound directions.

Figure 1-16: On-Time Performance – San Fernando Road - Southbound

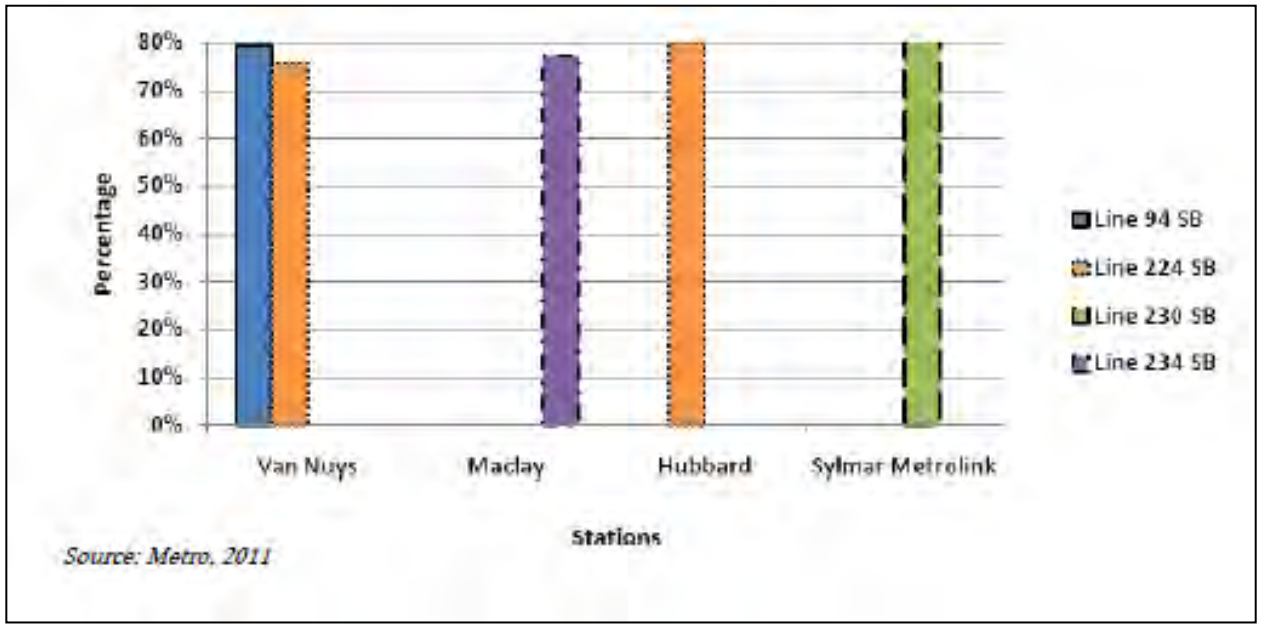
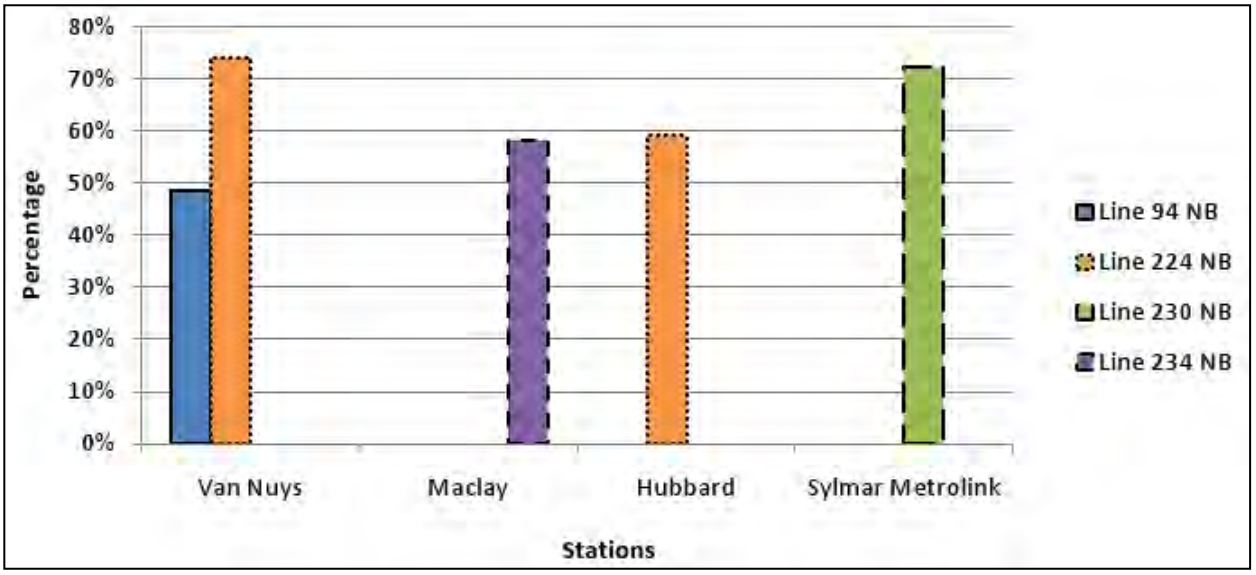


Figure 1-17: On-Time Performance – San Fernando Road - Northbound



Source: Metro, 2011.

The Metro Local Lines 94, 224, 230 and 234 generally perform better in the southbound direction, although on-time performance is still below 80 percent for most lines in this direction. Metro Local Lines 94, 224, and 234 perform especially poorly in the northbound direction, with on-time performance below 60 percent. The Metro Local Line 94 in the northbound direction performs particularly poorly, where on-time performance is under 50 percent. Please note that the Metro Rapid Line 794 was not evaluated as part of this study.

Transit service physically separated from auto traffic would allow for much improved reliability of operations in this corridor.

1.4 Project Purpose, Need, and Objectives

This section includes the project purpose, project need, and project objectives. The project purpose describes the intent of the proposed transit improvements in addressing the needs listed in the project need subsection. The range of alternatives considered during the AA and further considered in this Draft EIS/EIR reflect the identified project purpose and need. The project objectives describe how Metro intends on delivering the proposed transit project to not only meet the project purpose and need but also identify how the project alternatives are consistent with Metro's mission statement as a public transit agency.

1.4.1 Project Purpose

The East San Fernando Valley Transit Corridor Project would provide new service and/or infrastructure that improves passenger mobility and connectivity to regional activity centers, increases transit service efficiency (speeds and passenger throughput), and makes transit service more environmentally beneficial via reductions in greenhouse gas emissions.

The purposes of the proposed project can be summarized as follows:

- Improve mobility in the eastern San Fernando Valley by introducing an improved north-south transit connection between key transit hubs/routes by improving transit trip times and speeds along the project corridor;
- Enhance transit accessibility/connectivity for residents within the study area to local and regional destinations by improving the carrying capacity and person throughput through the corridor to address projected population growth and increased roadway congestion in the corridor that will directly affect transit service;
- Provide more reliable transit service within the eastern San Fernando Valley;
- Provide additional transit options in an area with a large transit dependent population, including the disabled, and high transit ridership; and
- Encourage modal shift to transit in the eastern San Fernando Valley, thereby improving air quality.

1.4.2 Project Need

This section summarizes the nexus between the purpose of the project and the identified needs in the study area. The five project purposes are defined below and followed by a discussion of supporting study area needs.

Purpose: Improve mobility in the eastern San Fernando Valley by introducing an improved north-south transit connection between key transit hubs/routes.

Supporting Needs: The project study area contains three major transit corridors (Metro Orange Line, Metrolink Antelope Valley Line, and Metrolink Ventura County Line/Amtrak Pacific Surfliner), which are vital to the regional movement of residents and workers into and out of the east San Fernando Valley. These core transit services traverse and serve the study area at various geographic locations and are linked by local and Rapid Bus service. The northern portion of the study area includes the Sylmar/San Fernando Metrolink Station, which is served by the Metrolink Antelope Valley Line. The middle portion of the study area is served by the Metrolink Ventura County Line/Amtrak Pacific Surfliner via the Van Nuys Station. The southern portion is served by the Metro Orange Line at the Van Nuys and Sepulveda station stops.

The extent of the study area's transit dependency is supported in part by boarding and alighting data in each corridor as well as its socioeconomic profile. For example, Metro Local Line 233 and Metro Rapid Line 761 have some of the highest ridership in the San Fernando Valley and Los Angeles County with approximately 24,000 boardings. Offering Metro riders an improved north-south transit connection is imperative to fostering increased future travel opportunities between key regional transit hubs, including a future project in the Sepulveda Pass and the Metro Orange Line (30,000 boardings).

Based on the Metro travel forecast model, the number of congested roadway segments (a portion of the roadway located between two intersections) in the study area is expected to increase from 126 to 162, a 29 percent increase in the AM peak hour and from 103 to 159, a 54 percent increase in the PM peak hour. Average speeds on these segments are expected to decrease by up to 12 miles per hour (mph) during the AM and PM peak hours. The increase in congested segments will result in lower vehicle speeds and increased travel delay in the study area, reducing mobility.

The forecasts also indicate that by the year 2040, peak-hour average vehicle travel speeds will:

- Decline in the Van Nuys Boulevard Corridor by about 4.6 mph (a 15.6 percent decrease), from 30.1 mph to 25.4 mph in the AM peak period and by about 4.3 mph (a 14.8 percent decrease) from 28.9 to 24.6 mph in the PM peak period.
- In the Sepulveda Boulevard Corridor, speeds are forecasted to decrease by about 3.5 miles per hour (an 11.3 percent decrease) from 30.9 mph to 27.4 mph in the AM peak period and by about 3.1 mph (a 14.8 percent decrease) from 30.7 to 27.6 mph in the PM peak period.
- For the study area as a whole, speeds are forecasted to decrease by about 4.1 miles per hour (a 13.4 percent decrease) from 30.5 mph to 26.4 mph in the AM peak period and by about 3.7 mph (a 14.8 percent decrease) from 29.8 to 26.1 mph in the PM peak period.

Based on travel projections from the Metro model, the number of study intersections currently operating at LOS E or F along the Van Nuys Boulevard corridor and the Sepulveda Boulevard corridor will more than double by the year 2040.

Mobility is directly related to, among other measures, average travel speeds and commute times. As traffic levels increase, travel times and speeds will worsen and create disincentives for travelers to use regional transit. Providing an improved north-south transit option that is not affected by traffic conditions is paramount in continuing to provide local mobility within the east San Fernando Valley, as well as providing regional mobility to and from the area, including connections to the rest of the transportation system and destinations such as the Westwood, UCLA, Brentwood, and the entire Westside by way of the Metro Orange Line, the future project in the Sepulveda Pass.

Purpose: Enhance transit accessibility/connectivity for residents within the study area to local and regional destinations.

Supporting Needs: According to the Metro model, the person-trip distribution for the project study area indicates that a high number of travel trips tend to be localized to the communities within the area. As shown in the Metro model results, approximately 50 percent of the trips stay within the study area, with a large portion of trips occurring between the northern communities of the City of San Fernando and Pacoima and the southern communities of Mission Hills and Panorama City. These southern communities have a higher number of activity centers that include Kaiser Permanente, several high schools, and the Panorama Mall. A significant proportion of the overall study area trip distribution is to and from the Van Nuys Civic Center area, constituting approximately 52 percent of all study area trips. The transit service levels between 2012 and 2017 were checked, validated, and these operating characteristics are still very similar and consistent in the study area.These general trip trends are expected to remain similar in 2040 and show a high attraction of trips between the central study area and the Civic Center area.

Because of the centralized trip patterns, transit accessibility and connectivity are integral to study area resident travel needs, especially to those who are transit dependent (35 percent). A total of 10 percent of households do not own a car and the average adult poverty ratio is 2.26 persons per acre compared to 1.08 per acre for Los Angeles County. These residents rely on Metro and City of Los Angeles Department of Transportation bus services for work and non-work trips within the study area and the greater Los Angeles County area.

By 2040, the trip pattern is expected to remain similar, with a high number of trips (approximately 50 percent) staying within the study area. Local trips will remain a significant contributor to traffic and transit trends. Therefore, providing enhanced transit connections and accessibility to surrounding destinations is critical for residents that rely on public transit.

Purpose: Provide more reliable transit services within the eastern San Fernando Valley.

Supporting Needs: The existing bus service along the study area corridors does not meet the Metro on-time performance goal of 80 percent. This is directly correlated to levels of congestion and related vehicular speeds, which together reduce the mobility of area bus riders. As congestion continues to increase, the reliability of bus service for riders will also worsen. Providing transit services that are less affected by increasing traffic congestion will provide increased reliability.

The increased congestion and reduction of speeds will increase both automobile and transit vehicle delay at intersections in the study area. The analysis indicates that the increase in average vehicle delay at key intersections in the study area are expected to increase by at least 30 seconds to possibly over two minutes at several locations during the AM and PM peak hours. Driver delay within the study area commute corridors could increase by 40 percent or more without major mobility improvements. For example, a driver approaching an intersection in the Civic Center that is currently experiencing 25 seconds in delay will now experience 35 seconds in delays by the year 2040.

Existing Metro bus performance data for the study area indicates that there are large overall differences between peak and off-peak scheduled runtimes (with an increase in runtimes from approximately 25 percent to 50 percent, between the fastest and slowest trips) and bus speeds (with an increase ranging from approximately 33 percent to 50 percent during peak periods). In the Van Nuys Boulevard and Sepulveda Boulevard corridors, there is a lack of a substantial speed advantage for the Rapid Line, as compared to the local line.

The Rapid Line 761 and the Local Line 233 operating on Van Nuys Boulevard do not meet the Metro on-time performance goal during peak periods. For example, the on-time performance of Rapid Line 761 within the study area is less than 50 percent at all time-points traveling northbound and approximately 60 to 70 percent at the southbound time-points. The on-time performance of the Local Line 233 averages to 69 percent in the southbound direction and 75 percent in the northbound direction. The same occurs along the length of Sepulveda Boulevard within the study area, where Rapid Line 734 and the Local Line 234 do not typically meet the on-time performance goal. On San Fernando Road, the Local Lines 94, 224, 230 and 234 generally perform below the goal within the study area.

On-time performance tends to be slightly better when it is measured across the entirety of these Rapid and Local lines. For instance, the on-time performance for the entire length of Line 233 along Van Nuys Boulevard is approximately 77 percent – still below the 80 percent on-time performance goal, but an improvement over the on-time performance within the study area specifically. This implies that congestion and subsequent poor on-time performance is especially severe in the study area, which may lead to the potential reductions in reliability along other portions of the routes outside of the study area.

The longer travel times, slower speeds, and on-time performance during the AM and PM peak hours support the need for improved transit service in the Van Nuys Boulevard and Sepulveda Boulevard corridors.

Purpose: Provide additional transit options in an area with a large transit dependent population, including the disabled, and high transit ridership.

Supporting Needs: The Van Nuys Boulevard corridor has the seventh highest total transit boardings on the Metro Bus system. This corridor is served by Rapid Line 761 and Local Line 233, which have combined passenger boardings that are the second-highest in the San Fernando Valley (24,000), with the Metro Orange Line boardings (30,000) at a slightly higher number.

Boardings and alightings along Van Nuys Boulevard are highest between Nordhoff Street and the Metro Orange Line, and between Laurel Canyon Boulevard and Glenoaks Boulevard. The demand in passenger boardings is constituted by both transit dependent and discretionary riders. The overall population density and the transit dependent population density are both more than twice as high in the study area as in the urbanized area of the County as a whole:

- The study area average of 0.53 zero-vehicle households per acre is 77 percent higher than the 0.30 County average.
- The study area average transit dependent population of 7.04 persons per acre is approximately 120 percent higher than the 3.21 County average.
- The study area average of 2.26 adult persons below the poverty line per acre is over two times the 1.08 County average.

Although population density and transit dependent population characteristics are expected to stay the same or improve slightly, study area population is expected to increase by almost 12 percent by the year 2040, and area employment will increase by approximately 15 percent. With the increase in population and employment growth, it is likely that there will be an increase in bus crowding.

The large number of existing riders within the Van Nuys and Sepulveda Boulevard corridors, and the projected population growth indicates that an especially large market is available if transit is further improved in the study area. There will be future needs for increased and upgraded transit services, as populations increase, and transit dependent factors related to age, the concentration of persons

without private transportation, and the number of adults below the poverty line are expected to remain higher than County averages. The additional transit option that would be provided by the project will serve existing and future riders well.

Purpose: Encourage modal shift to transit in the eastern San Fernando Valley, thereby improving air quality.

Supporting Needs: Standards for many of the criteria pollutants monitored within the east San Fernando Valley have been exceeded multiple times during each of the previous three years of collected data (2009 – 2011). The traffic analysis indicates that travel speeds, vehicular delay and congestion will worsen by 2040. This will result in increased gas consumption and vehicle emissions in the study area. The increase in delay at the study intersections is expected to increase vehicle emissions and fuel consumption.

To address climate change and greenhouse gas (GHG) emissions, thus air quality in California, two major initiatives were passed. Assembly Bill 32 (AB 32) was passed in 2006 with the aim of reducing GHG to 1990 levels by 2020. In 2008, Senate Bill 375 (SB 375) was passed to enhance the State's ability to reach the goals set forth in AB 32 via the promotion of planning more sustainable communities through integrated land use and transportation strategies. As a result of these policies, it is imperative that state and local agencies work toward a solution.

A primary project objective is to encourage a mode shift from automobile to transit, which would result in a reduction of mobile-source air pollutant emissions. The East San Fernando Valley Transit Corridor Project would provide transportation and transit improvements that could potentially include BRT, Low-Floor LRT/Tram, or Light Rail Transit (LRT). Each of these transit modes would provide the study area with high- quality transit service, where currently there are limited competitive alternatives to driving. All existing corridor services, excluding the Metro Orange Line running on a guideway, are slowed by mixed-flow traffic and traffic signal operations.

As such, the proposed project would provide the opportunity for auto drivers to choose low-emission transit modes to serve their transportation needs. By shifting mode share from personal automobiles to transit, fewer automobile trips would occur on area roadways, which would reduce the amount of time vehicles idle in severely congested traffic. To the extent that the proposed project can offer an alternative to automobile travel, mobile-source air pollutant emissions would be reduced.

1.4.3 Project Objectives

The project objectives reflect Metro's mission to meet public transportation and mobility needs for transit infrastructure while also being a responsible steward of the environment and being considerate of affected agencies and community members when planning a fiscally sound project. The objectives are described below:

- Provide new service and/or infrastructure that improves passenger mobility and connectivity to regional activity centers;
- Increase transit service efficiency (speeds and passenger throughput) in the project study area; and
- Make transit service more environmentally beneficial via reductions in greenhouse gas emissions in the project study area.