1.0 PURPOSE AND NEED

1.1 Introduction

The San Fernando Valley North-South Transit Corridor Study is being undertaken by the Los Angeles County Metropolitan Transportation Authority (MTA) to assess the need for improvements in north-south transit service in the San Fernando Valley and to evaluate a wide range of alternative improvements. The study area covers the area illustrated in Figure 1-1, generally extending from Ventura Boulevard on the south to the City of San Fernando and Sylmar community on the north, and from Glenoaks Boulevard-Vineland Avenue on the east to Topanga Canyon Boulevard on the west. It includes only the portions of the San Fernando Valley within the Cities of Los Angeles and San Fernando.

This study will follow the procedures for a Regionally Significant Transportation Investment Study (RSTIS), formerly known as a Major Investment Study (MIS), so that recommended improvements may be eligible for potential federal funds as well as state and local funds. The RSTIS process begins with the identification and detailed assessment of the need for a transportation improvement. It then evaluates a range of improvement alternatives that would satisfy mobility needs, complemented by a significant level of community participation in the evaluation process, and results in a recommendation for a locally preferred alternative (LPA). The RSTIS will evaluate future conditions in the year 2025 if nothing is implemented beyond planned improvements (the No Project Alternative). It will also evaluate lower-cost transportation systems management (TSM) improvements as well as physical improvements and transit service enhancements on one or more north-south corridors.

The San Fernando Valley (SFV) is served by the MTA bus transit system and the Metro Red Line subway. Other municipal carriers, such as Santa Clarita, Antelope Valley, Simi Valley, VISTA Conejo Connection, and LADOT DASH and Commuter Express, also provide bus transit services in and through the study area. Similarly, the Southern California Regional Rail Authority (SCRRA) operates two Metrolink commuter rail lines through the San Fernando Valley, one of which, the Ventura County Line is shared with Amtrak service. In 2000, the MTA initiated the Ventura Boulevard Metro Rapid Bus service which provides an east-west improved transit connection between the Universal City Red Line Station and the Warner Center Transit Center in Woodland Hills. The San Fernando Valley Metro Rapid Transitway project is scheduled to begin service in 2005 along a dedicated busway on the MTA-owned, former Southern Pacific (Burbank-Chandler) right-of-way, providing another improved east-west transit connection between the North Hollywood Metro Red Line station and Warner Center, connecting various activity centers. This RSTIS will seek ways to enhance north-south bus service in the San Fernando Valley to better connect with all these transit services and enhance mobility for Valley residents and workers.

1.2 Background And History

1.2.1 San Fernando Valley Transit Restructuring

The San Fernando Valley Transit Restructuring study was undertaken in 1993-1994 with the basic objectives of (a) responding to the demographic and employment changes

Figure 1-1
San Fernando Valley Regional Context

Source: Meyer, Mohaddes Associates

that had occurred during the previous decade and their attendant impacts on travel demand; (b)position the SFV transit network to take maximum advantage of upcoming rail improvements including both the Red Line heavy rail and Metrolink commuter rail services; and (c) improve the efficiency and effectiveness of public transit in the San Fernando Valley. The study proposed a number of service improvements including:

- Transition from a grid-based network to a hybrid system with hubs at key locations: new or improved ones at Warner Center, North Hollywood and Universal City Metro Red Line stations, and California State University Northridge (CSUN).
- Maximize effective and efficient linking of north-south with east-west cross-Valley bus lines to reduce passenger transfers.
- Introduce community and neighborhood services as replacements for regional services which provide ineffective short distance travel mobility.
- Streamline and consolidate both MTA and LADOT limited-stop and express services into more effective connectors with the rail system by providing for improved north-south and east-west travel.
- Enhance transit connections to the Metrolink system and activity centers.

MTA and the City of Los Angeles have spent the last eight years successfully implementing the majority of the recommendations from this study. Additional work is underway as part of the new Service Sector operation with most of the remaining recommendations, including streamlining limited-stop and express services and the replacement of some standard bus services with small bus community shuttles where appropriate, being implemented in the near term.

1.2.2 Metro Rapid Bus Program

The MTA Board approved the Metro Rapid Demonstration Project in March 1999 based on the findings and recommendations of the Regional Transit Alternatives Analysis (RTAA) that identified opportunities for the deployment of arterial bus rapid transit (BRT) service. One of the two selected demonstration corridors was Ventura Boulevard in the San Fernando Valley. The other was the Wilshire-Whittier corridor, along Wilshire Boulevard from the City of Santa Monica, through downtown Los Angeles, extending into East Los Angeles along Whittier Boulevard. Metro Rapid service was implemented in June 2000 together with the Metro Red Line extension to the San Fernando Valley and operated as a continuation of rapid transit from the Universal City Red Line Station along Ventura Boulevard. The service has been highly successful with overall corridor ridership climbing by nearly 27 percent with over 1/3 of the increase coming from new transit riders.

The Metro Rapid Bus service entails limited stops at approximately one-mile spacing, enhanced bus stops, and transit signal priority through signalized intersections. The buses travel in mixed flow with automobile traffic. The demonstration clearly showed that the arterial BRT service concept could be delivered efficiently and reliably and that there was a strong latent demand for such transit services. Based on this successful demonstration, the MTA Board has approved the expansion of the Metro Rapid

program from the two original lines to a total of 25 lines. A five-year implementation plan is currently in development that includes north-south Metro Rapid lines on Van Nuys Boulevard and on San Fernando Road/Lankershim Boulevard.

1.2.3 San Fernando Valley Metro Rapid Transitway Project

The San Fernando Valley (SFV) Metro Rapid Transitway project (formerly referred to as the East-West Transitway) will consist of a 14-mile dedicated busway from the North Hollywood Red Line Station to Warner Center, operating primarily on the MTA-owned, Burbank-Chandler railroad right-of-way. There will be 13 stations along the transitway at approximately one-mile intervals. The stations will be similar in design to a light rail station, with canopies over the platforms, seating, lighting, bicycle parking, and advance fare collection machines. Five of the 13 stations will have park-and-ride lots with a total of over 3,000 parking spaces along the transit corridor. The Sepulveda station will have the largest parking facility with approximately 1,200 spaces and convenient access to the San Diego Freeway. The SFV Metro Rapid Transitway is scheduled to open for service in 2005. Buses operating in this dedicated right-of-way will experience reduced delays due to traffic congestion. The limited stops and transit signal priority along the corridor will decrease travel time and will allow buses to make this cross-valley trip in virtually the same travel time both today and in 2020 because of the dedicated busway. In 2020, buses are expected to run at approximately three- to five-minute headways in the peak hours, and there is the potential for buses to enter the busway at mid-point stations and/or travel the length of the busway with limited stops. In addition, coordinated bus feeder service will be provided to the SFV Metro Rapid Transitway through enhanced headways on existing north-south bus routes along the streets that have Transitway stations. The SFV Metro Rapid Transitway project is illustrated in Figure 1-2. Extensive landscaping, pedestrian and bicycle facilities, including a bike and pedestrian path, will also be provided along the former railroad right-of-way as the urban design component of the East-West project.

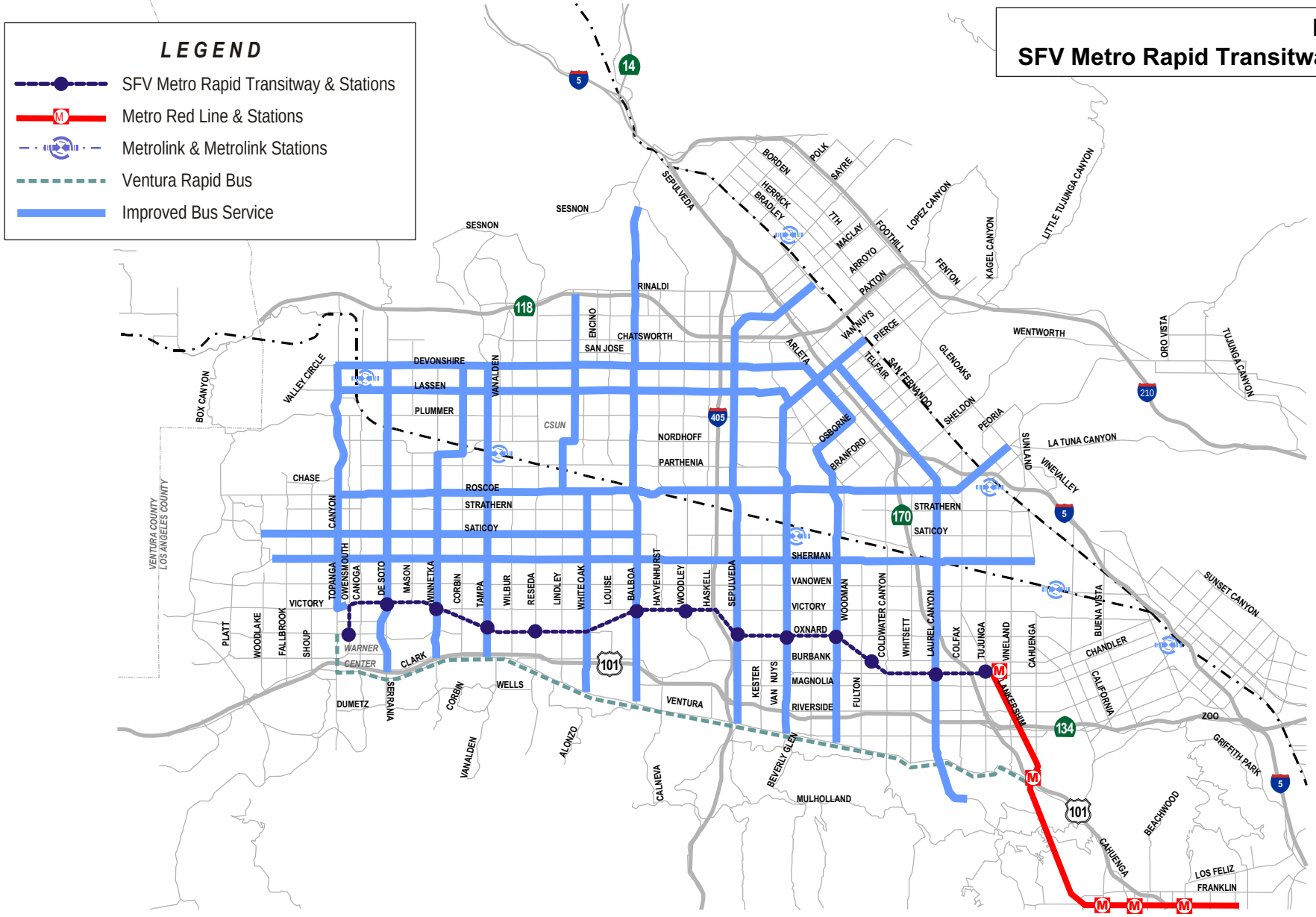
1.2.4 State Legislation

State legislation has been passed which provides funding for a north-south transit corridor in the San Fernando Valley. The State of California's Transportation Congestion Relief Program (TCRP) and the Governor's 2001 Transportation Initiative earmarked $100 million to "*build a North/South corridor bus transit project that would interface with the East/West Burbank-Chandler corridor project and with the Ventura Boulevard Rapid Bus project.*" Due to the state budget situation in 2003, these funds are no longer currently available. The evaluation of alternatives in this RSTIS takes this legislation into consideration, in as much as the preferred corridor(s) for a north-south busway must connect with the existing Ventura Boulevard Metro Rapid Bus and the San Fernando Valley Metro Rapid Transitway service in order to meet state funding requirements under the TCRP, should its funding be restored in the future.

1.2.5 Transit Sectors

The MTA recently began operating its transit service on a service sector pattern which is designed to bring the operation closer to the customer and to the communities served. It is hoped that this will help make MTA service more responsive to customers' needs, improve community satisfaction and improve the image of the agency. If successful,

Figure 1-2
SFV Metro Rapid Transitway Project



Source: San Fernando Valley East-West Transit Corridor Final EIR, February 2002

the service sectors will provide high-quality, on-time, safe and efficient customer-responsive service at a cost that saves money for the taxpayers.

The MTA service area has been divided into five sectors; the San Fernando Valley, the San Gabriel Valley, the Central City and Westside, the South Bay and the Gateway Cities in the southeastern part of Los Angeles County. Each of these areas was identified by its cohesiveness as a group of communities, as well as by the "trip generators" and transit service patterns. The service sectors manage the Tier Two and Three types of transit service. Metro Rail, along with the Metro Rapid Bus and Express Bus lines, are inter-regional in nature. Called Tier One services, they will continue to be directed from MTA Headquarters. Tier Two services are local routes, which are now managed at the sector level. Similarly, Tier Three services are local shuttle-type services, are also coordinated in the sectors. The service sectors semi-autonomous areas with a general manager who has the authority to shape service, reroute bus lines, and conduct the sector's business in the most appropriate way to serve the area. The sector general mangers report to local governance boards. Sector management offices, are located within the service area, include service scheduling and planning personnel, security, public affairs, recruiting, finance and administrative employees. Their duties involve local oversight of bus routes, types of service to be offered, service frequency and hours of operation, among others.

The San Fernando Valley Sector staff are participating in this RSTIS effort and will coordinate their public outreach efforts with the RSTIS outreach program. This will help to insure that the RSTIS is coordinated with all of the other transit planning activities occurring simultaneously in the San Fernando Valley.

1.3 Setting

The need for a transportation improvement can be driven by a number of factors. These include relieving congestion, providing transportation options to persons without a car, enhancing connectivity of transportation facilities, better serving land uses and public and private activity centers, increasing the efficiency of transit services, or making transit service more accessible and aesthetically pleasing to use. This section addresses the existing and future transportation conditions in the San Fernando Valley, which indicate that improvements to north-south transit service are needed.

1.3.1 Regional Context

There are several regional transportation facilities existing or planned in the San Fernando Valley. One of the purposes of a North-South Transit corridor would be to provide connectivity to these facilities.

Inter-County Transit Connections

Regional transportation services, which extend between counties, include the inter-county commuter rail network, Metrolink, operated by the Southern California Regional Rail Authority (SCRRA) and Amtrak service, which operates daily trains between San Diego and northern California, but which also offers more frequent service between San Diego and Santa Barbara. Two Metrolink lines traverse the San Fernando Valley, the Ventura County Line and the Antelope Valley Line. The Ventura County Line extends diagonally across the Valley from Chatsworth to Burbank. The Antelope Valley

Line parallels San Fernando Road in the eastern portion of the Valley. The Amtrak route uses the same rail line as the Ventura County Line. The Metro Rail and Rapid Bus systems in Los Angeles also carry longer-distance trips throughout the County. Figure 1-3 illustrates these regional transit facilities. The majority of the regional transit service in the San Fernando Valley is generally east-west oriented. Additional high-capacity north-south service, beyond the planned Van Nuys Metro Rapid Bus, would greatly enhance the connectivity of large sections of the Valley to the regional transportation system. Connections to other bus transit operators are discussed later in Section 1.3.6.

MTA Long Range Plan

The *2001 Long-Range Transportation Plan for Los Angeles County* prepared by the MTA, looks at the transportation needs of the County over the next twenty-five years. It includes recommendations for a Baseline Plan, which includes projects already approved by the MTA Board, a Constrained Plan, which includes projects that can be funded with funds available for allocation over the next twenty-five years, and a Strategic Plan, that includes high priority projects that would be funded if more revenue becomes available. The San Fernando Valley North-South Transit Corridor is included in the Constrained Plan without the identification of a specific route, indicating that policy makers see a need for a high-capacity north-south transit project in the Valley. In addition to the North-South Transit Corridor, the Constrained Plan includes 22 additional Metro Rapid Bus routes and the Strategic Plan includes 14 additional Metro Rapid routes. In the San Fernando Valley, beyond the planned Van Nuys Boulevard and Lankershim-San Fernando Road Metro Rapid Bus routes, candidate lines include Roscoe Boulevard and Vineland Avenue. A Five-Year Implementation Plan for Metro Rapid Service was approved by the MTA Board in September, 2002. It includes funding for the Van Nuys and San Fernando-Lankershim routes. The Roscoe Boulevard route was not approved for Phase II funding by the MTA Board, however.

Regional Transportation Plan

The 2001 Regional Transportation Plan (RTP) Update, *Community Link 21,* was prepared by the Southern California Association of Governments (SCAG) and adopted by the Regional Council. It is currently being updated and will be approved in 2004. It is consistent with the MTA Long Range Plan, as far as planned transit projects in the San Fernando Valley. In addition, the RTP also proposes a Metro Rapid Bus route on the San Diego Freeway, extending south from the Ventura Metro Rapid Bus.

1.3.2 Demographics

Population and Employment Growth Trends

Los Angeles County is the most populous county in California. The County is estimated to have had approximately 9.5 million residents in 2000, and is anticipated to have approximately 12.3 million residents in 2025. This represents a growth of over 29 percent over 25 years.

The City of Los Angeles is the second most populous city in the United States, and the most populous in the State of California. Los Angeles was home to approximately 3.7 million people in the year 2000, according to the 2000 Census, and is predicted to grow to over 4.7 million people by the year 2025, representing 28 percent growth in that 25 year time frame.

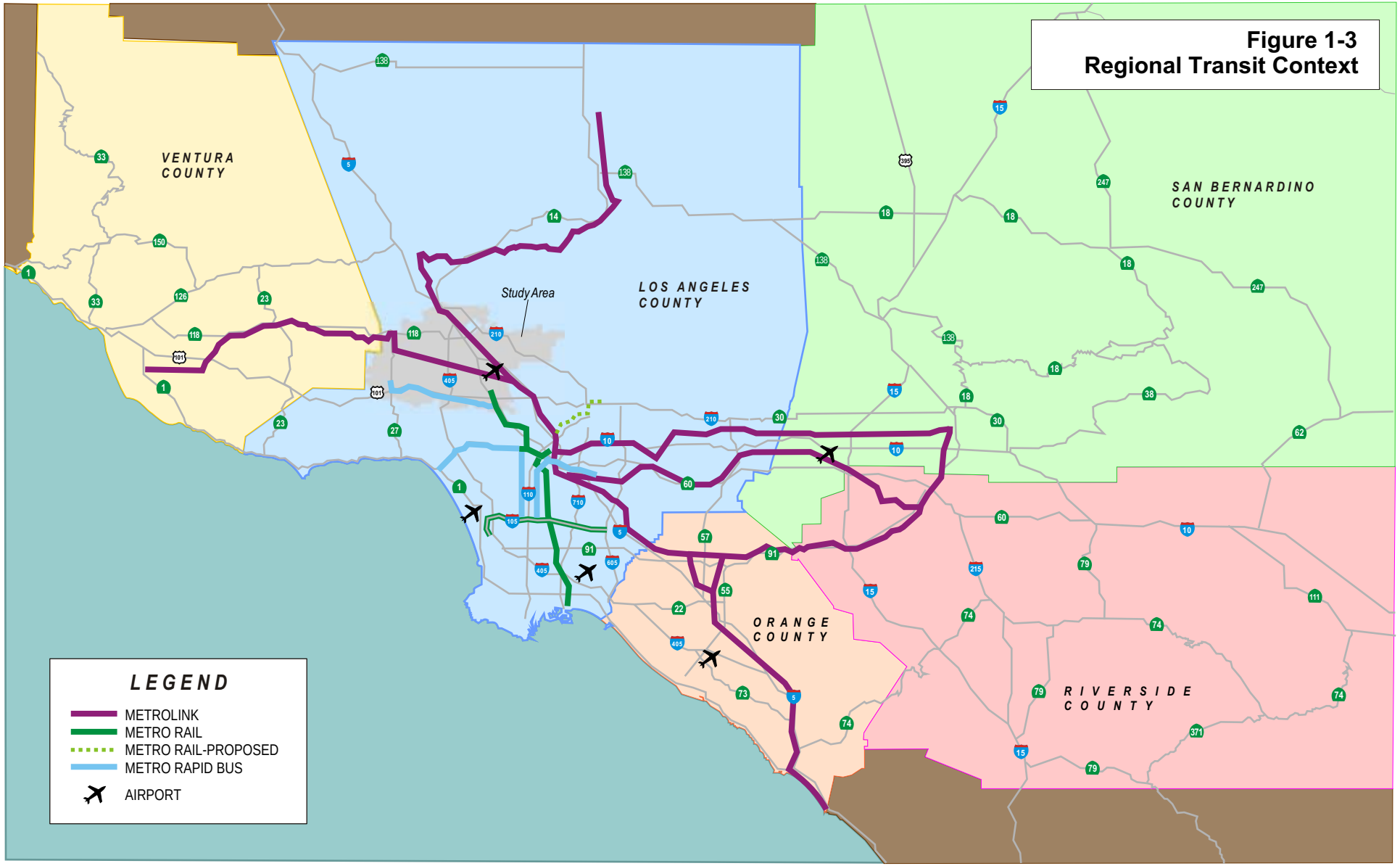


Figure 1-3
Regional Transit Context
VENTURA COUNTY
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
ORANGE COUNTY
RIVERSIDE COUNTY
Study Area
LEGEND
METROLINK
METRO RAIL
METRO RAIL-PROPOSED
METRO RAPID BUS
AIRPORT

The San Fernando Valley was originally developed as an agricultural area. It became a suburb of Los Angeles as an affordable living option for workers commuting into downtown Los Angeles and elsewhere in the County. In the 1980's, major employment centers located in the Valley, however, many residents continued to commute to their jobs while residents from other areas began commuting into the Valley. This resulted in a very large population and rapid job growth in the Valley, and a heavy pattern of commuting throughout the area.

Table 1.1 shows that in the year 2000, 1,317,334 people lived in the San Fernando Valley. By 2025, this area is predicted to have a population of 1,668,549 people, an increase of over 351,000 people or approximately 31 percent.

Employment in the San Fernando Valley is also expected to grow steadily as well (see Table 1.1). In 2000, there were 555,960 jobs in the Valley. By the year 2025, the numbers of jobs in the Valley is expected to have grown to 647,989, a 17 percent increase.

Table 1.1: Population and Employment Changes from 1997 to 2025

Area	1997	2000	2005	2010	2015	2020	2025	Percent Growth 1997-2025
Population								
San Fernando Valley	1,278,281	1,317,334	1,382,728	1,446,486	1,510,047	1,591,567	1,668,549	31%
City of Los Angeles	3,700,895	3,809,860	3,992,073	4,148,566	4,306,692	4,523,452	4,742,540	28%
Employment								
San Fernando Valley	555,462	555,960	579,593	603,475	619,773	631,158	647,989	17%
City of Los Angeles	1,751,951	1,762,085	1,833,650	1,901,025	1,946,942	1,979,969	2,023,641	16%

Source: Projections based on Data from the Southern California Association of Governments' (SCAG) *2001 Regional Trasnportation Plan, SCAG, April 2001.*

In summary, the San Fernando Valley and the City of Los Angeles, have been growing steadily for the past several years and are expected to continue to do so throughout the next 23 years, with growth in the Valley outpacing the City as a whole. The potential North-South transit corridors are in close proximity to a substantial fraction of the population of the San Fernando Valley, and will only grow in importance as the population and employment of the San Fernando Valley grows.

Figures 1-4 through 1-7 illustrate additional socioeconomic data that provide indicators of potential transit ridership. Figure 1-4 shows population density by census tracts. The darker colors indicate a higher concentration of population. The highest population densities are concentrated in the Panorama City and North Hills areas along Sepulveda Boulevard and Van Nuys Boulevard, but there are also concentrations of population density along Vineland Avenue, Lankershim Boulevard and in Canoga Park and Tarzana. These are the same general areas where persons under 15 and over 64(Figure 1-5), those most likely to need to use transit because they cannot drive, are concentrated.

Employment densities are illustrated in Figure 1-6. The areas with the highest densities of jobs are generally located in the southern half of the Valley, in Warner Center, the

Media District in the Universal City-Burbank area and along Ventura Boulevard. There is also a concentration of jobs along the Metrolink line in the center of the Valley, including the Van Nuys government center, industrial areas west of the I-405 and in the Chatsworth area. North-south transit improvements would help residents of the northern portions of the Valley get to the employment centers to the south.

Figure 1-7 illustrates data from the Southern California Association of Governments (SCAG) travel demand forecasting model. It shows the Traffic Analysis Zones (TAZs) in the San Fernando Valley with a high transit mode split (percentage of trips made on transit). The areas of high transit usage are most heavily concentrated in the East Valley, including the City of San Fernando. There are also areas of high transit usage in the West Valley along Topanga Canyon Boulevard and along Reseda Boulevard and around CSUN.

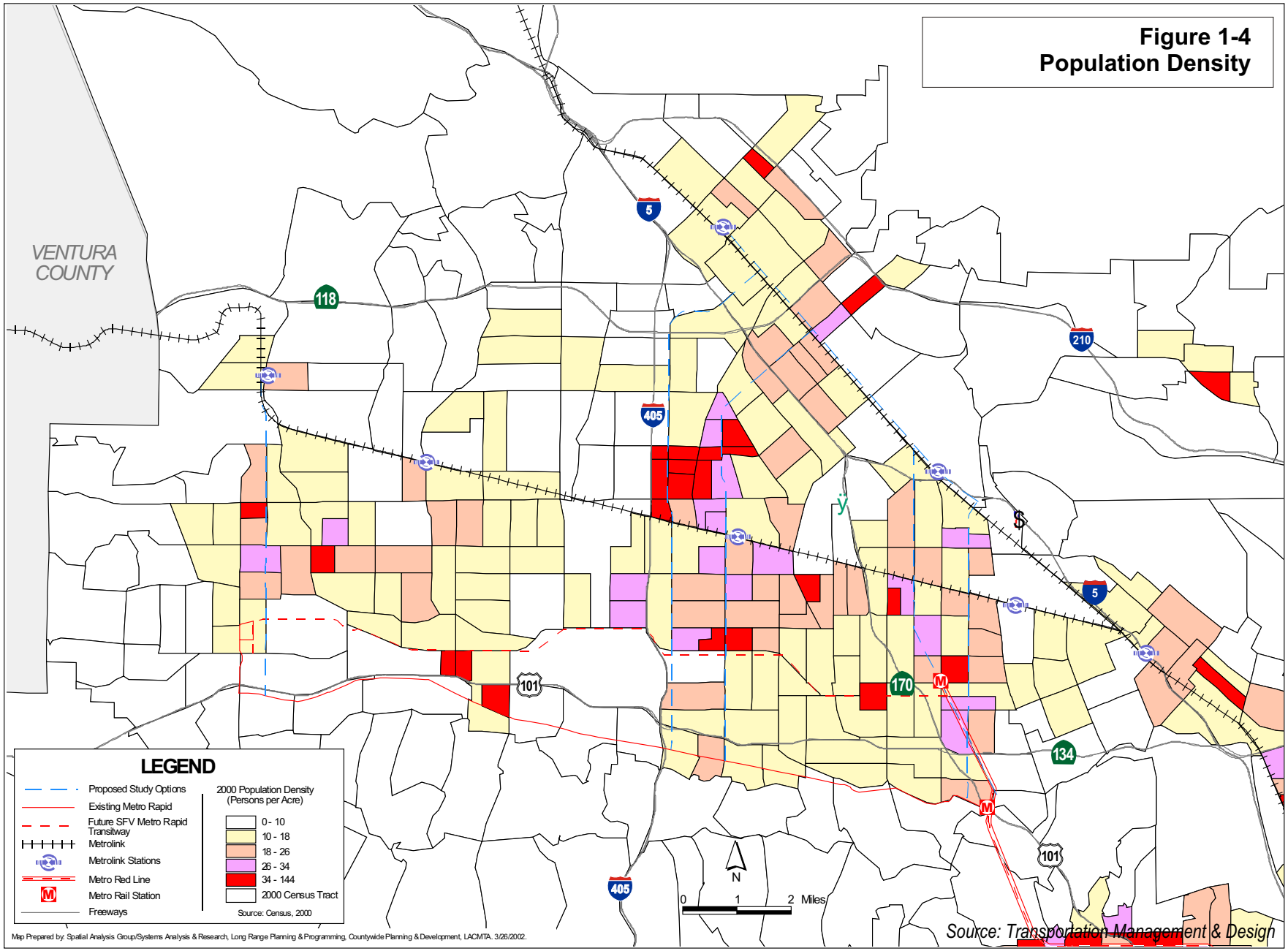
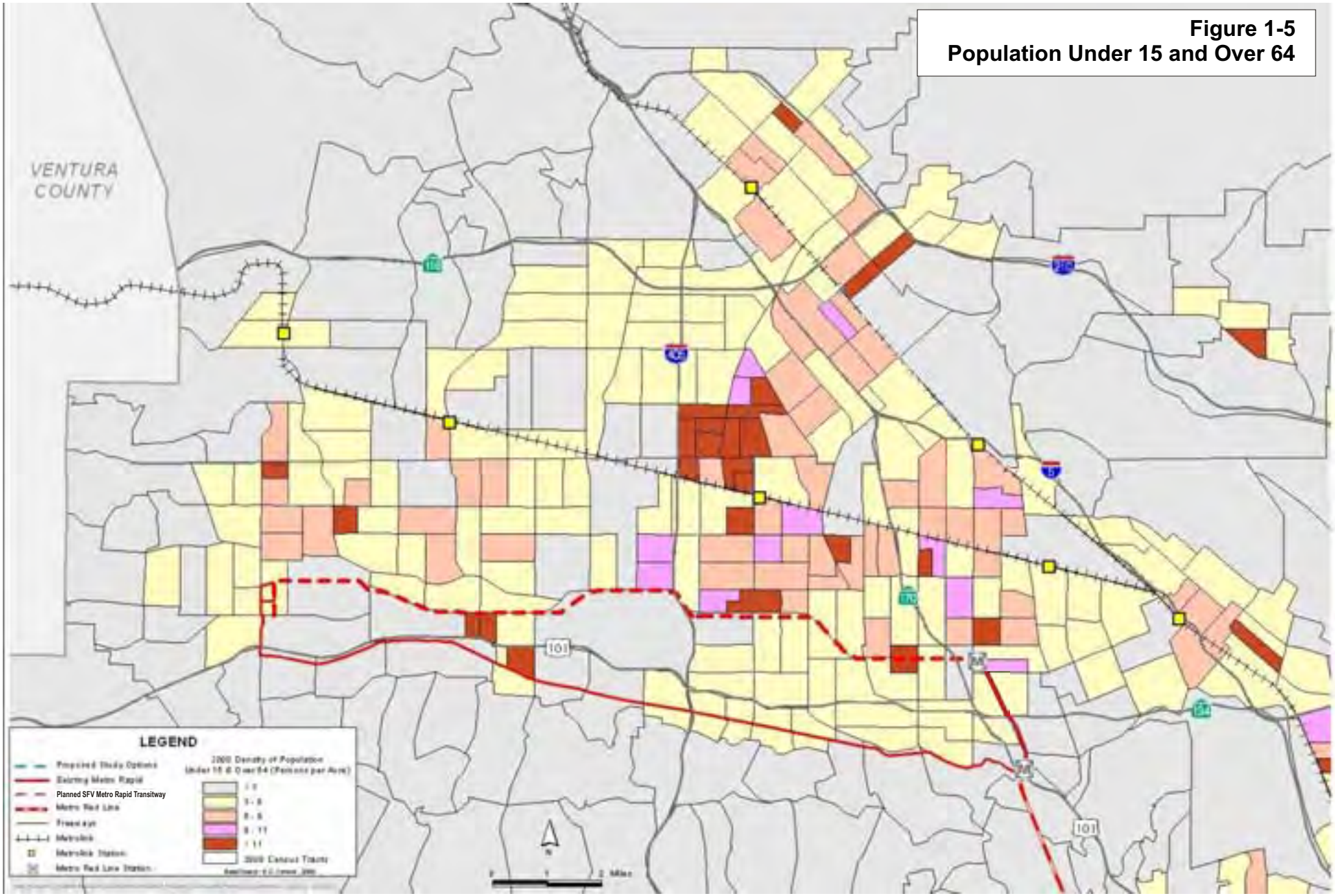


Figure 1-4
Population Density
VENTURA COUNTY
118
5
405
210
101
170
134
LEGEND
Proposed Study Options
Existing Metro Rapid
Future SFV Metro Rapid Transitway
Metrolink
Metrolink Stations
Metro Red Line
Metro Rail Station
Freeways
2000 Population Density (Persons per Acre)
0 - 10
10 - 18
18 - 26
26 - 34
34 - 144
2000 Census Tract
Source: Census, 2000
N
0 1 2 Miles
Map Prepared by: Spatial Analysis Group/Systems Analysis & Research, Long Range Planning & Programming, Countywide Planning & Development, LACMTA. 3/26/2002.
Source: Transportation Management & Design

Figure 1-5
Population Under 15 and Over 64



Source: TMD, October 2002

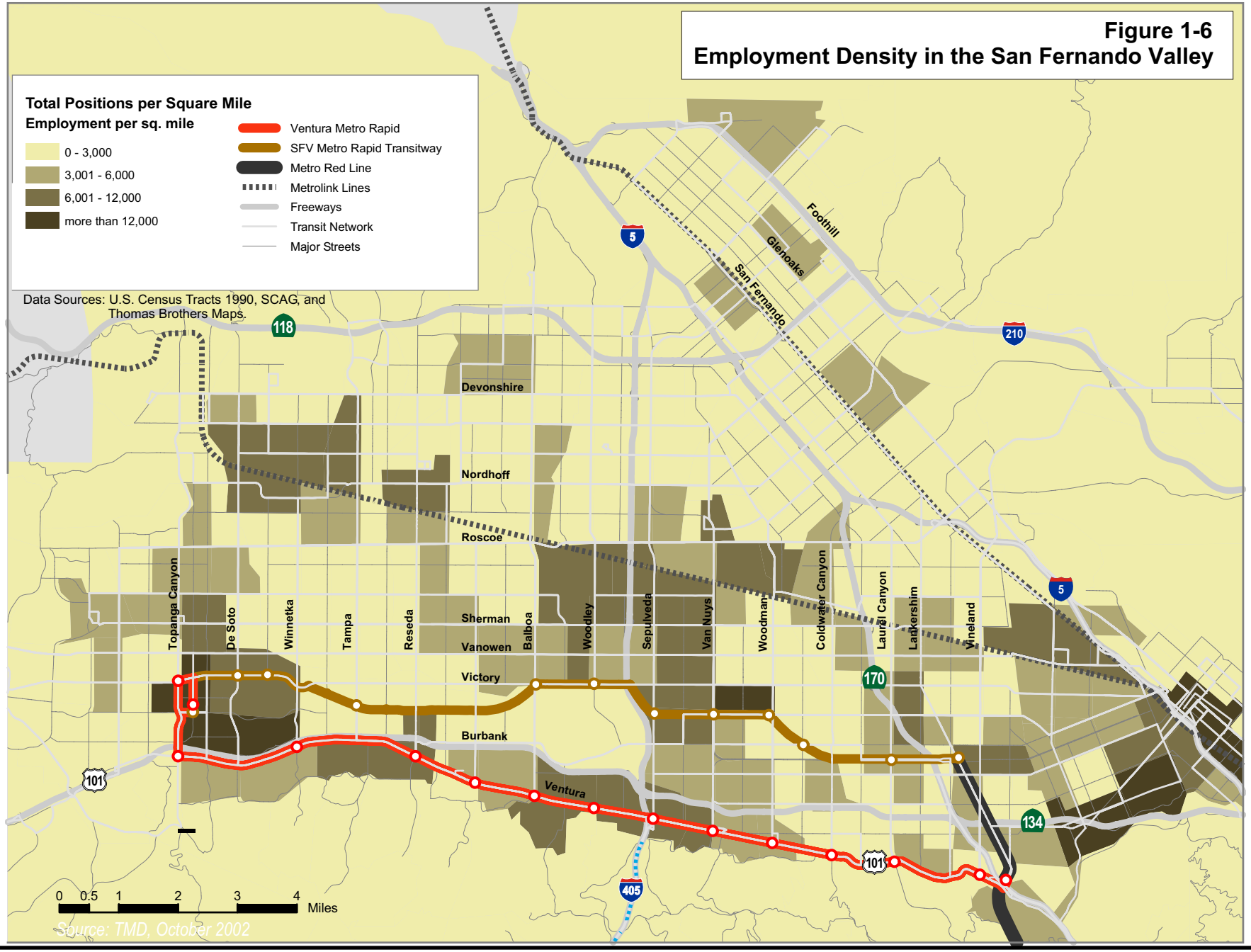
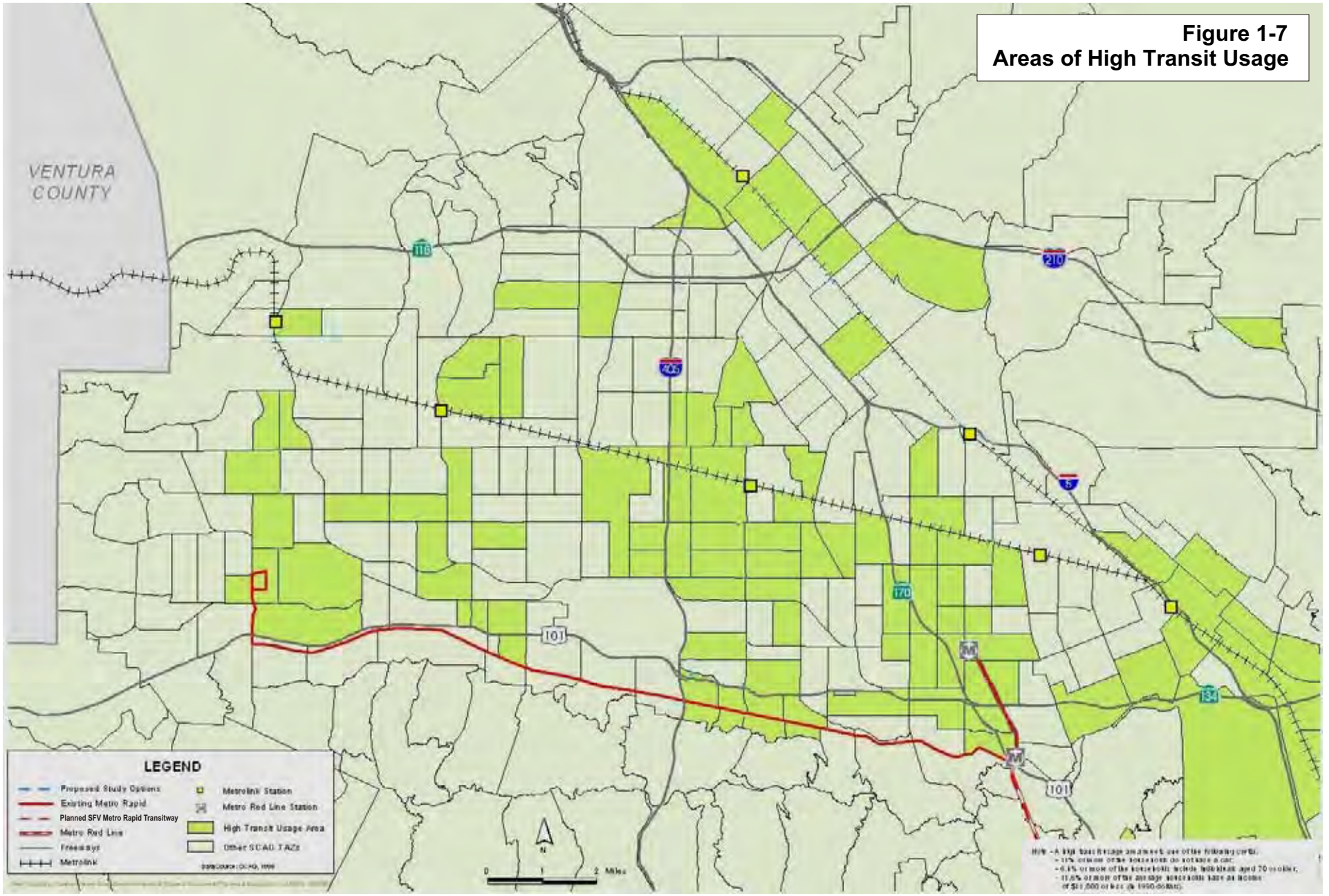


Figure 1-6
Employment Density in the San Fernando Valley
Total Positions per Square Mile
Employment per sq. mile
0 - 3,000
3,001 - 6,000
6,001 - 12,000
more than 12,000
Ventura Metro Rapid
SFV Metro Rapid Transitway
Metro Red Line
Metrolink Lines
Freeways
Transit Network
Major Streets
Data Sources: U.S. Census Tracts 1990, SCAG, and Thomas Brothers Maps.
Foothill
Glenoaks
San Fernando
Devonshire
Nordhoff
Roscoe
Sherman
Vanowen
Victory
Burbank
Ventura
Topanga Canyon
De Soto
Winnetka
Tampa
Reseda
Balboa
Woodley
Sepulveda
Van Nuys
Woodman
Coldwater Canyon
Laurel Canyon
Lankershim
Vineland
118
5
210
170
134
101
405
0 0.5 1 2 3 4 Miles
Source: TMD, October 2002

Figure 1-7
Areas of High Transit Usage



Source: TMD, October 2002

1.3.3 Activity Centers

Major activity centers are potential good attractors of transit services due to their employment density, relatively high traffic congestion, cost of parking and occasional pedestrian amenities. One of the purposes of the North-South Transit Corridor will be to provide high-capacity service to as many of these activity centers as possible. The following is a list of different types of major activity centers in the San Fernando Valley study area, which are described in the following paragraphs:

Medical Facilities

- Olive View Medical Center
- Columbia-West Hills Medical Center
- Encino-Tarzana Medical Center and surrounding areas
- Granada Hills Community Hospital
- Hollywood Community Hospital, Van Nuys
- Kaiser Hospital, Panorama City
- Kaiser Hospital, Woodland Hills
- Mission Community Hospital
- Northridge Hospital Medical Center
- Veterans Administration Hospital, Panorama City
- Pacifica Hospital of the Valley
- Sherman Oaks Hospital
- Valley Presbyterian Hospital

Colleges & Universities

- California State University Northridge
- Woodbury University
- Los Angeles Mission College
- Los Angeles Valley College
- Pierce College

Airports

- Van Nuys Airport
- Burbank Airport
- Whiteman Airpark

Regional Shopping Centers

- Fallbrook Mall
- Westfield Shoppingtown Topanga Plaza
- Promenade Mall
- Northridge Fashion Center
- Sherman Oaks Galleria
- Sherman Oaks Fashion Square
- Panorama Mall
- Valley Plaza
- The “Plant”
- Laurel Plaza

Entertainment/Recreational Centers

- Sepulveda Basin Recreational Center
- Hansen Dam Recreation Area
- Universal Studios/Amphitheater/City Walk
- San Fernando Mission

Major Employment Centers

- Warner Center
- Van Nuys Government Center & Commercial Corridor
- Ventura Boulevard Corridor (Encino-Sherman Oaks)
- Chatsworth industrial center
- City of San Fernando Government Center
- North Hollywood District
- I-405/Roscoe area (Busch Brewery, Galpin Ford dealership)
- Van Nuys Boulevard Auto Mall
- Universal City/Media District

Major Transit Hubs

- Warner Center Transit Center
- Chatsworth Metrolink Station
- Northridge Metrolink Station
- Van Nuys Metrolink/Amtrak Station
- Burbank Airport Metrolink Station
- Sylmar/San Fernando Metrolink Station
- Sun Valley Metrolink Station
- North Hollywood Metro Red Line Station
- Universal City Metro Red Line Station
- Future East-West BRT Sepulveda Park-and-Ride Station
- Van Nuys Flyaway

There are thirteen large medical centers located throughout the San Fernando Valley. Los Angeles County Olive View – UCLA Medical Center is the largest and it is located north of the Sylmar Community. Other large medical centers include: Columbia-West Hills Medical Center, Encino-Tarzana Regional Medical Center, Granada Hills Community Hospital, Hollywood Community Hospital – Van Nuys, Kaiser Foundation Hospital - Panorama City, Kaiser Foundation Hospital – Woodland Hills, Mission Community Hospital, Northridge Hospital Medical Center, Northridge Hospital Medical Center – Sherman, Pacifica Hospital of the Valley, Sherman Oaks Hospital and Health Center, and Valley Presbyterian Hospital. Medical centers represent concentrations of employment, but they also represent areas where many visitor trips are made, often via transit.

There are five colleges and universities located within the San Fernando Valley. California State University, Northridge is the largest and it is located in the northwest section of the Valley. Woodbury University, a private college, is located in the community of Sun Valley on the northwest boundary of the City of Burbank. Los Angeles Mission College is located in the community of Sylmar. Los Angeles Pierce College is located near Warner Center in the west valley, and Los Angeles Valley

College is located in the Community of North Hollywood in the eastern portion of the Valley. Both Los Angeles Valley College and Pierce College are located adjacent to stations on the planned SFV Metro Rapid Transitway, so transfers to potential North-South transit corridors could significantly increase the transit accessibility of these colleges.

There are three airports within the San Fernando Valley, the largest being the Burbank-Glendale-Pasadena Airport located in northwest Burbank in the eastern portion of the Valley. The Van Nuys Airport is located in the western portion of the Valley near the communities of North Hills and Northridge. Adjacent to the Van Nuys Airport on Woodley Avenue is the Van Nuys Flyaway that serves as a park-and-ride facility for LAX Airport. Express buses connect the Flyaway site to LAX. Whiteman Airpark is in the north-central section of the Valley in the community of Pacoima.

There are ten large shopping centers located throughout the San Fernando Valley. They include: Fallbrook Mall, Fashion Square - Sherman Oaks, Laurel Plaza, Northridge Fashion Center, Panorama Mall, Promenade at Woodland Hills, Sherman Oaks Galleria, Topanga Plaza, Valley Plaza, The "Plant", and Westfield Shoppingtown Topanga.

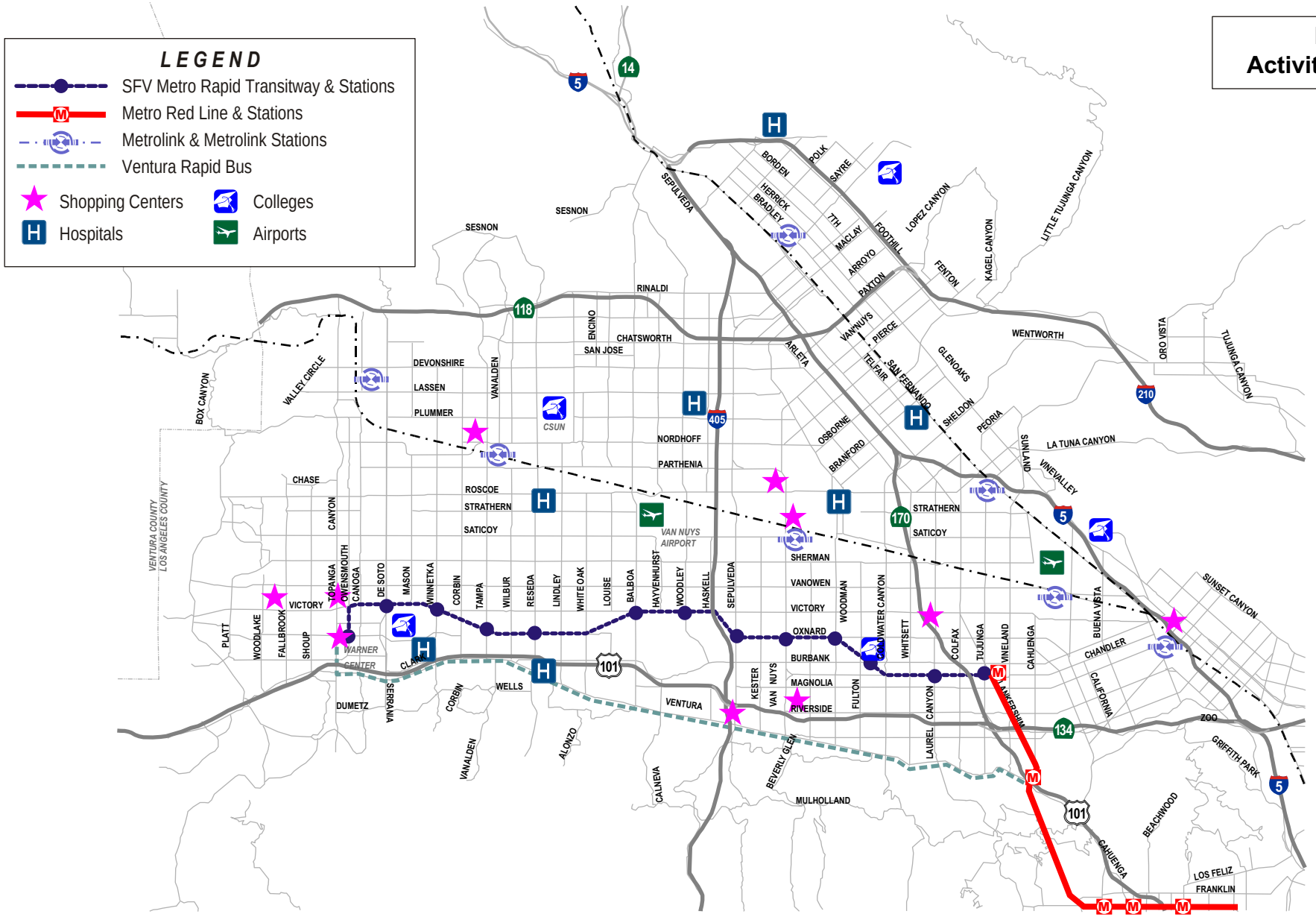
Entertainment-related businesses within the San Fernando Valley include some of the largest motion picture and television studios in the United States. They represent major employment concentrations as well as destinations for recreation trips and tourist visits. The entertainment venues include Universal Studios, the Universal Amphitheater, and Universal Citywalk within the Universal City section of Los Angeles County. The CBS Studio Center located in the Community of Studio City. Warner Bros Studios, Disney Studios, and NBC Studios are located in the Media District of the City of Burbank.

The Sepulveda Dam Recreation Area and Hansen Dam Recreation Area are also major recreational destinations. Another point of interest that should be considered an activity center is the San Fernando Mission in the Mission Hills Community of the City of Los Angeles.

Figure 1-8 illustrates the dispersed nature of these activity centers. It would be difficult to serve all of them with high-capacity transit service, but there is a clear need for north-south service to connect as many of these activity centers as possible to the existing and planned east-west transit facilities.

The employment centers listed above also constitute activity centers and are discussed in the next section of this chapter.

Figure 1-8
Activity Centers



Source: Meyer, Mohaddes Associates

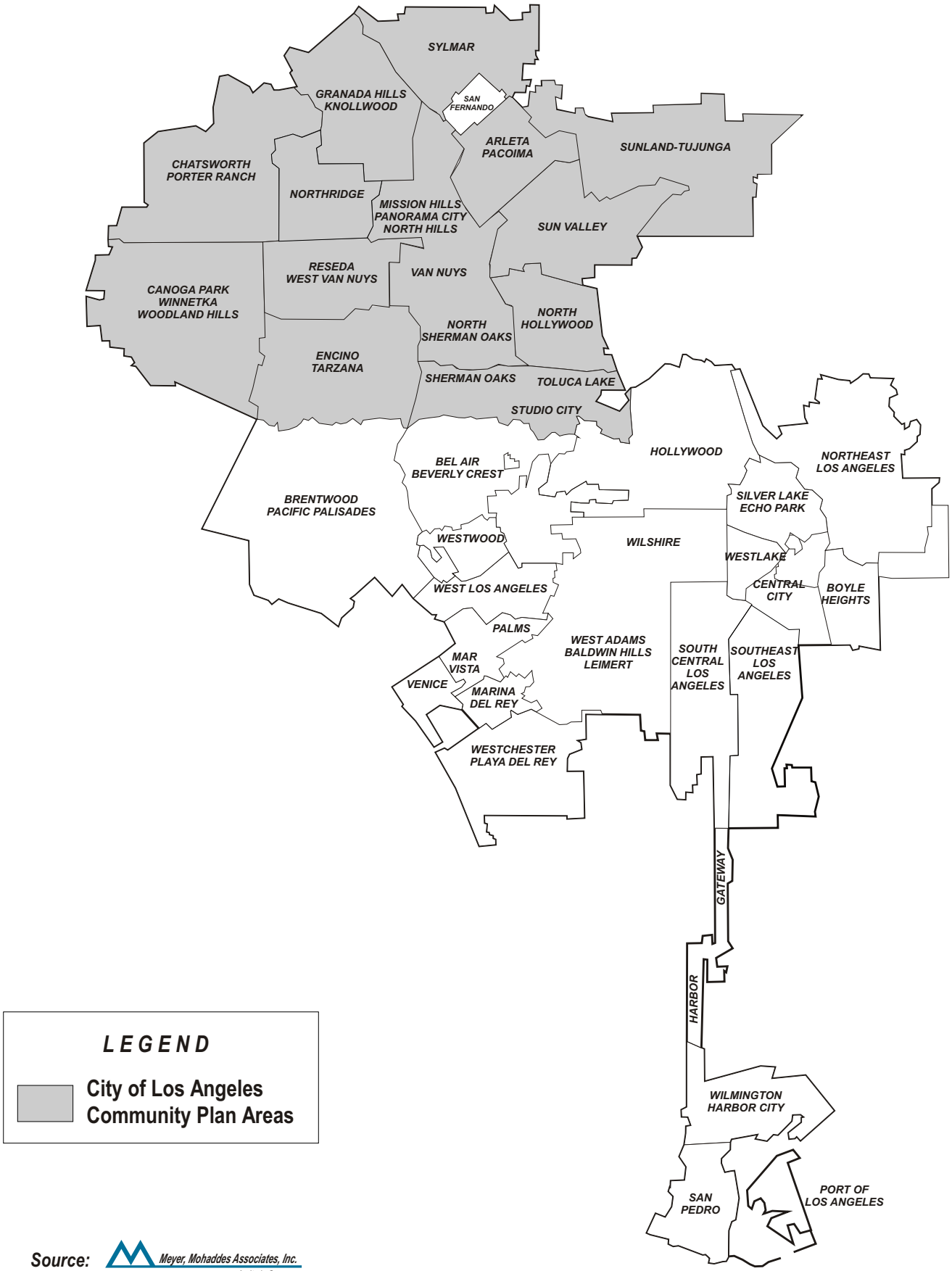
1.3.4 Land Use Plans & Policies

General Plans, Community Plans

The San Fernando Valley encompasses an area of 346 square miles. There are six cities within the San Fernando Valley: Burbank, Calabasas, Glendale, Los Angeles (valley portion), San Fernando, and Hidden Hills. There is also one unincorporated area of the County, Universal City, at the southern edge of the Valley. The study area for this RSTIS is confined to the City of Los Angeles and City of San Fernando portions of the Valley. The valley portion of the City of Los Angeles is divided into fourteen Community or District Plan Areas. Each has its own Community Plan. Figure 1-9 illustrates the Community Plan Areas in the City of Los Angeles. Since each of these cities and plan areas has its own land use plan and policies to regulate development, there are twenty different land use plans covering the San Fernando Valley.

The alternatives being evaluated for the San Fernando Valley North-South Transit Corridor are located in their entirety within the communities of the City of Los Angeles and the City of San Fernando. The land use plans for these areas of the Valley identify the following land use categories: single-family residential, multiple-family residential, general commercial, industrial-manufacturing, open space, and public facilities.

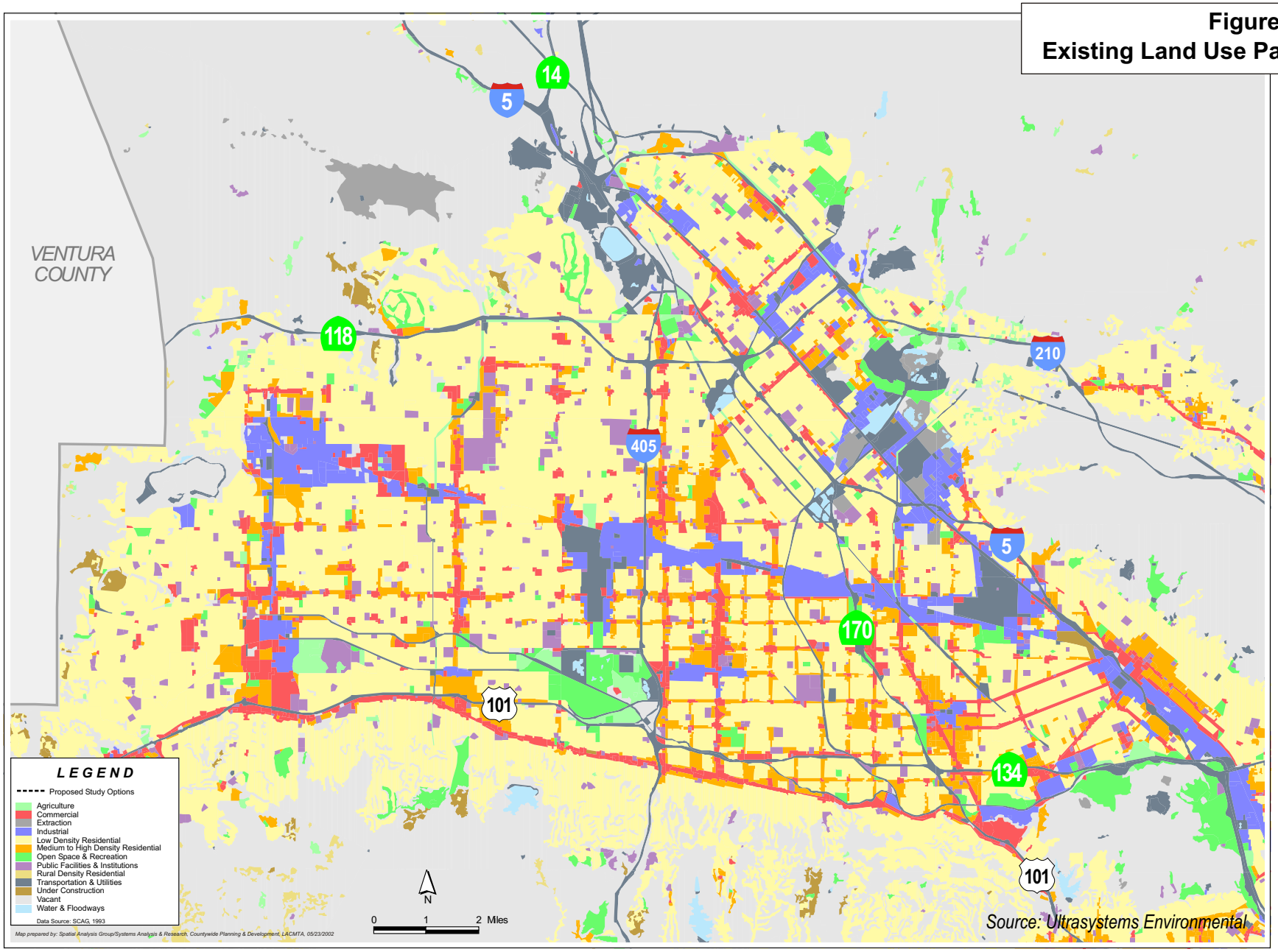
An examination of the different land use plans shows that the vast majority of the land within the San Fernando Valley is planned for single-family residential uses. Multiple-family residential uses are generally located along the major arterials. General commercial uses front most of the major streets or are located in centers, and there are industrial – manufacturing uses located along the rail corridors that pass through the valley. Figure 1-10 illustrates the existing land use pattern in the San Fernando Valley.



Source: Meyer, Mohaddes Associates, Inc. An Iteris Company

Figure 1-9
Community Plan Areas in San Fernando Valley

Figure 1-10
Existing Land Use Pattern



Redevelopment Project Areas

There are four City of Los Angeles Redevelopment Project Areas (RPAs) within the San Fernando Valley: Pacoima/ Panorama City, Laurel Canyon, North Hollywood, and Reseda/Canoga Park. Development within RPAs is overseen by the Community Redevelopment Agency (CRA) of the City of Los Angeles, which attempts to encourage housing and economic revitalization in blighted areas of the city. RPAs were also established in part to facilitate the repair, restoration, demolition, and/or replacement of property or areas adversely affected by the Northridge Earthquake and its subsequent aftershocks.

The Pacoima/Panorama City Redevelopment Project Area (RPA) is located in the northern portion of the valley within the communities of Sylmar, Panorama City, Arleta Pacoima, Sun Valley, and North Hollywood. In Sylmar the RPA is located along San Fernando Road, Bradley Avenue, and a small section of Glenoaks Boulevard. Another RPA is located along Foothill Boulevard north of the City of San Fernando. In Panorama City the main RPA is located along Sepulveda Boulevard, Van Nuys Boulevard, and Parthenia Street. There is a smaller RPA that runs along San Fernando Mission Boulevard, Rinaldi Street, and Laurel Canyon Boulevard. The RPA in Arleta Pacoima/ Sun Valley covers most of the area between Van Nuys Boulevard on the northwest, Glenoaks Boulevard on the northeast, Sheldon Street on the southeast, and Laurel Canyon Boulevard. There is a smaller RPA between San Fernando Road and Bradley Street and Louvre Street, and the boundary of the City of San Fernando. Foothill Boulevard is also designated as an RPA within the Arleta Pacoima Community. In the community of North Hollywood the area between Laurel Canyon Boulevard on the west, Vose Street on the north, Tujunga Avenue on the east, and Kittridge Street is also designated as a RPA.

The Laurel Canyon RPA is located in the center of the community of North Hollywood. This RPA focuses on the major commercial corridors of Burbank Boulevard, Victory Boulevard, and Laurel Canyon Boulevard.

The North Hollywood RPA is located in the southeastern portion of the community of North Hollywood. This RPA encompasses the area south of Hatteras Street, west of Cahuenga Avenue, north of Sarah Street, and east of Tujunga Avenue.

The Reseda/Canoga Park RPA is located in the western portion of the San Fernando Valley within the communities of Canoga Park, Winnetka, and Reseda. The main focus of this RPA is along Sherman Way between Topanga Canyon Boulevard (in Canoga Park) and Louise Avenue (in Reseda). Within Canoga Park the RPA expands in a north/south direction to include the area between Saticoy Street on the north and Erwin Street on the south. Within Winnetka the RPA focuses on Sherman Way, with a small area along Saticoy Street between Mason Avenue and Winnetka Avenue. In Reseda the RPA again expands in a north/south direction to Roscoe Boulevard on the north and Victory Boulevard on the south between Wilbur Avenue on the west and Hesperia Avenue on the east. The City of Los Angeles General Plan Framework includes goals for increased transit mode split and concentration of growth in designated Targeted Growth Areas.

City of Los Angeles' Transportation Element

The City of Los Angeles Transportation Element of the General Plan provides the guide to how the transportation system in the City of Los Angeles is to be developed and managed. It identifies the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other public utilities and facilities, all correlated to meet the transportation demands of the land use element of the general plan. The Transportation Element designates transit priority streets. As shown in Figure 1-11, in the San Fernando Valley, the designated Transit Priority streets are :

East-West Transit Priority Streets

- Ventura Boulevard (Primary Transit Priority)
- Victory Boulevard (Transit Priority)
- Roscoe Boulevard (Future Transit Priority)
- Devonshire Street (Future Transit Priority)

North-South Transit Priority Streets

- Van Nuys Boulevard (Primary Transit Priority)
- Lankershim Boulevard (Transit Priority)
- Glenoaks Boulevard (Transit Priority)
- Topanga Canyon Boulevard (Transit Priority)
- Reseda Boulevard (Future Transit Priority)
- Foothill Boulevard (Future Transit Priority)

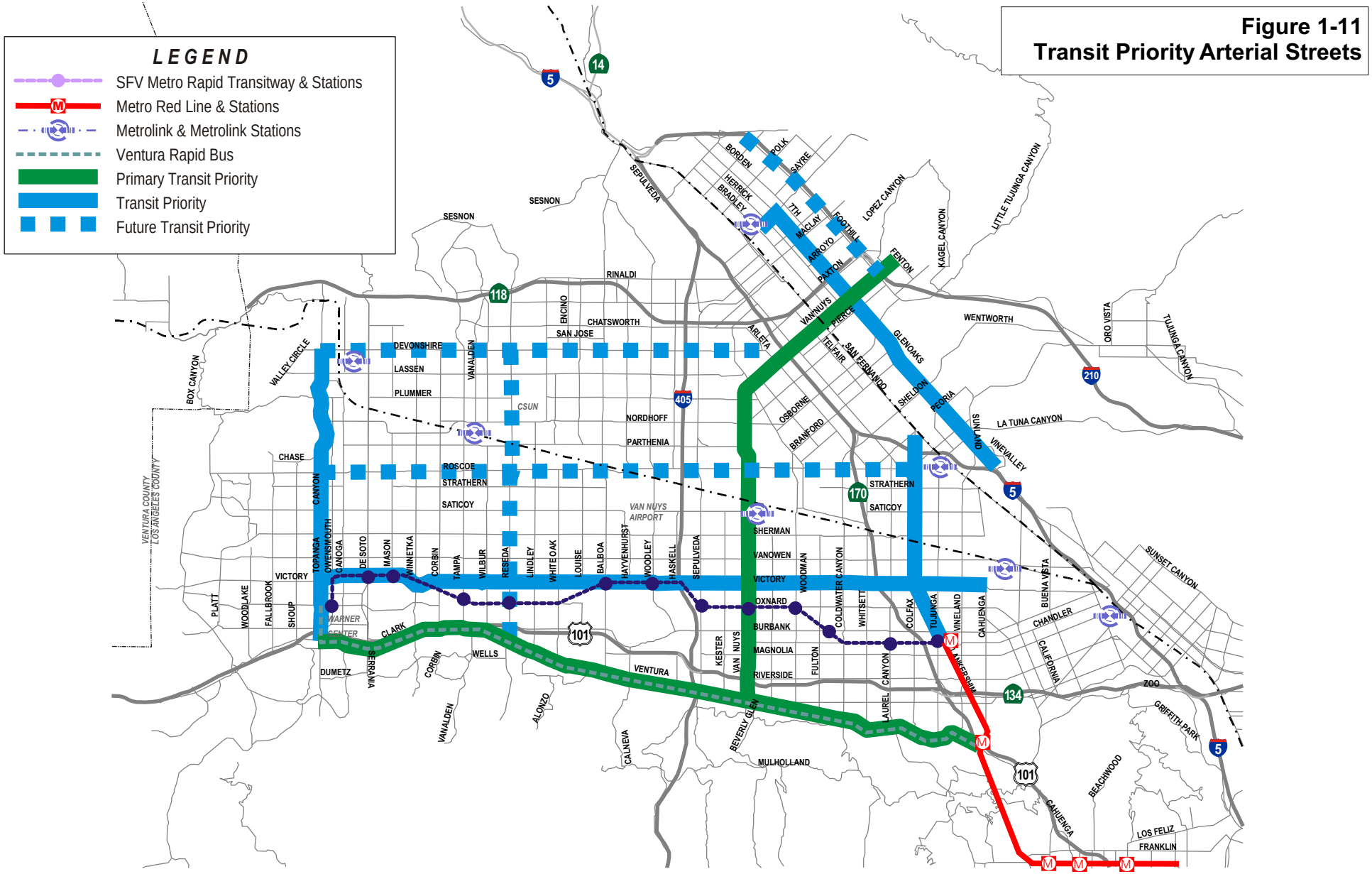
To date, transit priority has only been implemented on Ventura Boulevard through the Ventura Metro Rapid Bus project. The San Fernando Valley Metro Rapid Transitway closely parallels Victory Boulevard and will in a sense substitute for the implementation of that Transit Priority arterial street. In the north-south direction, Metro Rapid Bus service is planned for Van Nuys Boulevard and the planned San Fernando Road Metro Rapid Bus service will closely parallel Glenoaks Boulevard, but none of the other north-south Transit Priority arterial streets envisioned in the Transportation Element has yet been scheduled for implementation.

The types of improvements envisioned in the Transportation Element for Transit Priority arterial streets are:

- Peak period parking restrictions (Tow Away/No Stopping)
- Minimum 13-foot curb lanes
- Traffic signal modifications (signal priority or other)
- For Primary Transit Priority streets, bus only or bus and right-turn only curb lanes during peak periods may be installed.

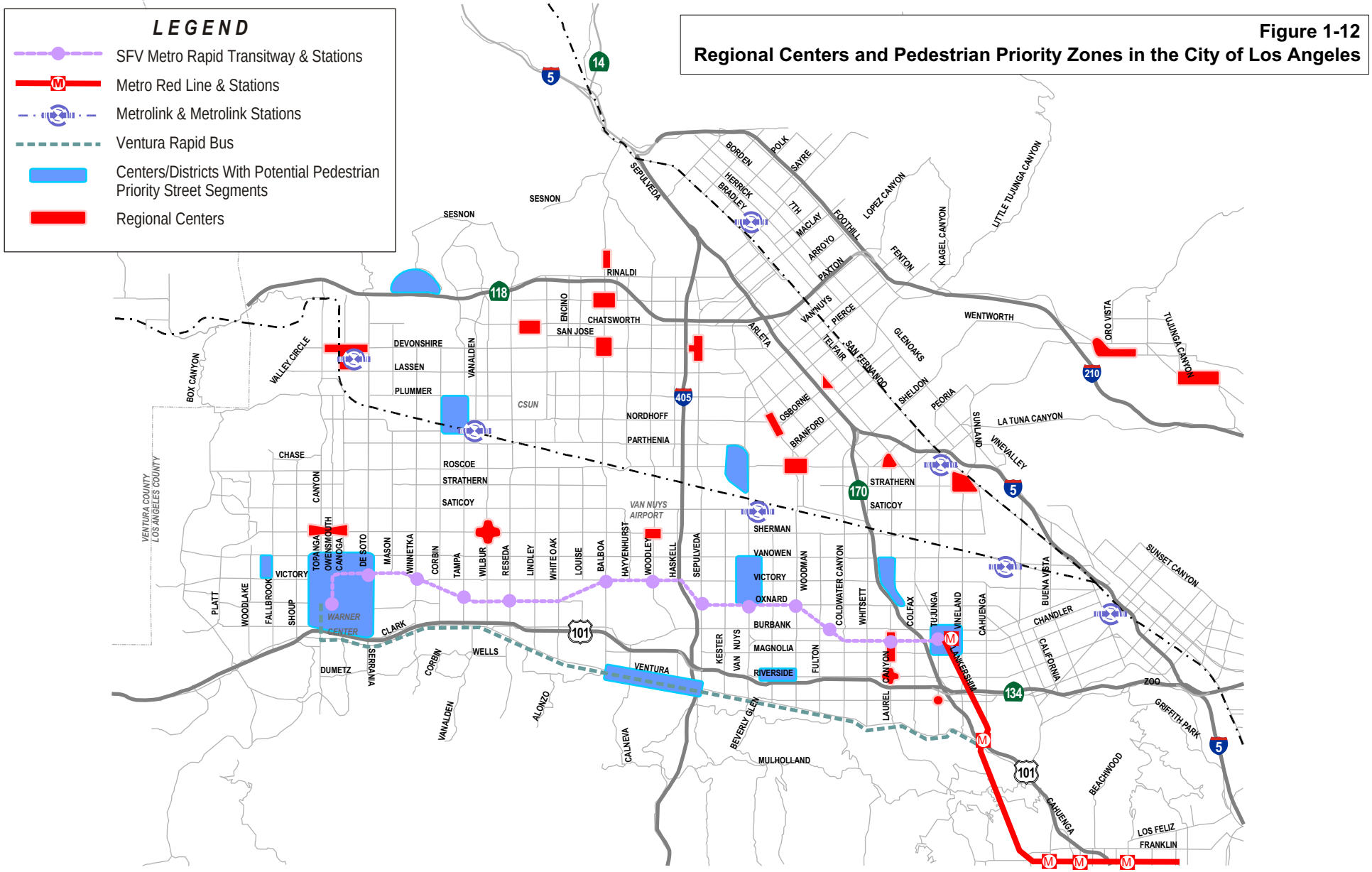
The Transportation Element also identifies centers of activity in the City that should be linked by transit, as well as areas of potential Pedestrian Priority street segments to which transit access would also be desirable. These are illustrated in Figure 1-12.

Figure 1-11
Transit Priority Arterial Streets



Source: Meyer, Mohaddes Associates

Figure 1-12
Regional Centers and Pedestrian Priority Zones in the City of Los Angeles



Source: Meyer, Mohaddes Associates

1.3.5 Traffic Conditions

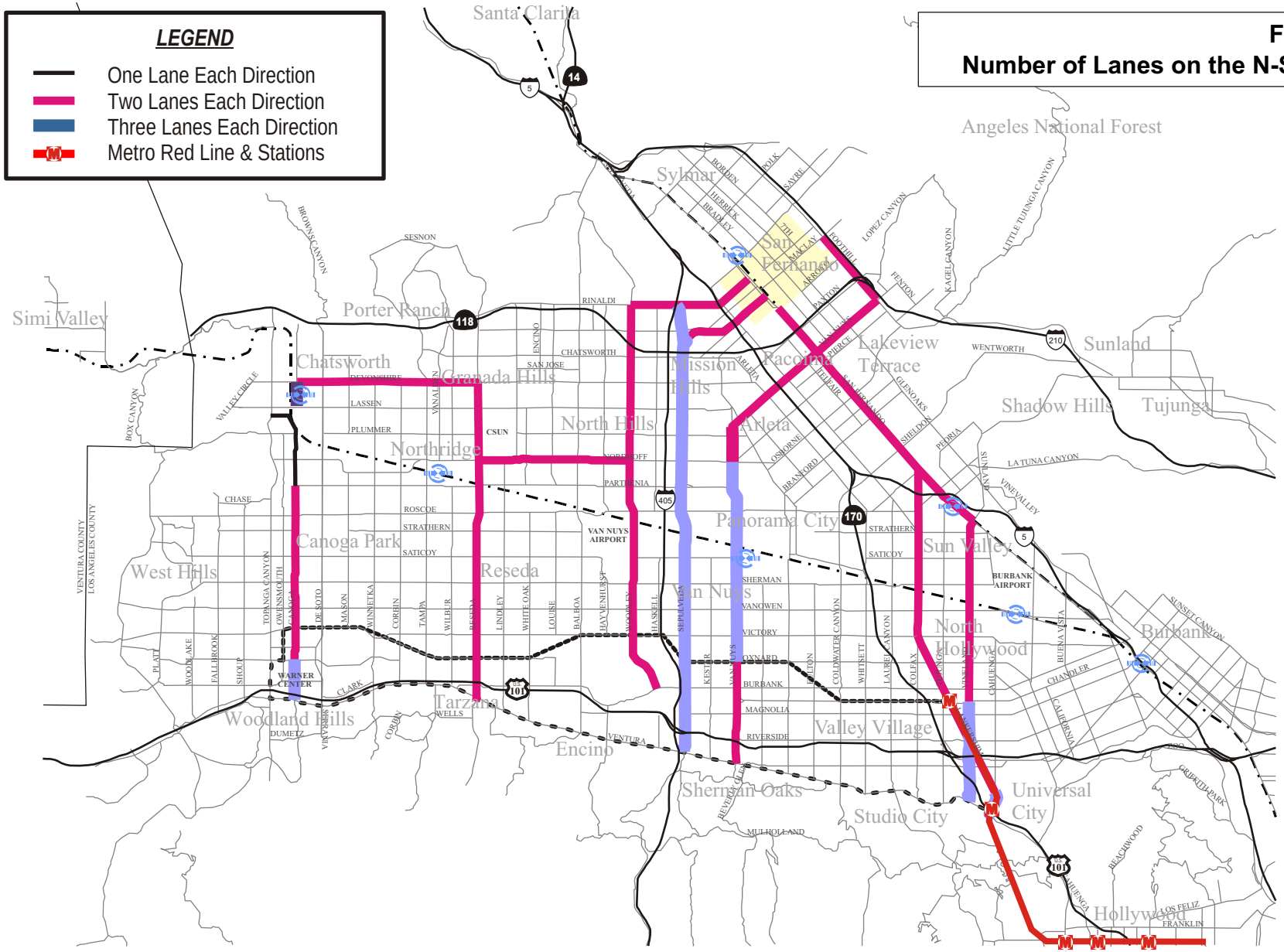
The arterial system in San Fernando Valley is generally characterized by a predominant north-south/east-west grid system, that has Major Highways – Class II (as defined by the City of Los Angeles' arterial classifications) at typically one-mile intervals, while Secondary Highways fill-in the ½ mile spacing between the Majors. There is also a secondary grid system, which runs in the eastern Valley area, that is parallel and perpendicular to the Union Pacific (Santa Clarita-Palmdale Metrolink) rail tracks, generally east of the I-5 Freeway. The alignment of the railroad and the adjacent Golden State Freeway (I-5) isolates the northeast portion of the Valley from the rest of the Valley and makes it more difficult to serve that area with transit routes.

The Major Highways typically have a 100-104 foot right of way, with four to six moving lanes, a two-way left turn lane (or in some limited cases raised median), and curbside parking, which is restricted to non-peak periods. The Secondary Highways typically have a 90-foot right of way, mostly four moving lanes, and curbside parking, however, the median type varies depending on the width of the street, from just a solid yellow stripe or a two-way left turn lane.

Figure 1-13 shows the number of through lanes on various segments of the preliminary candidate north-south arterials. Table 1.2 provides segment-by-segment details on the physical characteristics of the preliminary candidate arterials. These include: number of lanes, speed limits, median type, on-street parking availability and peak period restrictions (if any). The table also provides an initial assessment of whether the particular peak hour parking restriction results in an additional moving lane. Topanga Canyon, Sepulveda and Van Nuys Boulevards are the only arterials with three lanes in each direction at all times. However, a large majority of the other candidate arterials gain a third lane in each direction with peak period parking restrictions.

In the north-south direction, the Valley is generally only 8 to 10 miles in width, as opposed to the east-west direction, which is over 20 miles wide. Therefore, there are about twice as many north-south arterials as east-west arterials, and the north-south arterials tend to be more continuous. Where north-south arterials are discontinuous, it is typically due to natural features (the Sepulveda Dam and basin, hills, etc.) the Southern Pacific (Ventura Metrolink) rail line, or large developments (Van Nuys Airport, CSUN, Northridge Mall, etc.). All arterials are generally continuous across the many flood control channels and branches of the Los Angeles River, as well as across all the freeways and the SFV Metro Rapid Transitway alignment. Louise Avenue is the only arterial that does not cross the SFV Metro Rapid Transitway alignment.

Figure 1-13
Number of Lanes on the N-S Arterials



Source: TMD, October 2002

Table 1.2 Roadway Characteristics by Segment

ROADWAY SEGMENTS		EASTBOUND / NORTHBOUND			WESTBOUND / SOUTHBOUND			Speed limit	Median	Comments
FROM	TO	No. of Lanes	If Parking prohibited, adds a lane	Parking Restrictions	No. of Lanes	If Parking prohibited adds one	Parking Restrictions			
Reseda Blvd										
Devonshire St	Lassen St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Lassen St	Plummer St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Plummer St	Nordhoff St	2	Yes	1 Hr Pkg 8am-6pm	2	Yes	1 Hr Pkg 8am-6pm	35	Lane	
Nordhoff St	Parthenia St	2	Yes	2 Hrs Pkg 8am-6pm	2	Yes	2 Hrs Pkg 8am-6pm	35	Lane	
Parthenia St	Roscoe Blvd	2	Yes	2 Hrs Pkg 8am-6pm	2	Yes	2 Hrs Pkg 8am-6pm	35	Lane	
Roscoe Blvd	Strathern St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Strathern St	Saticoy St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Saticoy St	Sherman Wy	2	Yes	2 Hrs Pkg 8am-6pm	2	Yes	2 Hrs Pkg 8am-6pm	35	Lane	
Sherman Wy	Vanowen St	2	Yes	1 Hr Pkg 8am-6pm	2	Yes	1 Hr Pkg 8am-6pm	35	Lane	
Vanowen St	Victory Blvd	2	Yes	1 Hr Pkg 8am-6pm	2	Yes	1 Hr Pkg 8am-6pm	35	Lane	
Victory Blvd	Oxnard St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Oxnard St	Burbank Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Burbank Blvd	Magnolia Blvd	2	Yes	2 Hrs Pkg 8am-6pm	2	Yes	2 Hrs Pkg 8am-6pm	35	Lane	
Magnolia Blvd	Ventura Blvd	2	Yes	2 Hrs Pkg 8am-6pm	2	Yes	2 Hrs Pkg 8am-6pm	35	Lane	
Devonshire St										
Canoga Av	Desoto Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Desoto Av	Mason Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Mason Av	Winnetka Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Winnetka Av	Corbin Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Corbin Av	Tampa Av	2	No	NSAT	2	No	NSAT	35	Lane	
Tampa Av	Wilbur Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Wilbur Av	Reseda Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Canoga Av										
Devonshire St	Lassen St	1	No	Parking Ok	1	Yes	Parking Ok	35	Lane	
Plummer St	Nordhoff St	1	No	Unpaved Parking Ok	1	Yes	Parking Ok	35	Lane	
Nordhoff St	Parthenia St	1	No	Unpaved Parking Ok	1	Yes	Parking Ok	35	Lane	
Parthenia St	Roscoe Blvd	2	No	NSAT	2	Yes	Parking Ok	35	Lane	
Roscoe Blvd	Strathern St	2	No	NSAT	2	Yes	Parking Ok	35	Lane	
Strathern St	Saticoy St	2	No	NSAT	2	Yes	Parking Ok	35	Lane	
Saticoy St	Sherman Wy	2	No	NSAT	2	Yes	Parking Ok	35	Lane	
Sherman Wy	Vanowen St	2	No	NSAT	2	Yes	Parking Ok	35	Lane	
Vanowen St	Victory Blvd	2	No	NSAT	2	Yes	Parking Ok	35	Lane	
Victory Blvd	Oxnard St	2	No	NSAT	2	No	NSAT	35	Lane	
Oxnard St	Burbank Blvd	3	No	NSAT	3	No	NSAT	35	Raised	
Burbank Blvd	Magnolia Blvd	3	No	NSAT	3	No	NSAT	35	Raised	
Magnolia Blvd	Ventura Blvd	3	No	NSAT	3	No	NSAT	35	Raised	
Woodley Av										
Rinaldi St	S F Mission Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
S F Mission Blvd	Chatsworth St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Chatsworth St	Devonshire St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Devonshire St	Plummer St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Plummer St	Nordhoff St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Nordhoff St	Parthenia St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Parthenia St	Roscoe Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Roscoe Blvd	Strathern St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Strathern St	Saticoy St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Saticoy St	Sherman Wy	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Sherman Wy	Vanowen St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Vanowen St	Victory Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Victory Blvd	Oxnard St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Oxnard St	Burbank Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	Bike Lane
Sepulveda										
Rinaldi St	S F Mission Blvd	3	Yes	Parking Ok	3	Yes	Parking Ok	40	Raised	
S F Mission Blvd	Chatsworth St	3	Yes	Parking Ok	3	Yes	Parking Ok	40	Raised	
Chatsworth St	Devonshire St	3	Yes	Parking Ok	3	Yes	Parking Ok	40	Raised	
Devonshire St	Plummer St	3	Yes	Parking Ok	3	Yes	Parking Ok	40	Raised	
Plummer St	Nordhoff St	3	Yes	Parking Ok	3	Yes	Parking Ok	40	Raised	
Nordhoff St	Parthenia St	3	Yes	Parking Ok	3	Yes	Parking Ok	40	Raised	
Parthenia St	Roscoe Blvd	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Raised/Lane	
Roscoe Blvd	Strathern St	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Raised/Lane	
Strathern St	Saticoy St	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Raised/Lane	
Saticoy St	Sherman Wy	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Lane	
Sherman Wy	Vanowen St	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Lane	
Vanowen St	Victory Blvd	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Lane	
Victory Blvd	Oxnard St	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Lane	
Oxnard St	Burbank Blvd	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Lane	
Burbank Blvd	Magnolia Blvd	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Lane	
Magnolia Blvd	Ventura Blvd	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Lane	
Nordhoff St										
Reseda Blvd	Lindley Av	2	Yes	NS 7am-9am, 4:30pm-7pm	2	Yes	NS 7am-9am, 4:30pm-7pm	40	Lane	
Lindley Av	White Oak Av	2	Yes	NS 7am-9am, 4:30pm-7pm	2	Yes	NS 7am-9am, 4:30pm-7pm	40	Lane	
White Oak Av	Louise Av	2	Yes	NS 7am-9am	2	Yes	NS 7am-9am, 4:30pm-7pm	40	Lane	
Louise Av	Balboa Blvd	2	Yes	NS 7am-9am	2	Yes	NS 7am-9am, 4:30pm-7pm	40	Lane	
Balboa Blvd	Hayvenhurst Av	2	Yes	NS 7am-9am	2	Yes	NS 4pm-7pm	40	Lane	
Hayvenhurst Av	Woodley Av	2	Yes	NS 7am-9am	2	Yes	NS 4pm-7pm	40	Lane	

Table 1.2 Roadway Characteristics by Segment (continued)

Van Nuys Blvd										
Foothill Blvd	GlenOaks Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
GlenOaks Blvd	San Fernando Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
San Fernando Blvd	Laurel Canyon Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Laurel Canyon Blvd	Arleta Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Arleta Av	Woodman Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Woodman Av	Pummer St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Pummer St	Nordhoff St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Nordhoff St	Parthenia St	3	Yes	NS 7am-9am, 2:30pm-6pm	3	Yes	NS 7am-9am, 2:30pm-6pm	35	Raised	
Parthenia St	Roscoe Blvd	3	Yes	NS 7am-9am, 2:30pm-6pm	3	Yes	NS 7am-9am, 2:30pm-6pm	35	Lane	
Roscoe Blvd	Strathern St	3	Yes	2 Hrs 8am-6pm	3	Yes	2 Hrs 8am-6pm	35	Lane	
Strathern St	Saticoy St	3	Yes	2 Hrs 8am-6pm	3	Yes	2 Hrs 8am-6pm	35	Lane	
Saticoy St	Sherman Wy	3	Yes	2 Hrs 8am-6pm	3	Yes	2 Hrs 8am-6pm	35	Lane	
Sherman Wy	Vanowen St	3	Yes	1 Hr 8am-6pm	3	Yes	1 Hr 8am-6pm	35	Lane	
Vanowen St	Victory Blvd	3	Yes	1 Hr 8am-6pm	3	Yes	1 Hr 8am-6pm	35	Lane	
Victory Blvd	Oxnard St	3	Yes	1 Hr 8am-6pm	3	Yes	1 Hr 8am-6pm	35	Lane	
Oxnard St	Burbank Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Burbank Blvd	Magnolia Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Magnolia Blvd	Ventura Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Lankershim Blvd										
San Fernando Blvd	Tuxford St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Tuxford St	Strathern St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Strathern St	Saticoy St	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Saticoy St	Sherman Wy	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Sherman Wy	Vanowen St	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Vanowen St	Victory Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Victory Blvd	Oxnard St	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Oxnard St	Burbank Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Burbank Blvd	Chandler Blvd	2	No	NSAT	2	No	NSAT	35	Lane	
Chandler Blvd	Magnolia Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Magnolia Blvd	Moorpark St	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Moorpark St	Cahuenga Av	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Cahuenga Av	Ventura Blvd	3	No	NSAT	3	No	NSAT	35	Lane	
Vineland Av										
San Fernando Blvd	Strathern St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Strathern St	Saticoy St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Saticoy St	Sherman Wy	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Sherman Wy	Vanowen St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Vanowen St	Victory Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Victory Blvd	Oxnard St	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35		
Oxnard St	Hatteras St	2	No	NPAT	2	No	NPAT	35		
Hatteras St	Burbank Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35		
Burbank Blvd	Chandler Blvd	2	Yes	2 Hrs 8am-6pm	2	Yes	2 Hrs 8am-6pm	35	Lane	
Chandler Blvd	Magnolia Blvd	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Raised	
Magnolia Blvd	Moorpark St	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Raised	
Moorpark St	Cahuenga Av	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Raised	
Cahuenga Av	Ventura Blvd	3	Yes	Parking Ok	3	Yes	Parking Ok	35	Raised	
San Fernando Rd										
Hubbard St	Mission Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	35	-	
Mission Blvd	Maclay Av	1	Yes	2 Hrs 7am-6pm	1	Yes	2 Hrs 7am-6pm	35	-	
Maclay Av	Chatsworth Dr	1	Yes	2 Hrs 7am-6pm	1	Yes	2 Hrs 7am-6pm	35	-	
Chatsworth Dr	Paxton St	2	Yes	Parking Ok	2	Yes	Parking Ok	35	-	
Paxton St	Van Nuys Blvd	2	Yes	NSAT	2	Yes	Parking Ok	35	-	
Van Nuys Blvd	Osborne St	2	Yes	NSAT	2	Yes	Parking Ok	35	-	
Osborne St	Branford St	2	Yes	NSAT	2	Yes	Parking Ok	35	-	
Branford St	Sheldon St	2	Yes	NSAT	2	Yes	Parking Ok	35	-	
Sheldon St	Lankershim Blvd	2	Yes	NSAT	2	Yes	Parking Ok	35	-	
Lankershim Blvd	Vineland Av	2	Yes	NSAT	2	Yes	Parking Ok	35	-	
Brand Blvd										
Sepulveda Blvd	Laurel Canyon Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	40	Raised	
Laurel Canyon Blvd	S F Mission Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	40	Raised	
Rinaldi St/Workman										
San Fernando Blvd	Laurel Canyon Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	35	-	
Laurel Canyon Blvd	Sharp Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	-	
Sharp Av	Sepulveda Blvd	1	No	NSAT	1	No	NSAT	35	-	
Sepulveda Blvd	Haskell Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Haskell Av	Woodley Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Foothill Blvd										
Van Nuys Blvd	Arroyo Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Arroyo Av	Maclay Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Maclay Av	Hubbard St	2	No	NSAT	2	Yes	Parking Ok	35	Lane	
Hubbard St										
Foothill Blvd	Borden Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Borden Av	Glenoaks Blvd	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Glenoaks Blvd	Bradley Av	2	Yes	Parking Ok	2	Yes	Parking Ok	35	Lane	
Bradley Av	San Fernando Blvd	2	No	NPAT	2	No	NPAT	35	Lane	

The significant north-south Major Highways that run the entire length of the Valley, from east to west, include:

- Glenoaks Boulevard
- Laurel Canyon Boulevard
- Coldwater Canyon Avenue
- Woodman Avenue
- Van Nuys Boulevard
- Sepulveda Boulevard
- Balboa Boulevard
- Reseda Boulevard
- Tampa Avenue
- De Soto Avenue
- Topanga Canyon Boulevard

San Fernando Road, which is a significant Major Highway, is discontinuous where it crosses under the I-5 freeway. Generally, few of the Secondary Highways is continuous throughout the entire length of the Valley. Only Corbin Avenue is continuous from Ventura Boulevard to Devonshire Street.

Topanga Canyon Boulevard, Sepulveda Boulevard, Van Nuys Boulevard (through Beverly Glen Boulevard and Benedict Canyon Drive), Coldwater Canyon Avenue, and Laurel Canyon Avenue provide surface street connections through the Santa Monica Mountains with the Pacific Coast, the Westside and the Los Angeles Basin. Balboa Boulevard and San Fernando Road-The Old Road are the only arterials that provide surface street connections to the north via the Newhall Pass.

Most of the Major Highways have interchanges with complete ramp connections to the freeway system. On the other hand, the secondary arterials, are typically only grade separated with the freeways and have no interchange ramp connections, with minor exceptions.

The arterial grid system is the backbone of the Valley's circulation network. The previously described Major and Secondary Highways are also typically supported by intermediate ¼-mile collector streets. This highly regular orientation of the arterial system provides a significant amount of traffic carrying capacity and a multitude of route choices. Due to this fact, turn volumes at the intersections of arterials tend to be moderate in comparison to some other subregions, where most turns occur at the arterial crossings. Therefore, the Valley's grid system, which has over 1,700 traffic signals, is still predominantly controlled by two-phase traffic signals, which provide good levels of traffic progression.

As an illustration of the north-south arterial's collective traffic carrying capacity, an imaginary line (screenline) was drawn just south of Sherman Way and all traffic volumes crossing this line were counted and totaled across 23 arterials from Topanga Canyon Boulevard to Tujunga Avenue. At this location, the main north-south arterials carry a total daily two-way volume of approximately 550,000 vehicles in both directions. As a comparison, the I-405 and SR-170 freeways carry daily volumes of approximately 215,000 and 165,000 respectively, for a total of 380,000 at the same location (south of

the Sherman Way interchanges). This means that the north-south arterials collectively carry nearly 45 percent more daily traffic than the two north-south freeways.

Daily traffic volumes on the candidate north-south arterials vary widely from just under 2,000 to more than 45,000. However, most of the arterial daily volumes typically range between 20,000 and 30,000 daily two-way trips. Only a limited number of arterials carry less than 15,000 or more than 40,000 at any point. The highest average daily traffic volume on any north-south arterial is recorded on Sepulveda Boulevard south of Sherman Way, at over 46,600 and on Topanga Canyon Boulevard north of Devonshire Street at 46,200. Daily volumes on Van Nuys Boulevard peak at almost 39,000 south of Sherman Way and 38,400 near Burbank Boulevard. De Soto Avenue in the West Valley also has some of the highest daily volumes, at over 44,100 near Nordhoff Street. Reseda Boulevard carries consistently high daily traffic volumes in the range of 30,000 to 38,000 throughout its entire length. Lankershim Boulevard carries relatively lower volumes in the range of 22,000 to 28,000. Volumes on Vineland Avenue are generally below 30,000 daily trips. San Fernando Road carries daily volumes typically in the range of 15,000 to 22,000, and sharply peaks at 35,000 at Paxton Street. Daily volumes on Glenoaks Boulevard also typically range between 16,000 and 24,000.

Assuming an average four-lane cross section, the 23 arterials collectively have approximately 92 two-way lanes. Typically, one lane of traffic has a daily capacity of between 8000 to 10,000 vehicles per lane. This roughly translates into a daily north-south capacity of 736,000 to 920,000. Given the overall north-south volume of nearly 550,000 at the mid-point (Sherman Way), this means that on the average the north-south streets are already filled with vehicular traffic up to approximately 60 to 75 percent of their daily capacity.

There are numerous traffic congestion hot-spots on the north-south arterials in the Valley. The most significant and critical ones are typically associated with one or more of the following conditions:

- High-density employment and activity centers (e.g. Warner Center, Van Nuys Government Center, CSUN)
- Freeway parallel corridors (e.g. Sepulveda Boulevard, Woodley Avenue, San Fernando Road, Glenoaks Boulevard)
- Freeway crossing, interchange locations (e.g. Topanga Canyon Boulevard, Reseda Boulevard, Van Nuys Boulevard, at the 101 Freeway, Lankershim Boulevard at the 134 Freeway)

The most critical recurring peak hour congestion areas associated with the preliminary candidate arterials include, but are not limited to the following arterial segments:

- Topanga Canyon Boulevard in Warner Center, from Ventura Boulevard to Sherman Way
- Topanga Canyon Boulevard in the Vicinity of Roscoe Boulevard

- Reseda Boulevard in Tarzana between Ventura Boulevard and Victory Boulevard
- Reseda Boulevard in Northridge from Parthenia Street to Devonshire Street
- Sepulveda Boulevard in Sherman Oaks, from Valley Vista Avenue to the Ventura Freeway
- Sepulveda Boulevard from Victory Boulevard to Roscoe Boulevard
- Van Nuys Boulevard from Ventura Boulevard to Magnolia Avenue
- Van Nuys Boulevard from Oxnard to Sherman Way, through the Government Center
- Lankershim Boulevard from Magnolia Avenue to Oxnard Street

Other candidate arterial corridors such as Woodley Avenue, Vineland Avenue, San Fernando Road and Glenoaks Boulevard, in comparison with the above locations, are relatively free of high levels of congestion throughout most of the day.

1.3.6 Transit Service & Ridership Patterns

MTA transit service throughout the Valley is comprised of 23 local bus routes (five of them have branches adding up to 28 local bus routes). In addition, there is one limited-stop bus service (line 394, branch of local route 94) between Sylmar and Downtown Los Angeles, four express service routes (three of them branches of other local routes), and a Metro Rapid Bus line along Ventura Boulevard. Other public bus transit operators include Antelope Valley Transit Authority (AVTA), Santa Clarita Transit, Simi Valley Transit, VISTA Conejo Connection, and DASH and Commuter Express buses operated by LADOT. Greyhound service is also available at the North Hollywood Greyhound Station. Complementary rail services, the Metro Red Line subway stations at Universal City and North Hollywood and two Metrolink commuter rail lines cross the Valley on their way to Ventura and Lancaster to/from Downtown Union Station, also provide transit service to Valley residents.

The MTA bus service network has been established in a grid pattern with most of the routes focused on both east-west and north-south arterials (see Existing Transit Network Figure 1- 14). Despite the fact that the bus network covers all major arterials, bus service is not provided evenly throughout the Valley (see Table 1-3 Existing MTA Transit Service).

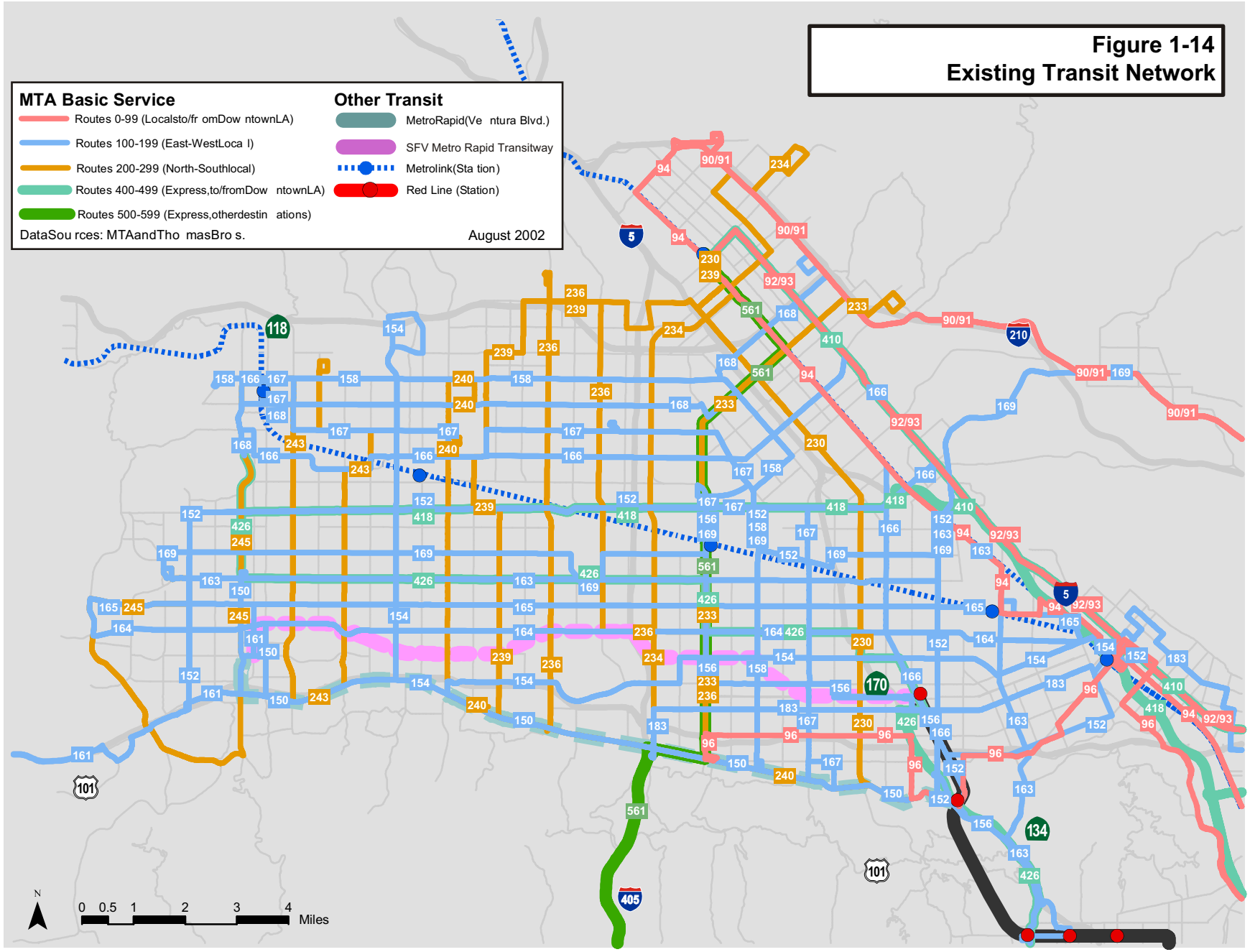


Figure 1-14
Existing Transit Network
MTA Basic Service
Routes 0-99 (Localsto/fr omDow ntownLA)
Routes 100-199 (East-WestLoca l)
Routes 200-299 (North-Southlocal)
Routes 400-499 (Express,to/fromDow ntownLA)
Routes 500-599 (Express,otherdestin ations)
Other Transit
MetroRapid(Ve ntura Blvd.)
SFV Metro Rapid Transitway
Metrolink(Sta tion)
Red Line (Station)
DataSou rces: MTAandTho masBro s.
August 2002
N
0 0.5 1 2 3 4
Miles

Table 1-3 Existing MTA Transit Service

	Route Number	Route	Span of Service (in hours)			Approximate Trunk Headway (in minutes)					
			Weekday	Saturday	Sunday/ Holiday	Weekday		Saturday		Sunday/Holiday	
						Peak	Off-peak	Peak	Off-peak	Peak	Off-peak
5 to 10 Minutes	233 - 561	Lakeview Terrace - Van Nuys	21	20	20	6	10	12	12	12	12
	750	Warner Center - Universal City	17	17	17	6	10	15	12	15	12
	94 - 394	San Fernando Road	22	21	21	7	13	13	12	20	14
	156	Panorama City - North Hollywood	17	16	16	7	15	12	15	15	16
	150 - 240	Warner Center - Universal City	24	24	24	10	15	14	15	14	15
	90 - 91	Foothill Bl. - Glendale Ave.	19	18	18	10	30	30	30	45	45
	166	Lankershim Bl. - Chatsworth TC	17	17	16	10	30	30	30	30	30
	152	Roscoe Bl. - Burbank	20	19	18	10	30	30	30	30	30
11 to 20 Minutes	183 - 234	Sepulveda Bl. - Sayre St.	19	18	17	11	18	30	30	30	30
	164 - 165	Victory Bl. - Burbank TC	19	18	17	11	20	25	25	30	30
	92 - 93	Glenoaks Bl. - Brand Bl.	24	24	24	12	20	13	15	20	20
	163	Sherman Way - Hollywood	22	21	20	14	20	16	15	30	25
	96	Sherman Oaks - Burbank	18	16	15	15	30	30	30	30	30
	230	Laurel Canyon Bl.	19	17	16	15	30	30	30	30	30
	243	Chatswork TC - Winnetka Ave.	16	-	-	15	60	-	-	-	-
	161	Westlake Village - Woodland Hills	15	14	14	15	60	30	60	60	60
	426	San Fernando - Wilshire	14	-	-	20	-	-	-	-	-
	418	Canoga Park - Los Angeles	14	-	-	20	-	-	-	-	-
21 to 30 Minutes	158	Devonshire St. - Woodman Ave.	16	16	13	24	60	60	60	60	60
	410	San Fernando - Los Angeles	4	-	-	24	-	-	-	-	-
	167	Plummer St. - Chatsworth TC	20	20	20	30	40	60	60	60	60
	154	Tampa Ave. - Burbank	17	14	-	30	60	60	60	-	-
	236	Balboa Bl.- Woodley Ave.	15	13	12	30	60	60	60	60	60
31 to 60 Minutes	245	Chatsworth TC - Valley Circle	16	14	12	36	45	60	60	60	60
	239	White Oak Ave. - Rinaldi St.	15	13	12	36	48	60	60	60	60
	168	Chatsworth TC - Paxton St.	14	12	-	60	60	60	60	-	-
	169	Saticoy - Sunland	16	13	12	60	60	60	60	60	60

Source: MTA Timetables June - December 2002

The Existing Transit Service Table 1-3, above, shows that local routes have varying service hours and varying service frequencies. The table also shows that routes providing more service (5-10 minute headways) are those along Ventura Boulevard, Reseda Boulevard, Van Nuys Boulevard, Burbank Boulevard, San Fernando Road, and Glenoaks Boulevard, which are the corridors that provide direct or connecting regional transit service through the Sepulveda and Cahuenga Passes to Los Angeles, or to Glendale and Downtown Los Angeles via Burbank (see Existing Transit Service Figure 1-15). The second-best service frequency (11 - 20 minutes) comprises bus routes that provide service throughout the Valley, with service in both north-south (Sepulveda Boulevard and Laurel Canyon Boulevard) and east-west (Nordhoff Boulevard, Roscoe Boulevard, Sherman Way, Vanowen Boulevard, and Victory Boulevard) directions. Many of the east-west lines also have a north-south segment in the east end of the Valley (Lankershim Boulevard, Glenoaks Boulevard, and Vineland Avenue) which connects them to the Metro Red Line stations.

An analysis of the Existing Transit Service in Figure 1-15, as opposed to the Existing Transit Network Figure 1-14, shows that there is more service in the East Valley, in terms of both service hours and service frequency. Additionally, it shows that the southeast part of the San Fernando Valley (North Hollywood and Universal City) contains many major bus routes connecting to the Metro Red Line.

The transit services provided by the other municipal operators which serve the Valley are typically longer-distance commute services connecting outlying suburbs with Warner Center. In addition, DASH shuttle services are provided by LADOT in Sherman Oaks, Van Nuys/Studio City, Panorama City and Warner Center.

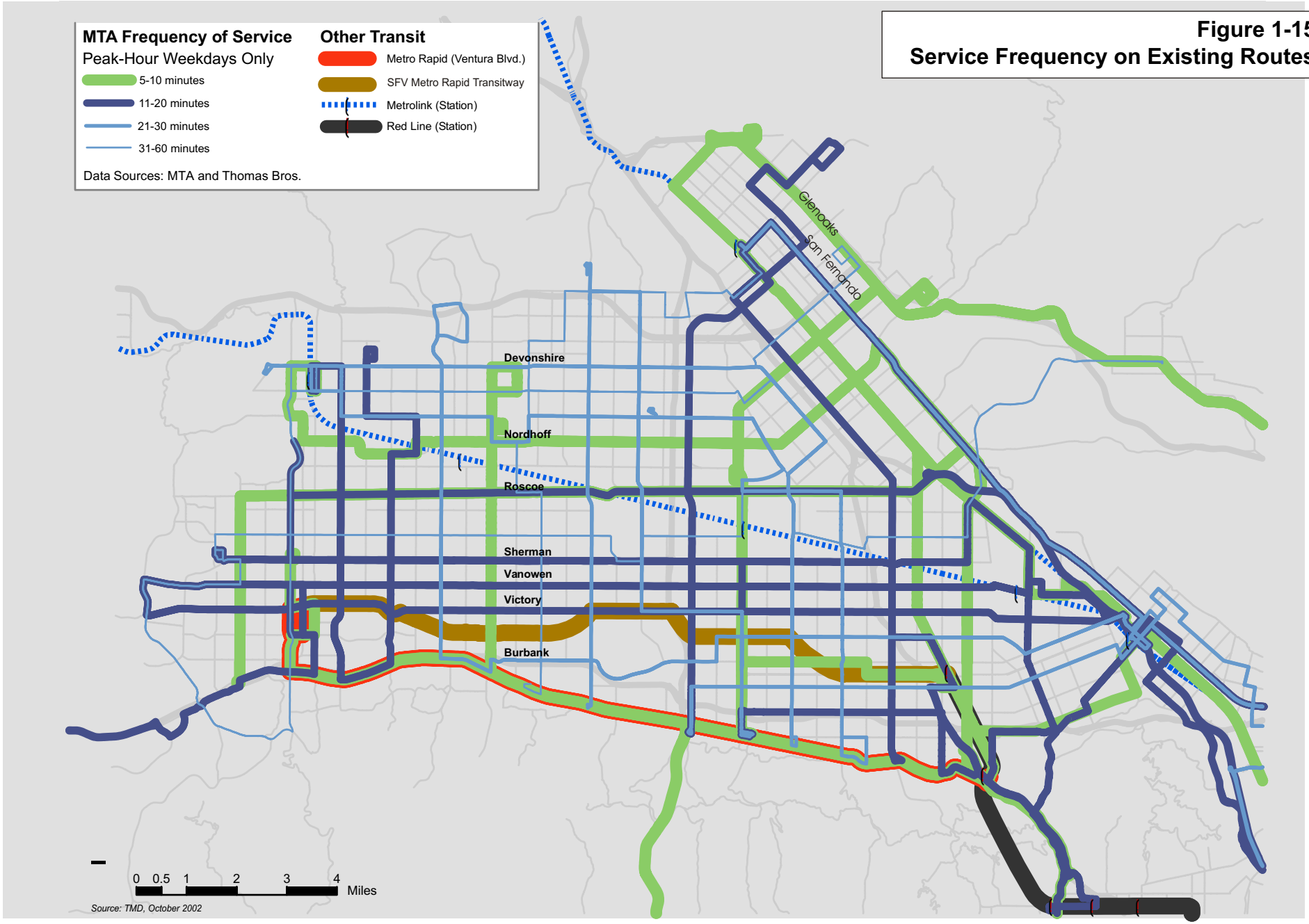
Existing Ridership in the San Fernando Valley

The Existing Transit Ridership in the San Fernando Valley, illustrated in Figure 1-16, shows that ridership is highest in the East Valley and, with the exception of Ventura Boulevard, that it is highest on the north-south routes (Van Nuys Boulevard, Sepulveda Boulevard, Vineland Avenue, Lankershim Boulevard, Laurel Canyon Boulevard, and San Fernando Road). Ridership is also high on north-south corridors within the West Valley (Topanga Canyon Boulevard, De Soto Boulevard, and Reseda Boulevard). Some important east-west corridors are Roscoe Boulevard, Sherman Way, Vanowen Boulevard, Victory Boulevard, and Burbank Boulevard.

While ridership is extremely high throughout the southeast Valley, there are very few boardings in the northwest, except at major intersections.

These observations are based on ridership data that has been updated with 2002 data from the MTA Automated Passenger Count (APC) system.

Figure 1-15
Service Frequency on Existing Routes



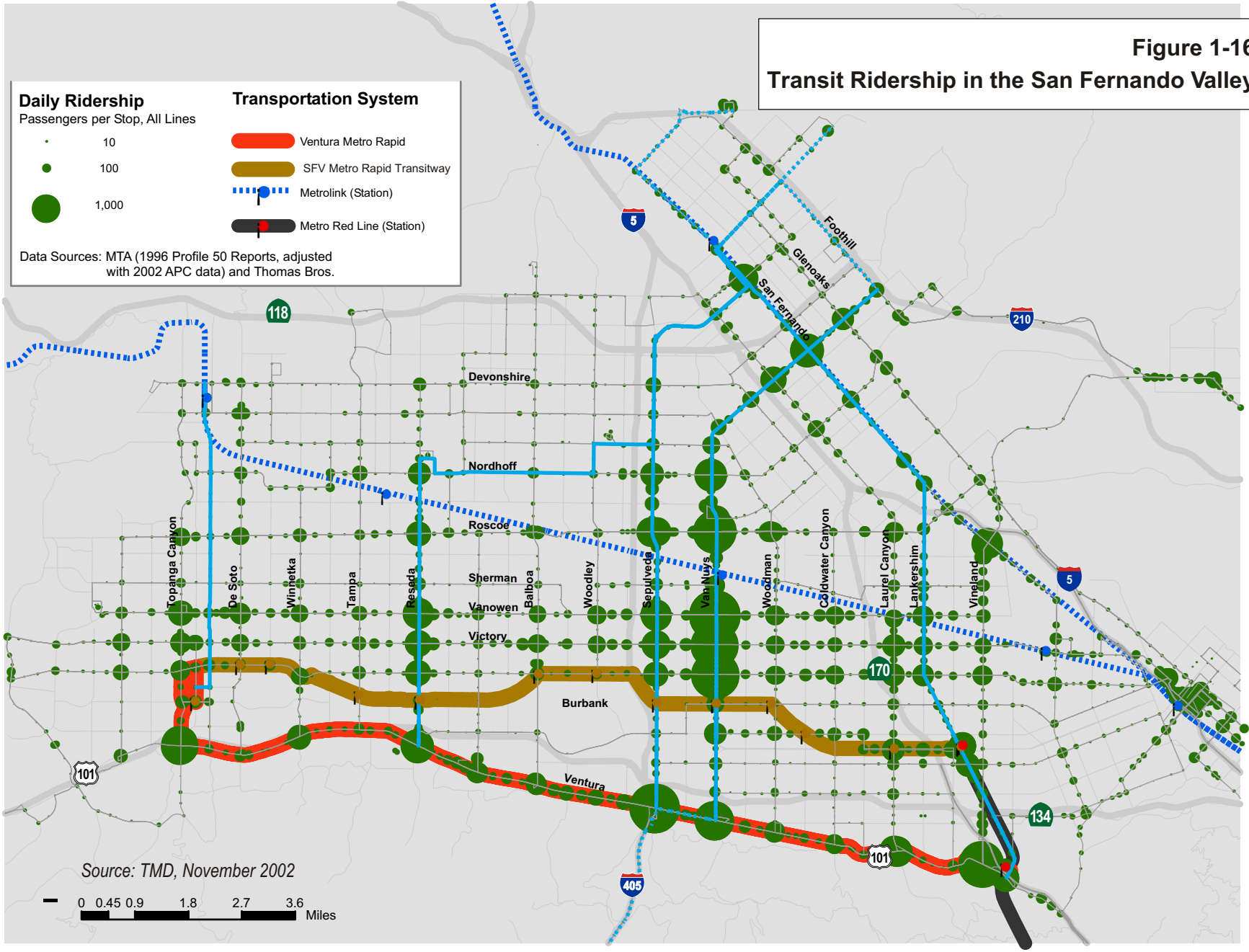


Figure 1-16
Transit Ridership in the San Fernando Valley
Daily Ridership
Passengers per Stop, All Lines
10
100
1,000
Transportation System
Ventura Metro Rapid
SFV Metro Rapid Transitway
Metrolink (Station)
Metro Red Line (Station)
Data Sources: MTA (1996 Profile 50 Reports, adjusted with 2002 APC data) and Thomas Bros.
Foothill
Glenoaks
San Fernando
Devonshire
Nordhoff
Roscoe
Sherman
Vanowen
Victory
Burbank
Ventura
Topanga Canyon
De Soto
Winnetka
Tampa
Reseda
Balboa
Woodley
Sepulveda
Van Nuys
Woodman
Coldwater Canyon
Laurel Canyon
Lankershim
Vineland
118
5
210
170
101
134
405
Source: TMD, November 2002
0 0.45 0.9 1.8 2.7 3.6
Miles

1.3.7 Transit Priority System

The City of Los Angeles Department of Transportation (LADOT), in collaboration with the MTA, has implemented an advanced Transit Priority System (TPS) as part of the Metro Rapid Bus program on Wilshire-Whittier Boulevards, Ventura Boulevard, South Broadway and Vermont Avenue. The TPS improves on-time performance of the buses by adjusting signal timing at intersections for buses as their approach is detected. It is also used to provide real-time next bus arrival information to passengers waiting at bus stops.

LADOT is planning the following improvements for the TPS system in the San Fernando Valley:

- Extend implementation of the Transit Priority System to accommodate Metro Rapid Bus service on Van Nuys Boulevard from Ventura Boulevard to the Sylmar/San Fernando Metrolink Station near San Fernando Road and Hubbard Street.
- Implement Transit Priority System along San Fernando Road in anticipation of future Metro Rapid Bus Service.
- Upgrade hardware and integrate new software for further deployment of the transit priority system in the San Fernando Valley.
- Integrate the existing Transit Priority System in the San Fernando Valley into the City's Adaptive Traffic Control System (ATCS) which will further enhance the priority treatment given to Metro Rapid buses.
- Incorporate Transit Priority System as part of the SFV Metro Rapid Transitway.

1.3.8 Urban Design Considerations

Neighborhood Character and Land Use

In a study area with more than one million people, numerous diverse neighborhoods line the north-south corridors of the Valley. The character of both the land-uses and the pathways in a neighborhood can contribute to its compatibility with transit service. In areas where it's easy and pleasant to walk to transit, more people will ride transit. In the San Fernando Valley, older neighborhoods such as some in the southeast and central Valley, as well as in the City of San Fernando, possess a higher density of residences, street-front commercial shops, and a grid of streets which allow ready access to potential transit corridors. Although not universal, many neighborhoods in the north and west portions of the Valley are less transit-supportive due to limited pedestrian access to major arterials, some gated communities, highly-separated land uses, and streets lacking pedestrian amenities such as sidewalks.

Bus Stops / Shelters

In the San Fernando Valley, bus stops are indicated by a sign at the curb near the stop. At a number of stops, particularly along corridors with higher ridership, patrons are provided with one or two benches adjacent to the street. More infrequently, bus shelters are installed, providing shade to patrons. Bus stops may have other amenities, such as informational signage, lighting, trash cans, telephones, trees and other landscaping. The provision of benches, shelters, and other amenities improves the

environment for waiting transit users and increases the overall attractiveness of transit use if maintained.

Bus stops are highly visible elements of the transit system, both for patrons and passersby. Bench and shelter design, as well as landscaping and public art, can enhance the overall urban environment, creating a positive identity for the transit system and the surrounding community. Generally, shelter design and the amenities provided vary by location. However, new transit facilities such as the Metro Rapid Bus on Ventura Boulevard and the planned SFV Metro Rapid Transitway demonstrate how consistent shelter/station design, coupled with amenities such as improved signage, can create a recognizable identity for transit service and increase its visibility, which may help attract new riders and make it easier to use transit.

Another consideration is the location of enhanced bus stops/shelters near activity centers and near-higher density residential areas. Strategic placement of bus stop amenities in areas of high-pedestrian activity may also enhance transit ridership and contribute to the revitalization of adjacent areas.

Corridor Urban Design

Corridor urban design, often called "streetscape" along arterial streets, is affected by numerous elements, including:

- Sidewalk width / sidewalk condition
- Trees and other landscape
- Lighting
- Crosswalks
- Transit shelters, benches, etc.
- Overhead wires
- Signage
- Adjacent buildings / development
- Driveways

The combined elements of the streetscape can make a street a more pleasant place to be, particularly for pedestrians and cyclists, who are unshielded from the environment by an enclosed vehicle. Because transit trips typically include some travel by foot or bicycle, a pleasant streetscape can improve the attractiveness of transit use along a given corridor.

The north-south arterial streets of the San Fernando Valley are varied in urban design detail and do not have a common streetscape quality. Most arterial streets have few trees, sidewalks are narrow and/or in poor condition, and signage is geared towards the motorist instead of the pedestrian or cyclist. Still, elements of a more pedestrian-oriented, pleasant streetscape do exist throughout the Valley, such as the street-front shops of Van Nuys Boulevard near the Government Center and in Pacoima, the pedestrian mall along San Fernando Road in the City of San Fernando, and the landscaped median of Sepulveda Boulevard north of Nordhoff Street.

1.4 Project Goals and Objectives

The goals and objectives for the project articulated in this section, will guide the development and evaluation of the alternatives. They have been developed from the transportation and land use goals and objectives of the participating government agencies and are consistent with the other transit improvements being planned for Los Angeles County. Table 1-4 lists the goals and objectives for the North-South Transit Corridor. In subsequent tasks of this study, the potential alternatives will be assessed in relation to these goals and objectives to see which best satisfy them.

Table 1-4 Goals and Objectives of the San Fernando Valley North-South Transit Corridor

Goal	Objective
1. Improve north-south mobility in the San Fernando Valley.	➢ Connect important activity centers, including government, educational, medical, cultural, commercial and business ➢ Support sustainable transportation development by increasing transit ridership ➢ Provide efficient, convenient and affordable transit alternatives to both choice riders and riders without easy access to other modes of transportation ➢ Provide an alternative to the congested San Diego (I-405), Golden State (I-5) and Hollywood (SR- 170-US-101) freeways ➢ Promote intra-modal and inter-modal integration and connectivity to improve system-wide transportation efficiency ➢ Connect with other regional transportation facilities, including Metro Red Line, SFV Metro Rapid Transitway, Ventura Metro Rapid Bus, and Metrolink ➢ Relieve congestion through the Cahuenga and Sepulveda passes by providing connections to the Los Angeles Basin through the Metro Red Line and to the Wilshire Rapid Bus. ➢ Minimize north-south travel times ➢ Provide enhanced bi-directional north-south transit service on multiple corridors ➢ Provide opportunities to intercept traffic passing through the Valley ➢ Provide park-and-ride lots at transit stops where compatible with surrounding land uses
2. Support land use and development goals	➢ Provide high-capacity transit linkages between major activity centers ➢ Achieve City of Los Angeles General Plan Framework Plan goals for increased transit use and concentration of growth in designated Targeted Growth Areas ➢ Coordinate with City of Los Angeles' Transportation Element policies for Transit Priority Arterial Streets (Van Nuys Blvd.,

	Lankershim Blvd., Glenoaks Blvd., Reseda Blvd., Topanga Canyon Blvd.) ➢ Enhance joint development opportunities ➢ Provide accessibility to government facilities in the Van Nuys Government Center and City of San Fernando
3. Maximize community input, i.e., define the project in a manner that it is responsive to community and policy makers	➢ Provide opportunities for community input to the RSTIS process ➢ Seek ways to incorporate community views into planning ➢ Provide alternative and multi-lingual methods for community input, including in-person, telephone, and web-based opportunities for information and feedback
4. Provide a transportation project that is compatible with and enhances the physical environment wherever possible.	➢ Identify cost-effective improvements that minimize adverse effects on the environment ➢ Avoid impacts on parklands ➢ Minimize noise impacts ➢ Minimize impacts on cultural resources ➢ Minimize air pollution ➢ Incorporate streetscape improvements in the transit improvements ➢ Incorporate improvements at transit stops that enhances the physical environment for waiting passengers ➢ Incorporate improvements that enhance bicycle and pedestrian accessibility to transit stops
5. Provide a transportation improvement project that minimizes impacts on the community	➢ Minimize business and residential dislocations, community disruption, and property damage ➢ Avoid creating physical barriers, destroying neighborhood cohesiveness, or in other ways lessening the quality of the human environment ➢ Minimize traffic and parking impacts ➢ Minimize impacts during construction
6. Provide a transportation project that is cost-effective and within the ability of MTA to fund, including capital and operating costs	➢ Identify cost-saving measures to reduce project costs ➢ Leverage existing transportation resources and explore new innovative financing opportunities ➢ Prioritize alternatives eligible for TCRP funding ➢ Maximize the benefits associated with the use of existing public rights-of-way. ➢ Ensure fiscal consistency with the MTA Long Range Plan ➢ Identify a phased implementation plan for alternatives to be implemented as funds are identified

1.5 Community Input

Receiving community input to guide the decision-making process at key project milestones is a crucial element of the Study. A proactive and comprehensive Public Agency and Community Participation program has been adopted to guide the outreach effort for this Study. It encompasses ongoing contact with key stakeholders such as public agencies with jurisdiction over the project, elected and public officials, residents, community leaders, businesses and the community at large — indeed, any individual or organization with interest in the Study. In order to maximize community input, this program will be supported by diverse outreach tools.

1.5.1 Elected Officials Input

There are 23 elected officials – local, state and federal – representing the San Fernando Valley. During the course of this RSTIS, there were some changes in the representatives due to elections. Outreach was made to the following elected officials:

- City of Los Angeles Mayor James Hahn and Council members Alex Padilla, Hal Bernson, Wendy Gruehl, Cindy Miscikowski, Dennis Zine, Ruth Galanter & Jack Weiss
- Los Angeles County Supervisors Zev Yaroslavsky & Mike Antonovich
- City of San Fernando former Mayor Cindy Montanez, Mayor Jose Hernandez and Council members Maribel De La Torre, Beverly Di Tomaso and Richard Ramos
- California State Senators Richard Alarcón & Sheila Kuehl
- California State Assembly members Bob Hertzberg (former member), Keith Richman, Tony Cardenas (former member), Paul Koretz & Cindy Montanez
- Members of Congress Henry Waxman, Brad Sherman & Howard Berman

The staff of these elected officials were invited to attend briefing meetings at key project milestones including an initial meeting as the project moved ahead and three additional meetings during the RSTIS phase. Individual meetings were scheduled at the request of elected officials as appropriate.

A kick-off meeting attended by the elected officials' staff was held on July 22, 2002. Those attending were presented with the alternatives developed. They supported the list of alternatives and provided some suggestions for additional public outreach contacts. Staff unable to participate was forwarded the information meeting materials for their review and comment.

A second briefing was held on October 15, 2002 to present the results of the preliminary screening of the corridor alternatives and the list of project alternatives that would be carried forward for more in-depth evaluation. They concurred in the recommendation to reduce the number of corridors to the five proposed. The third briefing was held on December 3, 2002 to present the detailed descriptions of the final alternatives, their cost and potential ridership, in advance of taking the alternatives to the public. A final meeting was held in March, 2002 to present the findings and recommendations of the RSTIS.

1.5.2 Public Input

Public input has been received at a combination of informational briefings at the regularly scheduled meetings of targeted stakeholder groups as well as at a series of public workshops/open houses. The public input approach considers reaching stakeholders that are both diverse (in terms of language, socio-economics and interest

group) as well as geographically spread-out. This is supported by a number of message dissemination tools including Fact Sheets/Project Updates, a Study information line, web page and publicity (advertisements, on-board "take ones" and direct mail to the project database).

Stakeholder groups targeted for their input into the Study has included, at minimum:

- Elected officials
- Neighborhood Councils
- Planning Councils
- Local and regional environmental groups
- Transportation interest & advocacy groups
- Business interests & Chambers of Commerce
- Real estate developers & major property owners
- Homeowners Associations
- Schools and other Educational Institutions
- Shopping Centers
- Religious Institutions and organizations
- Civic organizations & and community groups
- Major Employers/Key Destinations

Stakeholder Meetings

Stakeholder meetings were conducted throughout the RSTIS phase to raise awareness of the Study and to provide updates as the project progressed. A log of comments and action items has been recorded as meetings were conducted.

Public Open Houses

Two sets of three open houses/workshops during the RSTIS phase were conducted at locations geographically spread across the region, as follows:

- Northeast – San Fernando/Pacoima area
- Southeast – Sherman Oaks /Studio City/North Hollywood area
- West – Warner Center/Reseda/Northridge area

These public workshops were timed to coincide with the milestones of paramount concern to impacted communities, identification of alternatives and screening of the alternatives, in September 2002 and December 2002, respectively. Translation services for all community workshops were provided.

Public comments were accepted via laptop computer, written comment forms and tape recorder. The Robert Group summarized, tabulated and disseminated these comments to the project team upon conclusion of these open houses.

The feedback from the public was supportive of the need for improvements in north-south transit service. There was wide support for selecting more than one of the alternatives for implementation. Members of the public were supportive of each of the alternatives. There was also support expressed for improved feeder service and extensions to the routes in the Sylmar area. The connection from the City of San Fernando to CSUN was strongly supported as well as the extension of service to Westwood. A more complete description of the public outreach effort and the feedback provided by the public is contained in Appendix A of this RSTIS.

2.0 ALTERNATIVES CONSIDERED

2.1 Development of Alternatives

In order to develop a range of potential transit improvements that would meet the needs for improved north-south service in the San Fernando Valley, the project team considered a number of factors; connections to regional transportation facilities, service to high-density population and employment centers and activity centers, feasibility of providing dedicated lanes for transit vehicles, traffic conditions, and existing transit demands on existing routes. The Valley is a large area with many activity centers and multi-modal transportation facilities, so it is difficult to serve all of them with any single alternative. Numerous north-south corridors were investigated to determine which could most benefit from increased transit service and which would be least impacted by the service.

Prior to consideration of corridor improvements, it was necessary to identify changes to transportation infrastructure that will likely be in place prior to the improvements. This is defined as the No Project Alternative and includes improvements programmed for implementation in the San Fernando Valley over approximately the next three to five years.

The alternatives presented in this chapter of the RSTIS have been developed in consultation with the Cities of Los Angeles and San Fernando, Metrolink, MTA Planning and Valley Sector staff, representatives of elected representatives of the Valley at all levels of government, and the public. They have been refined based on this technical and policy input.

2.2 Description of Alternatives

2.2.1 No Project Alternative

The No Project Alternative serves as the Baseline against which the relative benefits, costs and performance of the other alternatives will be considered. The Baseline Alternative is consistent with the adopted MTA Long Range Plan.

The following projects will be assumed to be included in the No Project Alternative for the North-South San Fernando Valley Transit Corridor Regionally Significant Transportation Investment Study:

San Fernando Valley Metro Rapid Transitway Project - A 14-mile dedicated busway from the North Hollywood Red Line Station to Warner Center, operating primarily on the former Southern Pacific railroad right-of-way, will be implemented by the MTA. The project location was illustrated earlier in Figure 1- 2. There will be 13 stations, five with parking, providing over 3,000 new parking spaces. The Metro Rapid Transitway Corridor Project also includes improvements to the existing bus transit network in the Valley, which will provide access to the Transitway. These improvements are summarized in Table 2-1. The estimated opening date for the transitway is 2005.

Table 2-1. Metro Rapid Transitway Complementary Bus Service Improvements*

Street Name (Direction)**	MTA Route Number***	Peak Period Headway Reduction Percent Reduction (Headways Before/After)	Base Period Headway Reduction Percent Reduction (Headways Before/After)
Devonshire Street (E-W)	158	-	33% (60 to 40)
Lassen Street (E-W)	168	40% (67 to 40)	33% (60 to 40)
Roscoe Boulevard (E-W)	152	-	50% (60 to 30)
Saticoy Street (E-W)	169	26% (54 to 40)	33% (60 to 40)
Sherman Way (E-W)	163	29% (7 to 5)	50% (60 to 30)
Vanowen Street (E-W)	165	29% (7 to 5)	50% (60 to 30)
Victory Boulevard (E-W)	164	17% (18 to 15)	50% (60 to 30)
Laurel Canyon Boulevard (N-S)	230	43% (53 to 30)	-
Woodman Avenue (N-S)	158	-	33% (60 to 40)
Van Nuys (N-S)	156, 233	12% (4 to 3.5)	28% (9 to 6.5)
Sepulveda Boulevard (N-S)	234	9% (11 to 10)	40% (50 to 30)
White Oak Avenue (N-S)	239	11% (45 to 40)	33% (60 to 40)
Reseda Boulevard (N-S)	240	29% (14 to 10)	6% (16 to 15)
Tampa Avenue (N-S)	154	-	33% (60 to 40)
Winnetka Avenue (N-S)	243	-	25% (40 to 30)
De Soto Avenue (N-S)	243	-	25% (40 to 30)
Topanga Canyon Boulevard (N-S)	245	33% (45 to 30)	50% (60 to 30)

Notes:
*Table lists only routes along which service improvements have been made. Existing service would continue on other bus routes in the Valley that are not listed here.
**Street names refer to the arterial along which the major portion of the respective MTA bus route runs. Not all of the street may be served, and smaller portions of other streets may be served by the same line.
***MTA Route Numbers are local service route numbers. Express and limited service, as well as overlapping local service, may be in operation along the same routes.

Source: MTA, San Fernando Valley East-West Transit Corridor Final EIR, 2002.

Van Nuys Boulevard Metro Rapid Bus Service – The MTA will be implementing Metro Rapid Bus service on Van Nuys Boulevard similar to the service on Ventura Boulevard. Elements of the Metro Rapid Bus program will include new vehicles, fewer stops with upgraded physical amenities, and transit signal priority at intersections. This service is planned to be implemented in 2003 extending from Foothill Boulevard, down Van Nuys Boulevard to Ventura Boulevard, and then over the Sepulveda Pass to Westwood.

San Fernando Valley Transit Hubs - A project complementary to the Van Nuys Metro Rapid service will be implemented by the Los Angeles Department of Transportation (LADOT). The San Fernando Valley Transit Hubs project will provide improvements in safety and comfort for bus patrons. It is an LADOT program that has received MTA funding through the 1999 Call For Projects. Typical improvements include pedestrian lighting, shelters, information aids, signage, telephones, and distinctive pavement treatments to identify the place as a transit hub. Candidate locations for the improvements include:

- Van Nuys Blvd/Roscoe Blvd
- Van Nuys Blvd/Sherman Way
- Van Nuys Blvd/Sepulveda Blvd

- Van Nuys Blvd/Victory Blvd
- Nan Nuys Blvd/Vanowen St

Lankershim-San Fernando Metro Rapid Bus – Metro Rapid Bus service is scheduled for San Fernando Road and Lankershim Boulevard in 2006. It will run from the Sylmar/San Fernando Metrolink Station down San Fernando Road to Lankershim Boulevard and then down Lankershim to the North Hollywood Metro Red Line station.

City of Los Angeles Transit Enhancements - The City of Los Angeles has $2.1 Million to implement infrastructure improvements along both Van Nuys Boulevard and San Fernando Road in preparation for Metro Rapid Bus service. The City has also been awarded $187,000 from the 2001 Call for Projects for $233,750 in bus stop improvements along San Fernando Road, scheduled for implementation in 2006.

Sun Valley Metrolink Station Pedestrian Crossing – The City of Los Angeles is working with SCRRA to design and implement pedestrian safety improvements at the Sun Valley station, including bus stop improvements on San Fernando Road. Construction is expected to begin in May 2003.

Warner Center Transit Hub - A transit hub will be built on Owensmouth Avenue on the block between Oxnard Street and Erwin Street. The facility is designed to serve as the primary west Valley transit terminal for MTA buses (including the Ventura Boulevard Rapid Bus and the East-West BRT), LADOT Commuter Express, Simi Valley, Antelope Valley, Santa Clarita and Ventura County transit services. Construction is scheduled to begin in early 2003.

Van Nuys Amtrak/Metrolink Station Parking Expansion – LADOT and Caltrans Rail Programs Division will develop 130 additional parking spaces on approximately one acre adjacent to the existing station. Construction will begin in 2003.

Northridge Metrolink Station Pedestrian and Parking Improvements – This LADOT project will provide greater access by adding a sidewalk from Parthenia Street and street lighting and trees. It will also renovate the south portion of the parking lot and furnish improvements on Wilbur Avenue.

Chatsworth Metrolink Station Parking Expansion – Additional parking will be constructed to replace parking that was displaced by the joint use depot/child care facility. Design is expected to begin in autumn 2002.

2.2.2 Alternative 1: Transportation Systems Management Alternative

A Transportation Systems Management (TSM) Alternative is a required alternative in a RSTIS. It is designed to identify low-cost, easily implementable improvements as an alternative to construction of more-expensive alternatives. The San Fernando North-South Transit Corridor TSM Alternative entails providing additional transit service on existing MTA north-south transit routes. Table 2-2 illustrates the further reductions in transit headways that would be implemented by the TSM Alternative in comparison to the No Build Alternative.

Table 2-2. TSM Alternative Bus Service Improvements*

Street Name (Direction)**	MTA Route Number***	Peak Period Headway Reduction Percent Reduction (Headways Before/After)	Base Period Headway Reduction Percent Reduction (Headways Before/After)
Vineland Avenue (N-S)	152	33% (15 to 10)	33% (30 to 20)
Lankershim Boulevard (N-S)	166	33% (15 to 10)	33% (30 to 20)
Laurel Canyon Boulevard (N-S)	230	33% (15 to 10)	-
Woodman Avenue (N-S)	158	-	50% (60 to 30)
Van Nuys Boulevard (N-S)	156, 233	19% (2.7 to 2.2)	9% (5.5 to 5)
Sepulveda Boulevard (N-S)	234	33% (15 to 10)	25%(20 to 15)
White Oak Avenue (N-S)	239	33% (45 to 30)	50% (60 to 30)
Reseda Boulevard (N-S)	240	-	-
Tampa Avenue (N-S)	154	-	50% (60 to 30)
Winnetka Avenue (N-S)	243	-	50% (60 to 30)
De Soto Avenue (N-S)	243	-	50% (60 to 30)
Topanga Canyon Boulevard (N-S)	245	-	50% (60 to 30)

Notes:
*Table lists only routes along which service improvements have been made. Existing service would continue on other bus routes in the Valley that are not listed here.
**Street names refer to the arterial along which the major portion of the respective MTA bus route runs. Not all of the street may be served, and smaller portions of other streets may be served by the same line.
***MTA Route Numbers are local service route numbers. Express and limited service, as well as overlapping local service, may be in operation along the same routes.

Figure 2-1 illustrates the distribution of the routes that would be improved by the TSM Alternative. The routes that are planned to be improved as part of the SFV Metro Rapid Transitway are illustrated as well.

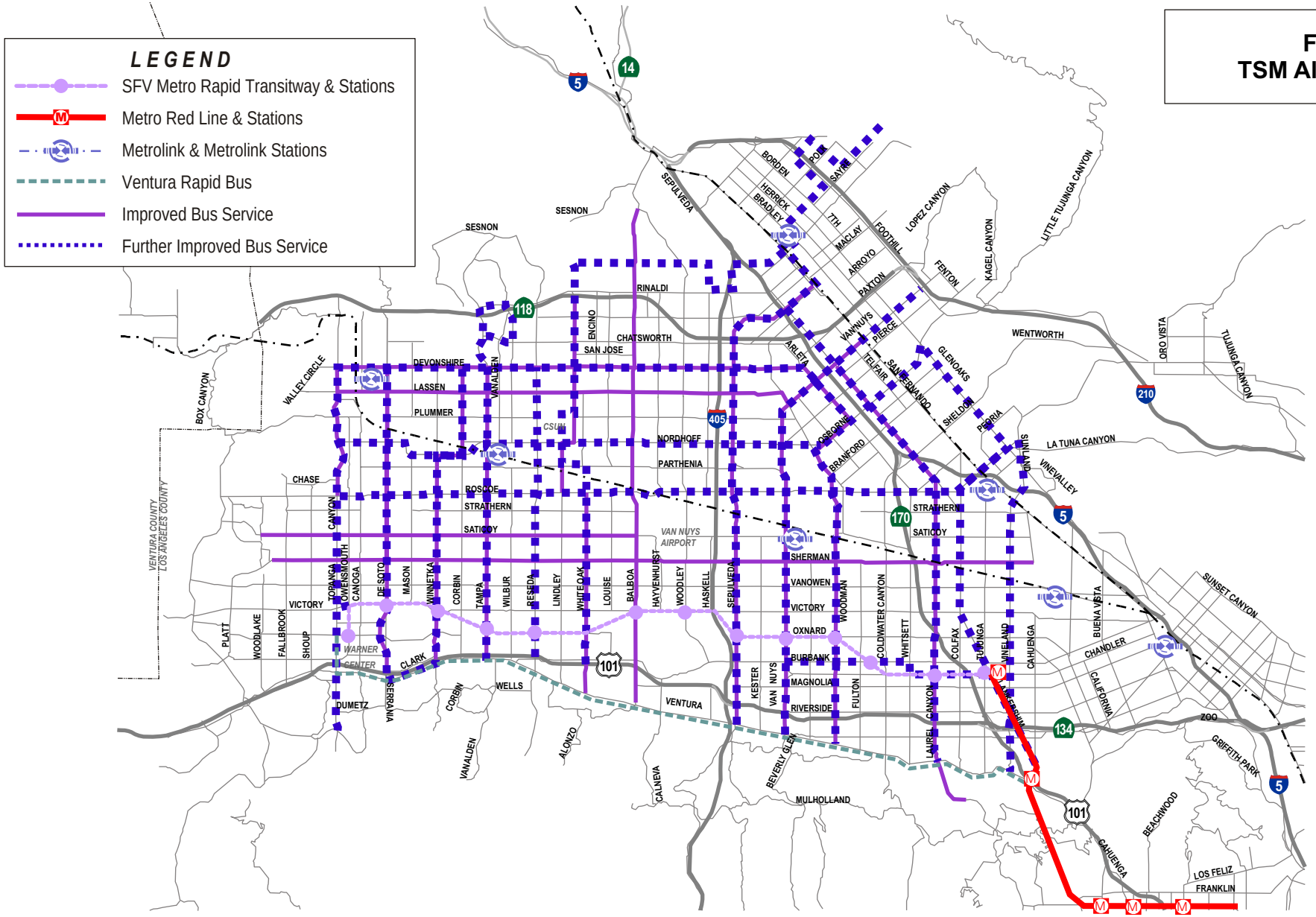
2.2.3 Alternative 2: Rapid Bus Alternative

The Rapid Bus Alternative further improves transit service on arterial streets by adding Rapid Bus service on the following routes:

- North Hollywood Red Line Station to Warner Center Transit Hub via Vineland, Roscoe and Topanga Canyon Boulevards
- Ventura Boulevard in Tarzana to Sylmar/San Fernando Metrolink Station via Reseda Boulevard, Devonshire Boulevard, Sepulveda Boulevard, Brand Boulevard, and San Fernando Road

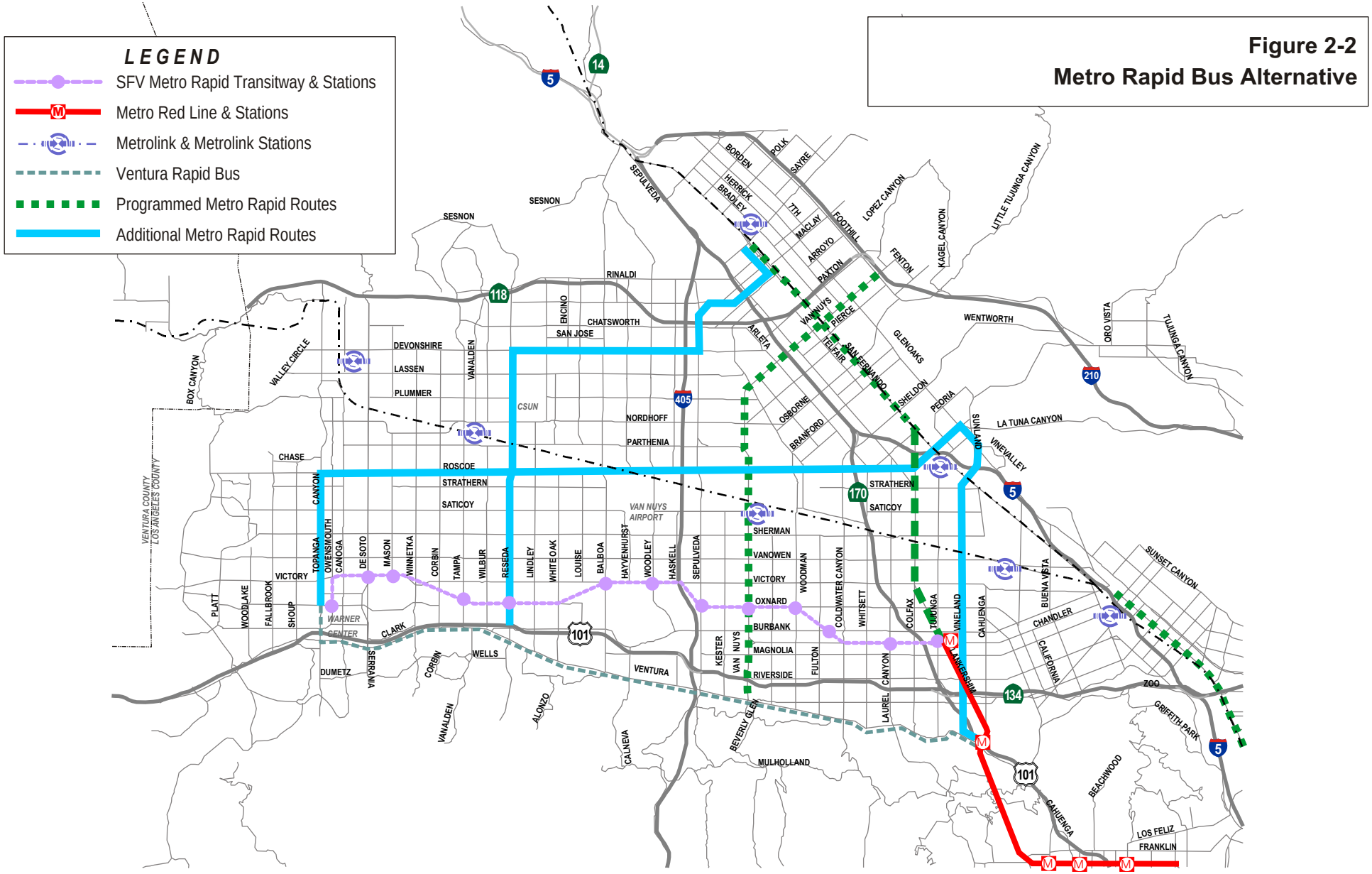
Figure 2-2 illustrates the Rapid Bus Alternative. The routes would operate similar to the existing Ventura Metro Rapid Bus and the planned Van Nuys and Lankershim-San Fernando Metro Rapid Buses, with limited stops (approximately one mile apart), new low-floor buses, enhanced bus stops and potentially expedited fare collection procedures, and short peak period headways. The Rapid Bus Alternative would provide a Metro Rapid Bus route in all portions of the San Fernando Valley except the northwest Valley. It would provide a network of high-capacity, reduced travel time bus routes linking most parts of the Valley to one another and to regional transportation facilities.

Figure 2-1
TSM Alternative



Source: Meyer, Mohaddes Associates

Figure 2-2
Metro Rapid Bus Alternative



Source: Meyer, Mohaddes Associates

Alternatives 3 through 12 – Corridor Alternatives
The following describes each of the route alternatives for the North-South San Fernando Valley Transit Corridor. Each description provides the corridor, current MTA Bus lines operating on the route, the type of facility proposed and connections to other facilities. It should be noted that these are preliminary descriptions identifying conceptual alternatives in each corridor. Following the preliminary screening of the corridors in Chapter 3, specific improvements in a reduced number of corridors are described in detail. The routes are illustrated on Figure 2-3.

2.2.4 Alternative 3: Glenoaks Boulevard - Vineland Avenue

Description of Proposed Route – This route would be located primarily on Glenoaks Boulevard extending from the Sylmar/San Fernando Metrolink Station to Vineland Avenue in Sunland. The route would then turn south on Vineland Avenue to connect to the Universal City Metro Red Line Station and the Ventura Metro Rapid bus.

Description of Current MTA Lines – MTA Routes 152, 169 and 163 operate on Glenoaks Boulevard and Vineland Avenue. Routes 92, 93, and 410 operate on portions of Glenoaks Boulevard.

Type of Busway and Limits– The entire route will generally provide a bus lane at curbside by prohibiting parking during peak periods. At major intersections, which currently operate with either dual left-turn lanes or separate right-turn lanes, mixed-flow operation of buses may be required.

Stations – Stations are proposed at the Sylmar/San Fernando Metrolink Station, Hubbard Street, Van Nuys Boulevard, Osborne Street, Tuxford Street, San Fernando Road, Victory Boulevard, Lankershim Boulevard, and Universal City Metro Station.

Intermodal Connections – This route would provide connections to the Sylmar/San Fernando Metrolink Station, North Hollywood Red Line/SFV Metro Rapid Transitway (with a short detour off of Vineland), Ventura Metro Rapid Bus and Universal City Metro Red Line Station.

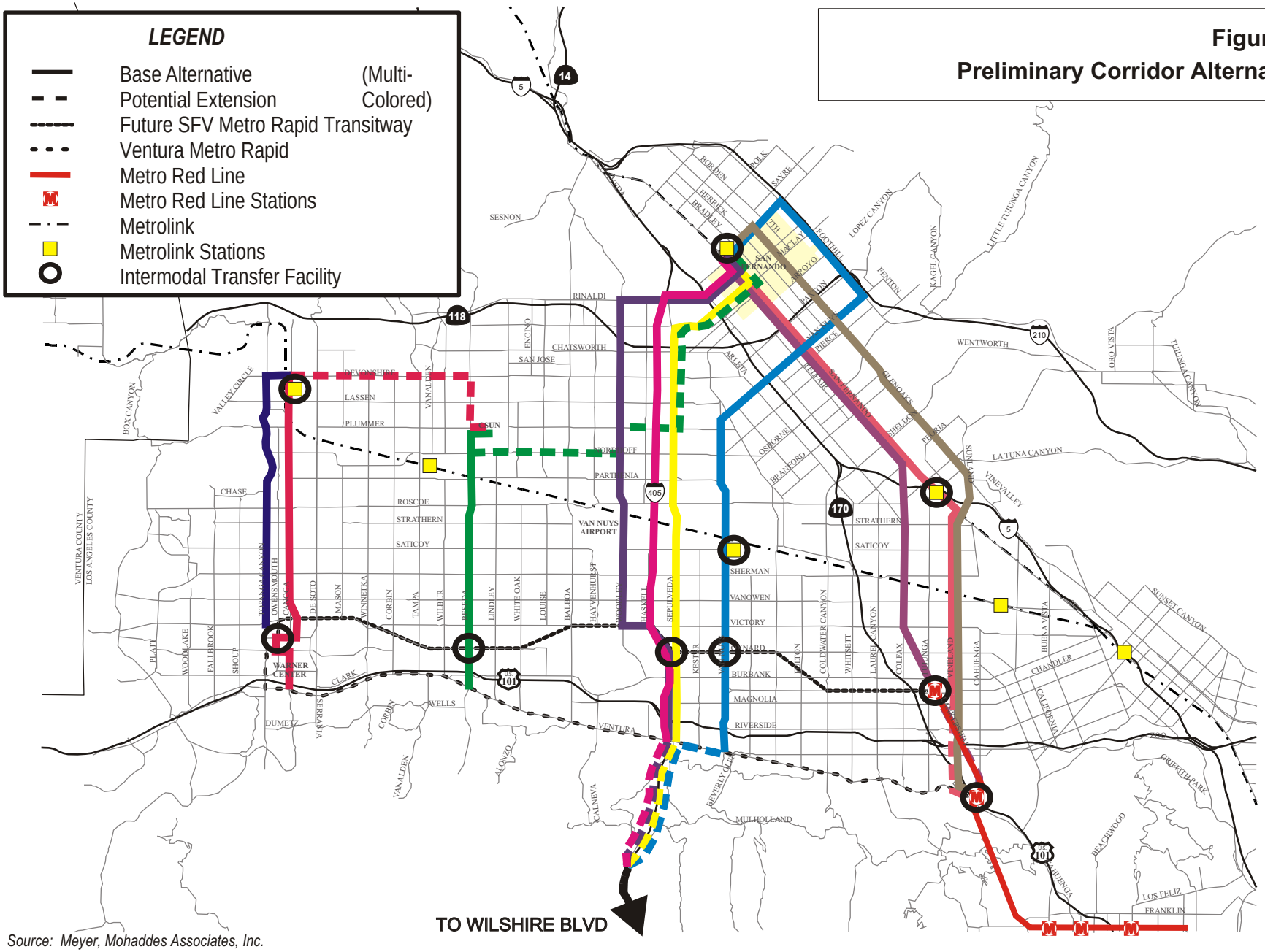
Activity Centers – This route provides service to the Sylmar/San Fernando Metrolink Station, Whiteman Airpark/Industrial, Hansen Dam Recreation Area, Sun Valley Park and Civic Center, Universal City Metro Red Line Station and Universal City.

Other Comments – The route would have to divert off of Vineland to serve the North Hollywood Metro Red Line Station.

2.2.5 Alternative 4: Vineland Avenue – San Fernando Road

Description of Proposed Route – This route would be located primarily on San Fernando Road from the Sylmar/San Fernando Metrolink Station to Vineland Avenue in Sunland. The route would then turn south on Vineland Avenue to connect to Ventura Boulevard and the Universal City Metro Red Line Station.

Figure 2-3
Preliminary Corridor Alternatives



Source: Meyer, Mohaddes Associates, Inc.

Current MTA Lines – Routes152, 169 and 163 operate on Vineland Avenue. Routes 394, 94 and 561 operate on San Fernando Road.

Type of Busway and Limits – San Fernando Road Southbound Bus Lane is provided by prohibiting parking during peak periods. San Fernando Road Northbound Bus operates in mixed-flow. The Vineland Avenue Bus Lane is provided by prohibiting parking during peak periods.

Stations – Stations will be located at San Fernando Road, Maclay Avenue, Van Nuys Boulevard, Osborne Street, the Sun Valley Metrolink Station in Sunland and at Vineland Avenue, Victory Boulevard, Lankershim Boulevard, and Universal City Metro Red Line Station.

Intermodal Connections – This route would provide connections to the Sylmar/San Fernando Metrolink Station, Sun Valley Metrolink Station, North Hollywood Metro Red Line/SFV Metro Rapid Transitway, Ventura Metro Rapid Bus and Universal City Metro Red Line Station.

Activity Centers – This route provides service to the Sylmar/San Fernando Road Metrolink Station, Downtown San Fernando, Whiteman Airpark, Pacifica Hospital of the Valley, Sun Valley Metrolink Station, Sun Valley Park and Civic Center, Universal City Metro Red Line Station and Universal City.

Other Comments – The route would have to divert off of Vineland to serve the North Hollywood Metro Red Line Station.

2.2.6 Alternative 5: Lankershim Boulevard – San Fernando Road

Description of Proposed Route – This route would be located primarily on San Fernando Road, extending from the Sylmar/San Fernando Metrolink station to Lankershim Boulevard then south to connect to the North Hollywood Metro Red Line Station, the San Fernando Valley Metro Rapid Transitway and the Universal City Metro Red Line Station.

Current MTA Lines – MTA Routes 394, 94, 561 operate on San Fernando Road and Routes 154, 156 and 166 operate on Lankershim Boulevard.

Type of Busway & Limits – The route would generally provide a Bus Lane by prohibiting parking during peak periods. The prohibition could occur in the peak direction only in some areas of Lankershim Boulevard. San Fernando Road in the southbound would also operate with parking prohibitions and northbound would operate with bus in mixed-flow.

Stations – Stations would be located on San Fernando road at Maclay Avenue, Van Nuys Boulevard, Osborne Street, Sheldon Street, and on Lankershim Boulevard at Roscoe Boulevard, Sherman Way, Vanowen Street, Victory Boulevard, North Hollywood

Metro Red Line Station/San Fernando Valley Metro Rapid Transitway, Vineland Avenue and Universal Metro Red Line Station.

Intermodal Connections – This route would provide connections at the Sylmar/San Fernando Metrolink Station, the North Hollywood Metro Red Line Station, SFV Metro Rapid Transitway, Ventura Metro Rapid Bus and Universal City Metro Red Line Station.

Activity Centers – This route provides service to the Sylmar/San Fernando Metrolink Station, Downtown San Fernando, Whiteman Airpark / Industrial, Pacifica Hospital of the Valley, Metro Red Line Station-North Hollywood, North Hollywood Park and Civic Center, Universal City Metro Red Line Station and Universal City

Other Comments– Operation of the N-S Metro Transitway between the Universal Metro Red Line Station and the North Hollywood Metro Red Line Station would be duplicative of Metro Red Line service which may reduce ridership for that segment.

2.2.7 Alternative 6: Van Nuys Boulevard

Description of Proposed Route – This Route would operate between the Sylmar/San Fernando Metrolink Station and Westwood via Hubbard Street, Foothill Boulevard and Van Nuys Boulevard. South of Ventura Boulevard, drivers will have the option to take either the I-405 or Sepulveda Boulevard route to Westwood. This preliminary route represents an extension of the planned Van Nuys Metro Rapid service from Foothill Boulevard to the Sylmar/San Fernando Metrolink Station.

Current MTA Lines – MTA Routes 233, 561, 426 and 156 operate presently on Van Nuys Boulevard.

Type of Busway & Limits – The route would run in mixed flow with transit priority system (TPS) along Van Nuys Boulevard from Foothill Boulevard to Ventura Boulevard. It would then travel along Ventura Boulevard to Sepulveda Boulevard and drivers would have the option to take Sepulveda Boulevard to Wilshire Boulevard, or get onto the San Diego Freeway and cross the Sepulveda Pass on the freeway, exiting at Wilshire Boulevard, to connect with the Wilshire Metro Rapid Bus in Westwood.

Stations – Stations for the route would include Hubbard Avenue at Glenoaks Boulevard, Foothill Boulevard at Arroyo Avenue and on Van Nuys Boulevard at Dronfield Avenue, Glenoaks Boulevard, San Fernando Road, Arleta Avenue, Woodman Avenue, Nordoff Street, Roscoe Boulevard, Van Nuys Metrolink Station, Sherman Way, Vanowen Street, Victory Boulevard, Oxnard Street/SFV Metro Rapid Transitway, Burbank Boulevard, and Ventura Boulevard Metro Rapid Bus.

Intermodal Connections – This route would provide connections at the Sylmar/San Fernando Metrolink Station, Van Nuys Metrolink/Amtrak Station, E-W Valley Transitway and Ventura Boulevard Metro Rapid Bus.

Activity Centers – This route provides service to the Sylmar/San Fernando Metrolink Station, Whiteman Airpark/Industrial, Panorama Mall, "The Plant" Shopping Center, Van

Nuys Metrolink/Amtrak Station, Van Nuys Civic Center, SFV Metro Rapid Transitway, Northridge Hospital, Hollywood Community Hospital, Sherman Oaks Hospital, Van Nuys Auto Center, Sherman Oaks Square Town Center, Ventura Boulevard Commercial District and Westwood/UCLA.

Other Comments– This route will receive Metro Rapid Bus service in June 2003 on Van Nuys Boulevard with termini in the vicinity of Foothill Boulevard and in Westwood.

2.2.8 Alternative 7: Sepulveda Boulevard

Description of Proposed Route – This route begins at the Ventura Boulevard Metro Rapid Bus line and extends north to Brand Boulevard (north of the Route 118 Freeway) then on Brand Boulevard to San Fernando Road and terminates at the Sylmar/San Fernando Metrolink Station. An option is also being considered to extend the route over the Sepulveda Pass to Westwood.

Current MTA Lines – MTA Routes 183 and 234 operate on Sepulveda Boulevard and Brand Boulevard. Routes 394, 94 and 561 operate on San Fernando Road.

Type of Busway and Limits – A Sepulveda Boulevard Busway will operate from Ventura Boulevard to Parthenia with the bus in mixed-flow southbound and a peak period lane northbound with parking prohibitions, and a restriping of the travel lanes. North of Parthenia to Brand Boulevard, a 24-hour bus lane is possible. On Brand Boulevard, the route could also operate in bus lanes with peak period parking prohibitions, but given the residential nature of this part of the corridor and the low traffic volumes, a peak period transit lane is not proposed. Transit Priority Signals would be implemented along the route.

Stations – Stations are located at Ventura Boulevard Metro Rapid Bus, the SFV Metro Rapid Transitway, Victory Boulevard, Vanowen Street, Sherman Way, Roscoe Boulevard, Nordhoff Street, Devonshire Street, Laurel Canyon Boulevard, San Fernando Boulevard and the Sylmar/San Fernando Metrolink Station.

Intermodal Connections – This route would provide connections at the Sylmar/San Fernando Metrolink Station, SFV Metro Rapid Transitway and Ventura Boulevard Metro Rapid Bus.

Activity Centers - This route provides service to the Sylmar/San Fernando Metrolink Station, Downtown San Fernando, San Fernando Mission, Valley Presbyterian Hospital, SFV Metro Rapid Transitway and Ventura Boulevard Commercial District.

Other Comments– The southern portion of this route southbound would operate in mixed-flow and resulting operations would depend on current congestion levels and locations. It would also include implementation of the transit priority system (TPS) at all signalized intersections.

2.2.9 Alternative 8: San Diego Freeway (I-405)

Description of Proposed Route – This route would begin at the Sylmar/San Fernando Metrolink Station and proceed on San Fernando Road to Mission Boulevard to Rinaldi Street then on the I-405 Freeway south to Roscoe Boulevard where the route exits to a station then proceeds south on the I-405 to Victory Boulevard and the SFV Metro Rapid Transitway. The route would then proceed south to Ventura Boulevard Metro Rapid Bus Stations, then back on the I-405 to the Wilshire Boulevard Metro Rapid Bus Line.

Current MTA Lines – This route accommodates Santa Clarita Bus Lines 792, 793, 797 and 798 and Antelope Valley Line 786.

Type of Busway and Limits – This route would operate on San Fernando Road and Rinaldi in peak period bus lanes, then on the I-405 in the HOV lanes, with stops at Roscoe and the SFV Metro Rapid Transitway. It would operate in the new HOV lanes on I-405 south to Wilshire Boulevard. In the northbound direction it would operate in mixed flow over the Sepulveda Pass until such time that the planned northbound HOV lanes on the freeway are complete.

Stations – Stations would be located at Sylmar/San Fernando Metrolink, Rinaldi at the Medical Center, Roscoe Boulevard, the Valley SFV Metro Rapid Transitway, and Ventura Boulevard Metro Rapid Bus Station.

Intermodal Connections – This route would provide connections at the Sylmar/San Fernando Metrolink Station, SFV Metro Rapid Transitway, Ventura Boulevard Metro Rapid Bus and Wilshire Boulevard Metro Rapid Bus.

Activity Centers – This route provides service to the Sylmar/San Fernando Metrolink Station, Providence Holy Cross Medical Center, Sepulveda Dam Recreation Center, Ventura Boulevard Commercial District and Wilshire Boulevard/UCLA.

Other Comments– Running the bus on the I-405 Freeway during peak periods may result in congested operations (merging and weaving).

2.2.10 Alternative 9: Woodley Avenue

Description of Proposed Route – The route begins at Ventura Boulevard Metro Rapid Bus on Sepulveda Boulevard and proceeds northerly to the SFV Metro Rapid Transitway to Woodley Avenue at Victory Boulevard. It then turns north on Woodley Avenue to Rinaldi, where it turns easterly to San Fernando Road (via Mission Boulevard), and then to the Sylmar/San Fernando Metrolink Station.

Current MTA Lines – MTA Line 236 operates on Woodley Avenue, along with Santa Clarita 793 and 798. MTA lines 169 and 573 operate on short sections of Woodley Avenue.

Type of Busway and Limits – This busway will operate with peak period parking prohibitions on Sepulveda Boulevard from Ventura Boulevard to the SFV Metro Rapid Transitway and then on the Transitway to Victory Boulevard. From that point, the bus would operate in mixed-flow.

Stations – Stations would occur at the Ventura Boulevard Metro Rapid Bus, the SFV Metro Rapid Transitway, Victory Boulevard, Vanowen Street, Sherman Way, Van Nuys Airport, Roscoe Boulevard, Plummer Street, Chatsworth Street, Rinaldi at the Medical Center and the Sylmar/San Fernando Metrolink Station.

Intermodal Connections – This route would provide connections at the Sylmar/San Fernando Metrolink Station, "Fly Away Bus" at Van Nuys Airport, SFV Metro Rapid Transitway, Ventura Boulevard Metro Rapid Bus and possible connection to the Wilshire Boulevard Metro Rapid Bus.

Activity Centers – This route provides service to the Sylmar/San Fernando Metrolink Station, Providence Holy Cross Medical Center, Veteran Administration, Sepulveda Care Center, Fly Away Bus Service to LAX at Van Nuys Airport, Sepulveda Dam Recreation Center and Ventura Boulevard Commercial District.

Other Comments– The majority of the route would operate in mixed-flow conditions.

2.2.11 Alternative 10: Reseda Boulevard

Description of Proposed Route – This route begins at the Ventura Boulevard Metro Rapid Bus Line and the route proceeds northerly to California State University at Northridge, where it enters the campus and exits to Nordhoff and proceeds easterly to Woodley Avenue, northerly to Plummer Street, easterly to Sepulveda Boulevard and then north to Brand Boulevard and San Fernando Road to the Sylmar/San Fernando Metrolink Station.

Current MTA Lines – MTA Lines 240, 167 and 154 operate on Reseda Boulevard.

Type of Busway and Limits – This busway would operate in mixed-flow with the Transit Priority System.

Stations – Stations would be located at the Ventura Boulevard Metro Bus, the SFV Metro Rapid Transitway, Victory Boulevard, Vanowen Street, Sherman Way, Roscoe Boulevard, CSUN, Balboa Boulevard and Woodley Avenue on Nordoff Street, Veterans Administration Hospital on Plummer Street, Sepulveda Boulevard, Devonshire Street, Brand Boulevard at Laurel Canyon Boulevard, San Fernando Road and the Sylmar/San Fernando Metrolink Station.

Intermodal Connections – This route would provide connections to the Ventura Boulevard Metro Rapid Bus, the SFV Metro Rapid Transitway, and the Sylmar/San Fernando Metrolink Station.

Activity Centers – This route provides service to the Ventura Boulevard Commercial, Northridge Medical Center, CSUN, Veterans Administration Hospital, San Fernando Mission, downtown San Fernando Road and Sylmar.

Other Comments– The route would operate in mixed-flow conditions. This route provides an E-W component to the N-S route and connections to Mid-Valley centers (CSUN) and the Veteran Administration facility from Sylmar/San Fernando. A short version of this route was also considered which would run from Ventura Boulevard to the CSUN campus only. The Reseda Extended route described above includes the extension from CSUN to the Sylmar/San Fernando Metrolink Station.

2.2.12 Alternative 11: Canoga Avenue Railroad Right-of-Way

Description of Proposed Route – The Route begins at the Warner Center Transit Center and proceeds north on Variel Avenue to the SFV Metro Rapid Transitway on the former railroad right-of-way. The route proceeds north on the railroad right-of-way which parallels Canoga Avenue, to Plummer Street. Two options were considered for the final northern segment to connect to Lassen Street, (1) a grade separation could be built over the Metrolink/Amtrak lines to carry the busway straight north to Lassen Street, or (2) the busway would end at Plummer Street and buses would use Plummer, Owensmouth and Lassen to reach the Chatsworth Metrolink Station.

Current MTA Lines – No current bus lines.

Type of Busway and Limits – This route would run "on street mixed-flow" on Erwin Street or Oxnard Street (one-direction, each) and on Variel Ave. to the abandoned Railroad right-of-way, alongside Canoga Avenue. The route proceeds north as a separated busway, with a potential grade separation over the Metrolink/Amtrak Rail Road lines and connects to the Chatsworth Metrolink Station.

Stations – Stations are located at the Warner Center Transit Center, Vanowen Street, Sherman Way, Roscoe Boulevard, Nordhoff Street and the Chatsworth Metrolink Station.

Intermodal Connections – This route would provide connections to the Chatsworth Metrolink Station, SFV Metro Rapid Transitway, Warner Center Transit Hub and Ventura Boulevard Metro Rapid Bus.

Activity Centers – This route provides service to the Chatsworth Metrolink Station, Warner Center Hilton, Westfield Shoppingtown Topanga, The Promenade Mall, Warner Ranch Park, Voit Center, Blue Cross Center, Trillium and the Ventura Boulevard Commercial District.

Other Comments– This route would provide a separate exclusive transitway and parallel off street bikeway. It connects to the end of the SFV Metro Rapid Transitway and the Ventura County Metrolink Line, but does not connect to the Antelope Valley Metrolink Line. There is also the potential for park-and-ride lots at several locations along this MTA-

owned right-of-way. There are existing businesses in the right-of-way which lease the land from the MTA and many would be displaced if the ROW is used for a transitway.

2.2.13 Alternative 12: Topanga Canyon Boulevard

Description of Proposed Route – The route begins at the Warner Center Transit Center, uses Erwin Street to Topanga Canyon Boulevard, then northerly as a bus in mixed-flow route to Lassen Street, then to the Chatsworth Metrolink Station.

Current MTA Lines – MTA Lines 150, 166, 426, 575, 750, 422, 245, 168 and Santa Clarita 791 operate along this route.

Type of Busway and Limits – This route would operate as a bus in mixed-flow with the Transit Priority Systems for the entire length.

Stations – Stations would be located at the Warner Center Transit Center, Victory Boulevard, Vanowen Street, Sherman Way, Roscoe Boulevard, Nordhoff Street and the Chatsworth Metrolink Station.

Intermodal Connections – This route would provide connections to the Chatsworth Metrolink Station, Warner Center Transit Center, SFV Metro Rapid Transitway (connection at Warner Center) and Ventura Boulevard Metro Rapid Bus connection at Warner Center.

Activity Centers – This route provides service to the Chatsworth Metrolink Station, Canoga Park High School, Westfield Shoppingtown Topanga and the Promenade Mall.

Other Comments– This route is currently a state highway (Route 27) and obtaining parking prohibitions, additional ROW for stations, special signal timing to expedite bus flow would require coordination with and approval by Caltrans.

3.0 PRELIMINARY SCREENING OF CORRIDORS

3.1 Overview of Screening Process

In order to reduce the number of alternatives down to a more manageable set of alternatives, a qualitative assessment of the corridors was conducted. The screening process included the eleven corridor options described in Chapter 2. It was always the intention to assess lower-cost TSM and Rapid Bus Alternatives in the RSTIS, and a No-Project Alternative is a mandatory element of a RSTIS, so these alternatives were not subject to the corridor screening process.

When the preliminary screening was conducted, details such as locations of stations, dedicated lanes and other physical improvements on each corridor had not yet been developed. This initial screening process was intended to be a higher-level screening process that would identify any fatal flaws in a corridor that would make it inappropriate for high-capacity transit service and to identify which corridors appeared to warrant more detailed analysis. This initial scope was designed to identify the four or five routes (as well as the other three options mentioned) that represented the highest opportunity for success and cost-effectiveness, based on a number of evaluation criteria. These remaining corridors were then taken to the next step, in terms of developing detailed plans for the improvements on each corridor (Chapter 4) and then evaluated in greater detail in Chapter 5.

3.2 Methodology

Nineteen evaluation criteria were developed which allowed the team to qualitatively assess how well the corridors would meet the goals and objectives of the project. The evaluation criteria included:

- Serves Population Density
- Serves Employment Density
- Serves Transit Dependent Population
- Serves Activity Centers
- Consistency with General Plans
- Enhances Redevelopment Project Potential
- Utilizes Existing Transit Priority System
- Serves High Traffic Volume Corridor
- Has Opportunities for Dedicated Lanes
- Complements Existing Transit Routes
- Exhibits High Ridership Potential
- Enhances Network Connectivity
- Enhances Connections Beyond San Fernando Valley
- Consistency with Long Range Transportation Plans
- Opportunities for Urban Design Enhancements
- Serves Transit/Pedestrian Oriented Development
- Cost-Effectiveness
- Input from Policy Makers
- Input from the Public

For each of these evaluation criteria, the alternatives were ranked relative to one another as high, medium or low. Given the preliminary nature of the evaluation process at this point, no attempt was made to quantify the measures, but rather based on engineering

judgement and knowledge of the study area, the corridors were rated relative to one another on how they would best perform with respect to each evaluation criteria.

Table 3.1 provides a summary evaluation of all 13 alternatives considered. A description of the relative rankings of the alternatives in each issue area follows.

Demographics

Demographic factors have a direct correlation to the success of a transit route, and must be examined carefully when making a determination as to where to place new service. Using Geographic Information Systems technology, maps were produced of the San Fernando Valley, and demographic factors were plotted on them. See Figures 1-4 through 1-7 in Chapter 1.

Population Density

Population density, the number of people living on an acre of land, was visually examined for each of the candidate corridors. Figure 1-7, earlier, presented the population density on the study area at the census tract level in the following categories:

- 0-10 persons per acre
- 10-18 persons
- 18-26 persons
- 26-34 persons
- 34-144 persons

The corridors were evaluated on how many of the high-density census tracts they would serve. Those corridors serving areas of high population density ranked most highly. The Van Nuys corridor serves the areas of highest population density. The TSM Alternative was also rated high because it serves many parts of the Valley. Glenoaks Boulevard and the corridors in the West Valley serve areas of lower density population and were rated lower.

Employment Density

Employment density, the number of jobs per acre, is also an important predictor of transit ridership, as people need to get to and from work. In this instance, Transit Analysis Zones (TAZs) were utilized as the area of identification/analysis. For a given TAZ, the employment density was determined to be:

- <2 jobs per acre
- 2-10 jobs
- 10-17 jobs
- 17-22 jobs
- > 22 jobs

The corridors were evaluated on how many of the high-density employment zones they would serve. Those corridors serving areas of high employment density ranked most highly. The Van Nuys corridor serves areas of high employment in the Government Center. The Rapid Bus Alternative serves Warner Center and the CSUN campus. The Canoga corridor serves Warner Center and the Chatsworth industrial area. All were rated highly, as was the TSM Alternative because it serves many employment areas throughout the Valley. Glenoaks, Woodley and the Reseda Short corridor serve areas of lower employment density and were rated lower.

Table 3.1 Preliminary Corridor Evaluation

EVALUATION CRITERIA	TSM	Rapid Bus	Glenoaks Blvd	Vineland Ave	Lankershim Blvd	Van Nuys Blvd	Sepulveda Blvd	I-405	Woodley Ave	Reseda Blvd (short)	Reseda Blvd (extended)	Canoga RR ROW	Topanga Canyon Blvd	EVALUATION CRITERIA
Population Density	●●●	●●	●	●●	●●	●●●	●●	●	●	●	●●	●	●	Population Density
Employment Density	●●●	●●●	●	●●	●●	●●●	●●	●●	●	●	●●	●●●	●●	Employment Density
Transit Dependent Population	●●	●●	●	●●	●●●	●●●	●●	●	●	●●	●●	●	●	Transit Dependent Population
Serves Activity Centers	●●	●●	●	●●	●●	●●●	●●	●●	●●	●●	●●●	●●	●	Serves Activity Centers
General Plans, Consistency	●●	●	●●	●	●●	●●●	●	●	●	●●	●●	●	●●	General Plans, Consistency
Redevelopment Project Potential	●●	●	●●	●●	●●	●	●	●	●	●	●	●	●	Redevelopment Project Potential
Existing Transit Priority System	●	●	●	●●	●●●	●●●	●	●	●	●	●	●	●	Existing Transit Priority System
Existing Traffic Volumes	●●	●●	●	●●	●●	●●●	●●	●●●	●	●●●	●●●	●	●●●	Existing Traffic Volumes
Opportunities for Dedicated Lane	●	●	●●	●●	●●	●●	●●	●●●	●	●	●	●●●	●	Opportunities for Dedicated Lane
Existing Routes: Complementary or Competitive	●●	●●●	●	●	●●●	●●●	●●	●●	●●	●●	●●●	●●●	●●	Existing Routes: Complementary or Competitive
Ridership Potential	●●	●●	●●	●●	●●	●●●	●●	●	●	●●	●	●	●	Ridership Potential
Network Connectivity	●	●●●	●●	●●●	●●●	●●●	●●	●	●	●●	●●●	●●	●●	Network Connectivity
Connectivity beyond SFV	●●	●●●	●●	●●	●●●	●●	●●●	●●●	●	●	●●	●●	●	Connectivity beyond SFV
Consistency with LRP	●●	●●	●	●	●●●	●●●	●	●●	●	●	●	●	●	Consistency with LRP
Impediments to Urban Design	●	●●	●●	●	●	●●	●●	●	●	●●	●●	●●●	●●	Impediments to Urban Design
Transit / Pedestrian Oriented	●●	●●	●	●●	●●●	●●●	●●	●	●	●●●	●●●	●	●●	Transit / Pedestrian Oriented
Cost-Effective Project	●●	●●	●●	●●	●●●	●●●	●●	●●	●	●●	●●	●	●●	Cost-Effective Project
Elected Officials Input	●●	●●	●	●	●●	●●●	●●●	●	●	●	●●	●●●	●	Elected Officials Input
Public Input	●●	●●	●	●	●●	●●●	●●●	●	●	●	●	●●●	●	Public Input

High ●●●
Medium ●●
Low ●

Transit-Dependent Population

One of the primary goals of transit service is to provide for the mobility needs of those youth and seniors who do not drive an automobile. These demographic audiences are termed "transit-dependent" population (those younger than 15 years old and those over 64 years old). Households without access to a car and those below the poverty line are also typically dependent on transit. A composite measure of these factors was created as a Transit Dependency Index (See Figure 1-10) using data derived from the 2000 census. The census tracts were rated from Far Below Average, meaning little dependency on transit, to Far Above Average, meaning many households were dependent upon transit. The corridors were reviewed to determine which corridors served the areas with the largest number of census tracts with concentrations of transit-dependent persons.

Each of the candidate corridors was evaluated, and those corridors which passed through areas having a high concentration of transit-dependent populations were ranked most highly. The Lankershim-San Fernando and Van Nuys corridors were rated highest. The Canoga and Topanga Canyon corridors served the lowest number of highly transit dependent zones and were rated low.

Table 3.2 summarizes the ratings of the corridors on demographic factors.

Table 3.2 Demographics Factors

Criteria/Corridor	TSM	Rapid Bus	Glenoaks Blvd	Vineland Ave	Lankershim Blvd	Van Nuys Blvd	Sepulveda Blvd	I-405	Woodley Ave	Reseda Blvd (Short)	Reseda Blvd (Extended)	Canoga RR ROW	Topanga Canyon Blvd
DEMOGRAPHIC FACTORS													
Population Density	**XXX**	**XX**	**X**	**XX**	**XX**	**XXX**	**XX**	**X**	**X**	**X**	**XX**	**X**	**X**
Employment Density	**XXX**	**XXX**	**X**	**XX**	**XX**	**XXX**	**XX**	**XX**	**X**	**XX**	**XX**	**XXX**	**XX**
Transit Dependent Population	**XX**	**XX**	**XX**	**XX**	**XXX**	**XXX**	**XX**	**X**	**X**	**XX**	**XX**	**X**	**X**
Scoring Factors:													
High 3 - **XXX**													
Medium 2 - **XX**													
Low 1 - **X**													

Land Use Plans and Policies

Activity Centers

One of the factors important in the success of any transit service is its ability to link origin points with destinations. Those routes, which help to link the greatest number of origins and destinations, have the potential for higher ridership. Those that serve major activity centers may also require higher capacity transit services, like Metro Rapid Bus, because of the concentration of activity and potential peaked ridership at such centers. Therefore, when evaluating the initial list of candidate corridors it was important to take into consideration the number and type of activity centers along each corridor.

In the next stage of the evaluation process, the trip generation factors of the various kinds of activity centers located along each of the remaining candidate corridors will be reflected in the ridership forecasts. Activity centers and intermodal facilities served by each corridor are summarized in Table 3-3.

Table 3.3 Activity Centers

CORRIDOR	MAJOR ACTIVITY CENTERS	INTERMODAL CONNECTIONS
TSM	Serves all activity centers	Serves all intermodal facilities
Rapid Bus	Downtown San Fernando	Sylmar/San Fernando Metrolink Station
	California State University Northridge	Metro Red Line Station – Universal City
	Warner Center	Future SFV Metro Rapid Transitway
	Universal City	Ventura Boulevard Metro Rapid Bus
Glenoaks Blvd	Whiteman Airpark	Sylmar/San Fernando Metrolink Station
	Hansen Dam Recreation Area	Metro Red Line Station – Universal City
	Sun Valley Park/Civic Center	
	Universal City	
Vineland Ave	Downtown San Fernando	Sylmar/San Fernando Metrolink Station
	Whiteman Airpark	Sun Valley Metrolink Station
	Pacifica Hospital of the Valley	Metro Red Line Station – Universal City
	Sun Valley Park/Civic Center	
	Universal City	
Lankershim Blvd	Downtown San Fernando	Sylmar/San Fernando Metrolink Station
	Whiteman Airpark	Metro Red Line Station - North Hollywood
	Pacifica Hospital of the Valley	Future SFV Metro Rapid Transitway
	North Hollywood Park and Civic Center	Ventura Boulevard Metro Rapid Bus
	Universal City	
Van Nuys Blvd	Downtown San Fernando	Sylmar/San Fernando Metrolink Station
	Whiteman Airpark	Van Nuys Metrolink/Amtrak Station
	Panorama Mall	Future SFV Metro Rapid Transitway
	"The Plant" Shopping Center	
	Van Nuys Civic Center	Ventura Boulevard Metro Rapid Bus

	Hospitals (Van Nuys Community, Sherman Oaks)	
	Van Nuys Auto Center	
	Sherman Oaks Square, Town Center	
	Ventura Blvd. Commercial District	
	Wilshire Boulevard/UCLA (potentially)	
Sepulveda Blvd	Downtown San Fernando	Sylmar/San Fernando Metrolink Station
	San Fernando Mission	Future SFV Metro Rapid Transitway
	Valley Presbyterian Hospital	Ventura Blvd. Metro Rapid Bus
	Ventura Blvd. Commercial District	
	Wilshire Boulevard/UCLA (potentially)	
I-405	Providence Holy Cross Medical Center	Sylmar/San Fernando Metrolink Station
	Ventura Blvd. Commercial District	Future SFV Metro Rapid Transitway
	Wilshire Boulevard/UCLA	Ventura Blvd. Metro Rapid Bus
		Wilshire Blvd. Metro Rapid Bus
Woodley Ave	Providence Holy Cross Medical Center	Sylmar/San Fernando Metrolink Station
	Sepulveda Care Center	Van Nuys LAX Fly Away
	Sepulveda Dam Recreation Area	Future SFV Metro Rapid Transitway
	Ventura Blvd. Commercial District	Ventura Blvd. Metro Rapid Bus
Reseda Blvd (Short)	California State University Northridge	Future SFV Metro Rapid Transitway
	Northridge Hospital Medical Center	Ventura Blvd. Metro Rapid Bus
	Reseda Park High School / Sherman Oaks High School	
	Tarzana Square	
	Ventura Blvd. Commercial District	
Reseda Blvd (Extended)	California State University Northridge	Sylmar/San Fernando Metrolink Station
	Northridge Hospital Medical Center	Future SFV Metro Rapid Transitway
	Reseda Park High School / Sherman Oaks High School	Ventura Blvd. Metro Rapid Bus
	Tarzana Square	
	Ventura Blvd. Commercial District	
	Veteran's Administration	
	San Fernando Mission	
	Downtown San Fernando	
Canoga RR Right-Of-Way	Warner Center Hilton	Chatsworth Metrolink Station
	Westfield Shoppingtown Topanga	SFV Metro Rapid Transitway (at Warner Ctr.)
	The Promenade Mall	Warner Center Transit Hub
	Warner Ranch Park	Ventura Blvd. Metro Rapid Bus
	Blue Cross	
	Voit Center	
Topanga Canyon Blvd	Canoga Park High School	SFV Metro Rapid Transitway (at Warner Ctr.)
	Westfield Shopping Town Topanga	Warner Center Transit Hub
	The Promenade Mall	Ventura Blvd. Metro Rapid Bus

General Plans

General Plans help to guide the current and future planning efforts of a community. Many communities include a transit component to help channel growth and development. This would be reviewed to ensure consistency between transit planning and the plans of the city through which the service passed. Candidate corridors were ranked "low", "medium" or "high" as to how well they helped to meet the goals as expressed in the local general plan.

Redevelopment Project Areas

Provision of new or additional transit service in a redevelopment area can help to address some of the concerns underlying the redevelopment effort. This could include such concerns as desire for economic development (jobs creation), or to improve the mobility of the citizens living in that area. Candidate corridors were evaluated on their ability to help contribute to the reduction of blight, or to provide a linkage between redevelopment areas. All candidate corridors ranked either "low" or "medium" – none of the candidate corridors was ranked as "high".

Table 3.4 summarizes the ratings of the corridors on land use factors.

Table 3.4 Land Use and Policies

Criteria/Corridor	TSM	Rapid Bus	Glenoaks Blvd	Vineland Ave	Lankershim Blvd	Van Nuys Blvd	Sepulveda Blvd	I-405	Woodley Ave	Reseda Blvd (Short)	Reseda Blvd (Extended)	Canoga RR ROW	Topanga Canyon Blvd
LAND USE PLANS & POLICIES													
Activity Centers	XX	XX	X	XX	XX	XXX	XX	XX	XX	XX	XXX	XX	X
General Plans, Community Plans	XX	X	XX	X	XX	XXX	X	X	X	XX	XX	X	XX
Redevelopment Project Areas	XX	X	XX	XX	XXX	X	XX	X	X	X	X	X	X
Scoring Factors:													
High 3 - **XXX**													
Medium 2 - **XX**													
Low 1 - **X**													

Transportation Features

Existing Transit Priority System

It is possible to provide transit service with priority signalization at intersections. Such priority signals can give a bus extra time to clear an intersection (and get to the stop on the opposite corner), or can give a bus an early green light so it gets a "head-start" over other traffic. Candidate corridors were evaluated to determine whether or not such priority signalization exists on that route. Both Lankershim and Van Nuys Boulevard were ranked as "high", because such transit priority systems will be implemented as part of the Phase II Metro Rapid Bus Program. Vineland Avenue was rated as "medium", because the San

Fernando Road portion of the alternative will also be included in the Phase II Metro Rapid program, but all other candidate corridors were rated as "low" because they do not have transit signal priority (TSP) programmed.

Existing Traffic Volumes

Existing traffic volumes were gauged to determine the potential impacts on traffic movement and levels of service should a new line be introduced. One of the benefits of Metro Rapid Bus service is its speed, which in a heavily developed area can rival that of a private automobile. But if the transit vehicle is unable to move through traffic efficiently, that benefit is lost. Candidate corridors' average annual daily total (ADT) volumes were reviewed. Those corridors with a high ADT reflected a demand for additional travel, which could be provided through new transit services and were rated higher than low-volume streets.

Opportunities for Dedicated Lanes

Another way to help meet the need for transit vehicles to move through traffic quickly is by giving them a dedicated lane on which to operate. The candidate corridors were analyzed to judge whether or not it would be physically possible (given the road width, medians, and setback or surrounding buildings and businesses) to provide such a dedicated lane, or whether the traffic volumes and level of service would be overly impacted by the dedication of a lane (in either or both directions) to transit. All of the retained candidate corridors ranked either "medium" or "high", indicating opportunities for the creation of a dedicated lane.

Table 3-5 indicates the ratings for the transportation features describes above.

Table 3.5 Transportation Features

Criteria/Corridor	TSM	Rapid Bus	Glenoaks Blvd	Vineland Ave	Lankershim Blvd	Van Nuys Blvd	Sepulveda Blvd	I-405	Woodley Ave	Reseda Blvd (Short)	Reseda Blvd (Extended)	Canoga RR ROW	Topanga Canyon Blvd
LAND USE PLANS & POLICIES													
Existing Transit Priority System	X	X	X	X	XXX	XXX	X	X	X	X	X	X	X
Existing Traffic Volumes	XX	XX	X	XX	XX	XXX	XX	XXX	X	XXX	XXX	X	XXX
Opportunities for Dedicated Lane	X	X	XX	XX	XX	XX	XX	XXX	X	X	X	XXX	X
Scoring Factors:													
High 3 - **XXX**													
Medium 2 - **XX**													
Low 1 - **X**													

Transit Service and Ridership

Existing Routes – Complementary or Competitive

When evaluating the potential benefits of a new transit line, care has to be taken not to grow ridership on the new line at the expense of an existing one. The candidate corridors were evaluated to note the presence of nearby service, and whether that service would be complementary (meaning both services would benefit because riders could transfer easily between them, and reach additional destinations more efficiently than would be otherwise possible), or competitive (meaning both serve the same population and activity centers/destinations) and a gain for one is a loss for the other. This inefficiency greatly increases costs of transit operation. The competitive analysis was geared toward competing express services, not local service. A competitive corridor is ranked low and a complementary corridor is ranked high.

The Glenoaks and Vineland corridors were ranked low, for example, because providing Metro Rapid Bus service on them would be competitive with the planned Metro Rapid Service on the Lankershim-San Fernando route. The Reseda and Canoga corridors ranked high because they would not compete with nearby services. Van Nuys and Lankershim-San Fernando also ranked high because additional improvements on those corridors would be complementary to the planned Metro Rapid Bus services on them. The Sepulveda corridor was evaluated as medium, because in spite of the fact that it is parallel to Van Nuys Boulevard, it serves areas of high density and transit dependency, and was felt not to divert riders from existing or planned transit service on Van Nuys Boulevard.

Line-by-Line Ridership Potential

Given the demographic and headway (how frequently the bus operates at a particular stop) factors, an analysis is undertaken to make an estimate of the potential ridership that could exist (it includes both the transit dependent population and a percentage of those who might be induced to take transit rather than driving a private automobile. This qualitative assessment represented a combination of the scores for the population and employment density and transit dependent population factors. Corridors that scored highest in those factors were judged to have higher ridership potential. The greater the transit ridership potential, the higher the corridor is ranked. Detailed ridership forecasts were conducted with the MTA travel demand model for the remaining alternatives in Chapter 5.

Table 3-6 summarizes the ratings on the transit criteria.

Table 3.6 Transit Service and Ridership

Criteria/Corridor	TSM	Rapid Bus	Glenoaks Blvd	Vineland Ave	Lankershim Blvd	Van Nuys Blvd	Sepulveda Blvd	I-405	Woodley Ave	Reseda Blvd (Short)	Reseda Blvd (Extended)	Canoga RR ROW	Topanga Canyon Blvd
TRANSIT SERVICE & RIDERSHIP PATTERNS													
Existing Routes - Complementary or Competitive	**XX**	**XXX**	**X**	**X**	**XXX**	**XXX**	**XX**	**XX**	**XX**	**XX**	**XXX**	**XXX**	**XX**
Line-by-Line Ridership Potential	**XX**	**XX**	**XX**	**XX**	**XX**	**XXX**	**XX**	**X**	**X**	**XX**	**X**	**X**	**X**
Scoring Factors:													
High 3 - **XXX**													
Medium 2 - **XX**													
Low 1 - **X**													

Regional Context/Connectivity

Another inducement to ridership and indicator of success is the ability of a route to provide a passenger with easy connection to other transit routes and services. Provision of intermodal connections along a route makes reaching more distant destinations easy and attractive because the connections (or transfers) are simple.

Each of the candidate corridors retained for further study offers at least two intermodal connections (including connectivity with Metrolink Commuter Rail), with some corridors having as many as four, in addition to other transit routes that cross the corridors.

Network Connectivity within the San Fernando Valley

How well a new transit service can help to provide for cross-valley travel, or provide connections to other services throughout the Valley is an important consideration. Candidate corridors were examined to help determine how they might interact with other transit services and provide new expansion of the transportation network. This was measured by number of interconnecting MTA routes on each corridor. Those corridors enhancing connectivity were scored higher than those with less connectivity. Several of the corridors (Vineland, Lankershim, Van Nuys and Reseda Extended) connect to as many as 15 intersecting routes lines with good frequencies. These routes connect to a lot of intersecting lines because they are longer routes and have somewhat dual north-south and east-west orientations. The Rapid Bus Alternatives similarly intersects routes in both the north-south and east-west directions and was rated high. The I-405 and Woodley corridors intersect only 5 to 7 lines and were rated low in connectivity. The other alternatives fell in between this range and were rated medium.

Transportation Connections outside San Fernando Valley

The ability to link up with transit services and other transportation modes (such as Amtrak, Commuter Rail, or MTA's Metro Red Line heavy rail service) helps provide for the long-distance traveler, and can help determine ridership. Each of the candidate corridors was evaluated to note how many intermodal connection opportunities existed along it. Those with more connections were ranked higher.

Consistency with MTA's Long Range Plan

Provision of new transit service must be in keeping with MTA's own long-range goals and plans, and candidate corridors were examined to ensure that any alternatives proposed would be consistent with the MTA Long-Range Plan. Any that were inconsistent with the plan were given a lower score.

Table 3-7 summarizes the ratings related to regional context.

Table 3.7 Regional Context/Connectivity

Criteria/Corridor	TSM	Rapid Bus	Glenoaks Blvd	Vineland Ave	Lankershim Blvd	Van Nuys Blvd	Sepulveda Blvd	I-405	Woodley Ave	Reseda Blvd (Short)	Reseda Blvd (Extended)	Canoga RR ROW	Topanga Canyon Blvd
REGIONAL CONTEXT / CONNECTIVITY													
Network Connectivity (within San Fernando Valley)	**X**	**XXX**	**XX**	**XXX**	**XXX**	**XXX**	**XX**	**X**	**X**	**XX**	**XXX**	**XX**	**XX**
Transportation Connections outside San Fernando Valley	**XX**	**XXX**	**XX**	**XX**	**XXX**	**XXX**	**XXX**	**XXX**	**X**	**X**	**XX**	**XX**	**X**
Consistency with MTA's Long Range Plan	**XX**	**XX**	**X**	**X**	**XXX**	**XXX**	**X**	**XX**	**X**	**X**	**X**	**X**	**X**
Scoring Factors:													
High 3 - **XXX**													
Medium 2 - **XX**													
Low 1 - **X**													

Accessibility and Urban Design

In general, the presence of existing urban design enhancements in a corridor should not determine whether it is selected for a transit investment. (An overlay of urban design improvements will be applied to any corridor selected.) However, two aspects of the existing urban design / built environment along a corridor would affect the future success of a transit investment:

- Transit- and Pedestrian-Oriented Neighborhoods
- Impediments to Transit Station / Urban Design Improvements

Transit- and Pedestrian-Oriented Neighborhoods along the Corridor

The attractiveness of a transit investment to potential riders is affected by the urban character of their origin and destination neighborhoods. Specifically, a corridor neighborhood is more likely to be accessible and therefore attractive for transit riders and other pedestrians if it has:

- A recognizable "center" with high pedestrian activity along the corridor,
- Higher-density, mixed land usage around its center,
- An extensive network of through streets with sidewalks, and

- Buildings which front directly onto those sidewalks

These neighborhoods such as these are often called transit-oriented or pedestrian-oriented neighborhoods, and their defining characteristic is their "walkability."

Conversely, a corridor neighbor would be "less transit friendly" if it has:

- No discernable center,
- Segmented, low-density land use,
- Discontinuous streets and sidewalks (e.g. cul-de-sac), and
- Buildings which are isolated from sidewalks by large parking lots or other major setbacks.

These neighborhoods will be relatively inaccessible and unattractive for transit riders and other pedestrians.

Analysis

For the transit- and pedestrian-orientation of neighborhoods analysis, the ratings in Table 3-8 have been assigned as follows:

- **High** (3, xxx) – Corridors with significant, observed transit- or pedestrian-oriented neighborhoods where potential transit stops could be located.
- **Medium** (2, xx) – Corridors with a balance of transit-oriented and less transit friendly neighborhoods, or neighborhoods with a mixture of these characteristics, or no observable positive or negative characteristics.
- **Low** (1, x) – Corridors with neighborhoods with observed less transit friendly characteristics.

Table 3.8 Transit- and Pedestrian-Oriented Neighborhoods along the Corridor

Alternative	Characteristics	Rating
No Project	Does not include any specific corridors – assign medium rating as a neutral rating.	XX
TSM	Includes multiple, diverse corridors – assign medium, neutral rating.	XX
Rapid Bus	Includes multiple, diverse corridors – assign medium, neutral rating.	XX
Vineland Ave. / Glenoaks Blvd.	No significant identifiable pedestrian-oriented centers. Does not directly access the North Hollywood center (at the Metro Red Line). Passes through heavily industrial areas (with few other uses) along Glenoaks.	X
Vineland Ave. / San Fernando Rd.	Does not directly access the North Hollywood transit- and pedestrian-oriented center, but does provide access to the City of San Fernando center.	XX
Lankershim Blvd. / San Fernando Rd.	Provide direct access to the North Hollywood transit- and pedestrian-oriented neighborhood center around Magnolia Boulevard and the City of San Fernando pedestrian center.	XXX
Van Nuys Blvd.	Provides access to Sherman Oaks pedestrian neighborhood center on Ventura Blvd, the Van Nuys Government Center, the Van Nuys pedestrian-oriented shopping district, the Pacoima neighborhood center on Van Nuys, and the City of San Fernando pedestrian-oriented center.	XXX
Sepulveda Blvd.	Provides access at one end to the City of San Fernando pedestrian-oriented center. While Sepulveda Blvd. itself has apartments in some section at the north, it's land use is largely auto-oriented uses with no significant neighborhood centers along the remainder of its length.	XX
I-405 Freeway	Does not provide direct access to any transit-oriented neighborhood centers, and is in fact isolated from the urban fabric.	X
Woodley Ave.	Does not provide direct access to any significant neighborhood centers. Much of the land use along this corridor is low-density residential.	X
Reseda Blvd.	Provides direct access to the Tarzana neighborhood center on Ventura Boulevard, the Reseda neighborhood center on Sherman Way, and the center around Cal State Northridge near Nordhoff. Uses along Reseda are generally a transit-oriented mix of higher-density residential and commercial.	XXX
Canoga ROW	Provides access to Warner Center, a major center, but pedestrian access is poor to the rest of the corridor, with no major pedestrian-oriented neighborhoods along the remaining length.	X
Topanga Canyon Blvd.	Provides access to Warner Center, a major center, but does not provide access to any other major centers. However, Canoga Park, at Sherman Way, does exhibit some characteristics of a transit-oriented neighborhood with higher densities and a mix of multifamily residential and commercial uses.	XX

Impediments to BRT Station / Accessibility Improvements along the Corridor

While an overlay of new accessibility enhancements can generally be applied to most urban arterials, there are impediments which could prevent the installation of BRT stations and other urban design enhancements. This, in turn, would reduce the attractiveness and usefulness of the system to potential transit users. The types of impediments to the installation of transit stations and other urban design improvements in the corridor include:

- Locations where no or extremely limited right-of-way for sidewalks exists between the street itself and private property. (e.g., locations where street widenings have been undertaken without full acquisition of adjacent property)
- Locations where a substantial amount of the sidewalk is occupied by physical barriers such as utility poles/wires, preventing the installation of amenities such as shelters, benches, etc.

Analysis

- **High** (3, xxx) – A clear opportunity with sufficiently wide, unobstructed sidewalks. A notable lack of impediments to urban design enhancement.
- **Medium** (2, xx) – The norm. No major observed impediments to urban design enhancement, but no major opportunities either.
- **Low** (1, x) – Observed impediments to urban design enhancement, such as narrow sidewalks, major utility poles in sidewalk or no opportunity for urban design improvements in the alternative.

Table 3.9 indicates where there are impediments to urban design enhancements on the corridors.

Table 3.9 Impediments to BRT Station / Urban Design Improvements along the Corridor

Alternative	Characteristics	Rating
No Project	With no "build" project, no urban design enhancements would be made.	X
TSM	With no "build" project, no urban design enhancements would be made.	X
Rapid Bus	Would not limit urban design enhancements per se, but would be restricted to those urban design enhancements that are typical a part of Rapid Bus corridors.	XX
Vineland Ave. / Glenoaks Blvd.	Segments of Vineland Avenue have been widened without right-of-way acquisitions having been made to rebuild the sidewalk. However, no other significant impediments to urban design improvements have been observed.	XX
Vineland Ave. / San Fernando Rd.	Segments of Vineland Avenue have been widened without right-of-way acquisitions having been made to rebuild the sidewalk. Along the north side of San Fernando Road, a bike path is planned on the railroad right-of-way, which precludes a separate pedestrian walkway and will need to share space with the transit stations.	X
Lankershim Blvd. / San Fernando Rd.	Segments of Lankershim Boulevard have been widened without right-of-way acquisitions having been made to rebuild the sidewalk. Along the north side of San Fernando Road, a bike path is planned on the railroad right-of-way, which precludes a separate pedestrian walkway and will need to share space with the transit stations.	X
Van Nuys Blvd.	No significant impediments for station / urban design improvements exist. Sidewalks are generally of adequate width.	XX
Sepulveda Blvd.	No significant impediments for station / urban design improvements exist. Sidewalks are generally of adequate width.	XX
I-405 Freeway	Right-of-way devoted almost entirely to basic freeway requirements. Major restrictions on urban design improvements.	X
Woodley Ave.	In some locations, such as near Sherman Way, the street has been widened without the necessary right-of-way acquisitions, leaving area of little or no sidewalk. This would limit the ability to install stations and/or other urban design improvements.	X
Reseda Blvd.	No significant impediments for station / urban design improvements exist.	XX
Canoga ROW	The MTA-owned right-of-way is mostly clear, and existing structures are on lease and can be removed. The open right-of-way is a clear opportunity for major urban design enhancements, similar to the East-West BRT corridor. These improvements will, however, increase the basic cost of the transportation project.	XXX
Topanga Canyon Blvd.	No significant impediments for station / urban design improvements exist. Sidewalks are generally adequate.	XX

Cost Effectiveness

Detailed cost estimates were developed (see the next chapter of the RSTIS) for the refined alternatives and a cost-effectiveness evaluation was quantified following completion of ridership forecasts and calculation of a cost per new rider. In this preliminary evaluation, the Van Nuys and Lankershim Alternatives are estimated to be highly cost effective because much of the costs will already have been incurred as part of the Metro Rapid Bus program. The Canoga Alternative is the least cost effective because it is the most expensive alternative and is not expected to generate as much ridership as some other corridors. The Woodley Alternative was also rated low on cost-effectiveness because it is not expected to generate a significant number of riders and is a long and circuitous route. The other alternatives fall in between and were rated medium.

Community Input

Community input was assessed based on the comments received at the first set of public workshops and at the briefings with the representatives of elected offices. Presentations were also provided to many community and business groups to obtain feedback of the alternatives. A summary of the comments received at the first set of public workshops, at which all eleven corridors were presented, is included in Appendix A. The three alternatives which received the greatest amount of public support were the Van Nuys, Sepulveda and Canoga corridors. There was also strong sentiment for connections to the Westside, Sylmar/Pacoima area and the Santa Clarita Valley, Metrolink, the Metro Red Line and the planned SFV Metro Rapid Transitway. Service to CSUN was also supported by workshop attendees. Table 3-10 summarizes the ratings of the corridors based on community input.

The input of the representatives of elected officials in the San Fernando Valley was obtained from briefings of the staff. Some supported the Canoga corridor strongly and there was opposition to Vineland because of the potential impact on the single-family home residential neighborhood on Vineland. Strong support for Van Nuys and Sepulveda was also mentioned, as well as the need to serve the West Valley.

Those corridors for which there were expressions of support from the public were rated high. For those where there was opposition expressed, a low score was assigned.

Table 3.10 Community Input

Criteria/Corridor	TSM	Rapid Bus	Gleanoaks Blvd	Vineland Ave	Lankershim Blvd	Van Nuys Blvd	Sepulveda Blvd	I-405	Woodley Ave	Reseda Blvd (Short)	Reseda Blvd (Extended)	Canoga RR ROW	Topanga Canyon Blvd
COMMUNITY INPUT													
Elected Officials Input	**XX**	**XX**	**X**	**X**	**XX**	**XXX**	**XXX**	**X**	**X**	**X**	**XX**	**XXX**	**X**
Public Input	**XX**	**XX**	**X**	**X**	**XX**	**XXX**	**XXX**	**X**	**X**	**X**	**X**	**XXX**	**X**
Scoring Factors:													
High 3 - **XXX**													
Medium 2 - **XX**													
Low 1 - **X**													

3.3 Results of Screening Process

Table 3.11 indicates those alternatives that scored highly and were retained for further study and those that were dropped from further consideration based on the preliminary screening analysis. The score represents the sum of the ratings (high=3points, medium=2point, low=1point) on each of the evaluation criteria discussed above.

In addition to the No Project Alternative, the TSM and Rapid Bus Alternatives were retained for further analysis as lower-cost options to the north-south corridors. The Lankershim, Van Nuys, Sepulveda, Reseda (service all the way to Sylmar/San Fernando) and Canoga Railroad Right-of-Way corridors were retained for further study. These alternatives all had a rating of 34 or above. At this point in the RSTIS process, the corridors were evaluated qualitatively to focus the remainder of the study on specific projects in those corridors which were evaluated to have the greatest potential for high-capacity transit service. The corridors eliminated from further study could be served by other types of transit, such as local bus service or express bus service, but did not appear to warrant further investigation for dedicated bus lanes.

Table 3.11 Preliminary Screening Results

CORRIDOR ALTERNATIVES	SCORE	COMMENTS
Retained for Further Study		
No Project (Baseline)		Mandatory inclusion; Necessary to compare Effects of Alternatives
TSM	**36**	Low cost, wide service area benefits
Rapid Bus	**38**	Low cost, wide distribution of Rapid Bus throughout San Fernando Valley
Lankershim Blvd.	**46**	Rapid Bus signal priority programmed, potential dedicated lanes
Van Nuys Blvd.	**53**	Rapid Bus signal priority programmed, serves many major activity centers, has established transit demand, potential for a Wilshire connection.
Sepulveda Blvd.	**38**	Potential NB dedicated lane, potential for a Wilshire connection, redevelopment potential.
Reseda Blvd. (Extended Line)	**37**	Ridership potential; Serves CSUN
Canoga Railroad Right-of-Way	**34**	MTA-owned, off-street, 24-hour dedicated lanes, provides a possible extension of SFV Metro Rapid Transitway, has limited street parking and traffic impacts
Not Retained for Further Study		
Glenoaks Blvd.	**28**	Low density, ridership, single family home impacts, duplication of Lankershim/San Fernando Rapid Bus line.
Vineland Ave.	**33**	Impacts to single family home, duplication of Lankershim/SF Rapid Bus
I-405	**31**	Limited stops potential in San Fernando Valley, limited Origins/Destinations, Primarily serves long-distance trips Better suited for commute-only express service
Woodley Ave.	**21**	Low density, limited ridership potential, Impacts to single family homes
Reseda Blvd. (short line)	**29**	Dedicated lane difficult, limited intermodal connections
Topanga Canyon Blvd.	**28**	State Highway. - Caltrans operated (presents design standards challenges), dedicated lane issues, limited ridership and activity centers.

4.0 REFINEMENT OF CORRIDOR ALTERNATIVES

Following the preliminary screening process, which reduced the number of the viable transit corridors to five alternatives, the specific details of the physical and operational improvements possible along each corridor were developed. The improvements included identification of station locations, areas where dedicated lanes were feasible, parking, accessibility improvements, landscape and urban design features, and other traffic engineering improvements to enhance bus speeds. The refinement of the alternatives was conducted through a collaborative process with local jurisdictions, MTA departments, Metrolink, and the public.

4.1 Programmed Improvements

Two of the corridors under consideration in this study, Van Nuys Boulevard and Lankershim Boulevard-San Fernando Road, have transit service improvements planned for implementation in the near future as part of the Metro Rapid Bus Five-year Implementation Plan. The planned improvements to these two corridors are described below. Additional improvements that could be implemented to further improve service in these two corridors are described later in this chapter as part of the Corridor Alternatives.

4.1.1 Metro Rapid Bus Five-year Implementation Plan Improvements

4.1.1.1 Van Nuys Metro Rapid Bus

MTA will be implementing Metro Rapid Bus service on Van Nuys Boulevard similar to the service currently operating on Ventura Boulevard. Figure 4-1 illustrates the Metro Rapid Bus services planned for the San Fernando Valley. Elements of the Metro Rapid Bus program will include new vehicles, limited stops with upgraded physical amenities, and transit signal priority at intersections. This service is planned for implementation in June 2003. Line 561 will be converted to the Van Nuys Metro Rapid Bus. It will extend from its northern terminus near Foothill Boulevard, down Van Nuys Boulevard to Ventura Boulevard, then over the Sepulveda Pass to Westwood. Drivers will be able to chose between Sepulveda Boulevard or the I-405 San Diego Freeway, depending upon traffic conditions. The segment of Line 561 on San Fernando Road between Van Nuys Boulevard and the Sylmar/San Fernando Metrolink Station is scheduled to be canceled, as well as the segment south of Wilshire Boulevard to LAX and the Green Line. Transit trips to these destinations will require a transfer in the future.

Stops on the Van Nuys Metro Rapid Bus will be located on Van Nuys Boulevard at Glenoaks Boulevard, San Fernando Road, Laurel Canyon Boulevard, Arleta Boulevard, Plummer Street, Nordhoff Street, Roscoe Boulevard, Van Nuys Metrolink Station, Sherman Way, Vanowen Street, Victory Boulevard, Oxnard Street, Burbank Boulevard, Magnolia Avenue, and Ventura Boulevard. Additional stops are planned on Ventura Boulevard at Sepulveda Boulevard, at the Getty Center, at Wilshire Boulevard/Westwood Boulevard, and on Veteran Avenue adjacent to the Federal Building.

The service will be implemented with the "branded" buses and stations that have been used on the four Metro Rapid Bus corridors already in service. Bus signal priority will also be implemented by LADOT along the corridor. The service will be operated seven days

a week. During weekday peak periods, it will operate with 6.0-minute headways and in off-peak and on weekends it will operate with 8.6-minute headways. The capital cost to implement the service is budgeted at $4.73 million. This includes the cost of stations and transit signal priority. MTA has buses available for the Van Nuys Rapid Bus, so vehicle costs are not included in this capital cost.

4.1.1.2 Lankershim-San Fernando Metro Rapid Bus

Metro Rapid Bus service is scheduled for Lankershim Boulevard and San Fernando Road in 2006. It will extend from the Sylmar/San Fernando Metrolink Station to the North Hollywood Red Line Station as illustrated in Figure 4-1. Stations along the route will be located on San Fernando Road at Maclay Avenue, Brand Boulevard, Paxton Street, Van Nuys Boulevard, Osborne Street, and Tuxford Street, and on Lankershim Boulevard at Roscoe Boulevard, Saticoy Street, Sherman Way, Vanowen Street, Victory Boulevard, and Oxnard Street. The MTA plans to initially operate a new limited stop peak period service on this route in 2003, with the conversion to Metro Rapid Bus service planned in 2006.

When implemented, the route will be operated on weekdays only, with 3.3 to 4.4 minute peak period service and 8.6 minute off-peak service. The capital cost for the new service is estimated at $4.95 million. This includes the cost of stations, transit signal priority and buses.

4.2 Process To Refine Alternatives

4.2.1 Meetings With Local Jurisdictions

Working sessions were held with LADOT and City of San Fernando staff to define the physical improvements along each alignment. Aerial photographs and "As Built" signing and striping plans for each roadway were reviewed to determine where dedicated bus-only lanes were feasible and where stations could be located. A minimum length of 50 feet of unobstructed sidewalk, not interrupted by driveways, telephone/utility poles, etc. was required to locate the bus stations. In general, an attempt was made to locate the bus stations at the far side of an intersection because they function better with the signal priority system and do not block right-turning vehicles.

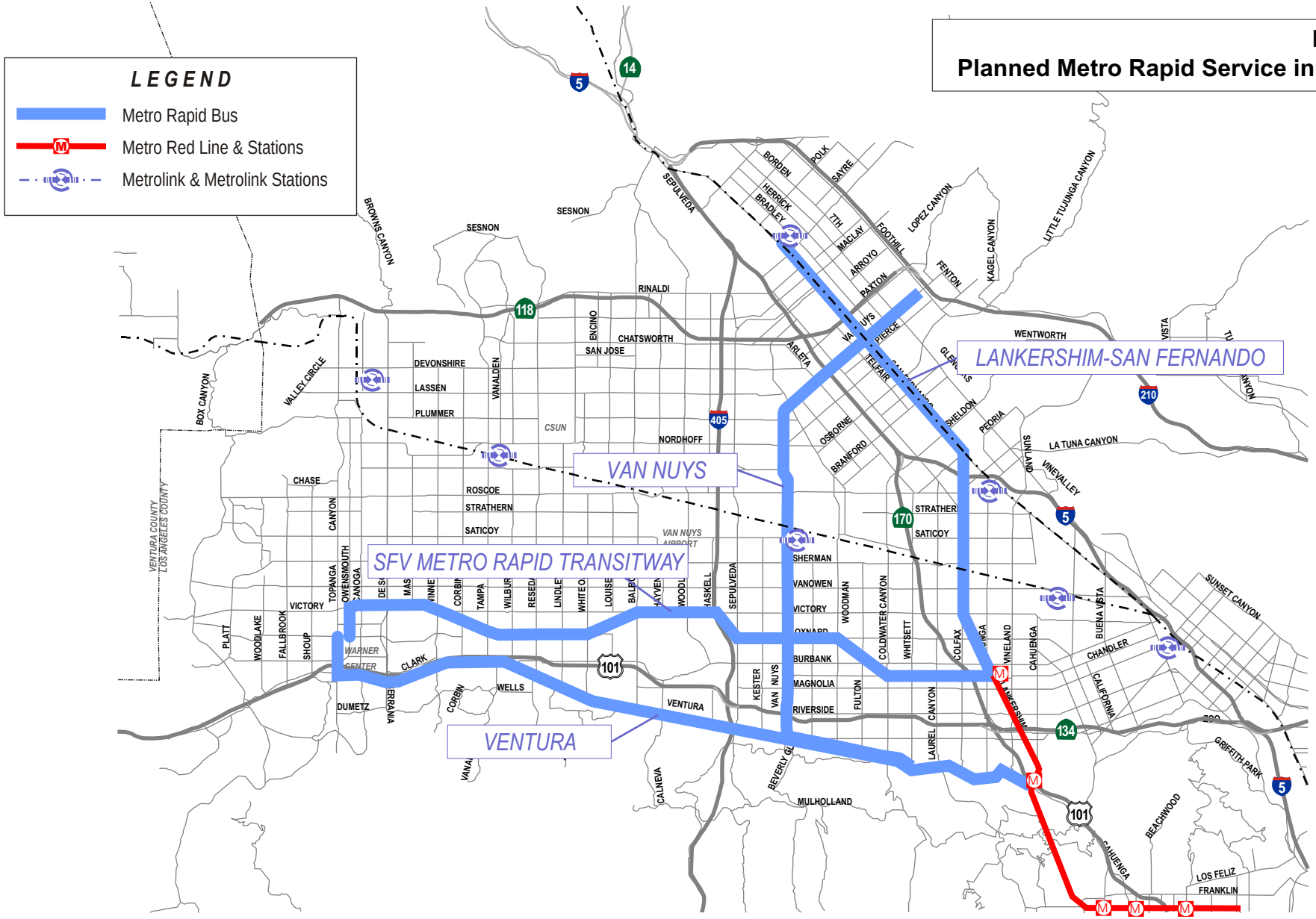
4.2.2 Meetings With MTA San Fernando Valley Transit Sector Staff

Working sessions were also held with MTA San Fernando Valley Transit Sector staff to identify transit operations improvements, bus stop locations, and maintenance facility requirements. Transit Sector staff also participated in the meetings with local jurisdictions and public workshops.

4.2.3 Public Workshops

- A second round of public workshops was held in December 2002 to present the refined alternatives to the public, and to obtain feedback on the details of the alternatives. In addition, numerous presentations were made to community and business groups to describe the alternatives and receive feedback on the physical improvements proposed on each corridor. On the whole, there was community support for the Study

Figure 4-1
Planned Metro Rapid Service in SF Valley



Source: Meyer, Mohaddes Associates

and to different degrees all of the alternatives. Public comments received at the December meetings showed support for:

- transit improvements for more than one alignment;
- the Van Nuys alternative, due to ridership projections;
- the Lankershim option, because it links the northeast Valley with the North Hollywood Metro Red Line station;
- the Reseda alternative, because it provides cross-Valley coverage and links some important activity centers;
- the Sepulveda alternative as it would potentially alleviate congestion on the I-405; and,
- the Canoga option, because it would be constructed in existing right-of-way (though a number of attendees expressed opposition to this alternative).

See Appendix A for details on the community outreach program.

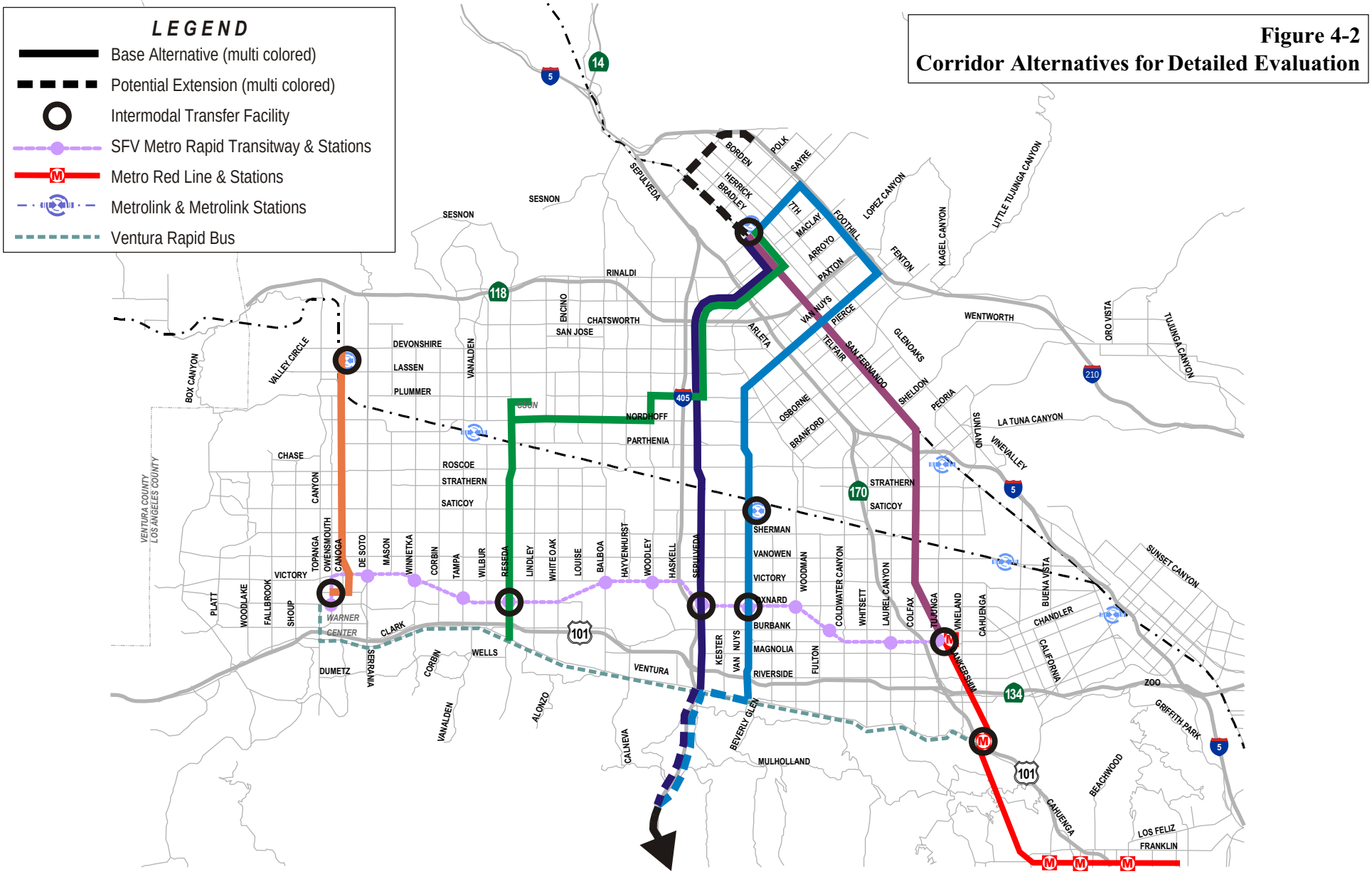
4.3 Transportation Improvements By Alternative

The physical improvements included in each alternative are described in this section, following a brief review of the Transportation System Management (TSM) and Rapid Bus Alternatives. Figure 4-2 illustrates the five corridor alternatives. Appendix B of this report includes the plan drawings for each alternative. The station design elements and other accessibility urban design and landscaping improvements are subsequently described. The operations plans assumed for each of the alternatives were similar to provide a common basis for modeling the demand for travel of each corridor. Those assumptions were that the buses would operate at 5.0-minute headways in the peak periods and 10.0-minute headways in the off peak.

4.3.1 Transportation Systems Management Alternative

The San Fernando North-South Transit Corridor TSM Alternative entails providing additional transit service on existing MTA north-south transit routes to shorten headways between buses. Refer to Figure 2-2 and Table 2.2 in Chapter 2 for the specific headway adjustments. In general, the TSM Alternative focuses on reducing off-peak headways so that no north-south routes are operated with headways longer than 30 minutes.

Figure 4-2
Corridor Alternatives for Detailed Evaluation



Source: San Fernando Valley East-West Transit Corridor Final EIR, February 2002

4.3.2 Rapid Bus Alternative

The Rapid Bus Alternative adds Metro Rapid Bus service on the following routes:

- North Hollywood Red Line Station to Warner Center Transit Hub via Vineland, Roscoe and Topanga Canyon Boulevards
- Ventura Boulevard to Sylmar/San Fernando Metrolink Station via Reseda Boulevard, Devonshire Boulevard, Sepulveda Boulevard, Brand Boulevard, and San Fernando Road

With these two new Metro Rapid Bus routes and the existing and planned routes on Ventura Boulevard, Van Nuys Boulevard, San Fernando-Lankershim, and SFV Metro Rapid Transitway, the Rapid Bus Alternative would provide a Metro Rapid Bus route in all portions of the San Fernando Valley except the northwest Valley. It would provide a network of high-capacity, reduced travel time bus routes linking most parts of the Valley to one another and to regional transportation facilities. Refer to Figure 2-2 in Chapter 2 for illustration of the Rapid Bus Alternative.

4.3.2 Canoga Railroad Right-of-Way

The southern terminus of the route begins at the Warner Center Transit Center on Owensmouth Avenue and runs on street in mixed flow to the SFV Metro Rapid Transitway at the intersection of Variel Avenue/Victory Boulevard. From there, it proceeds north along the MTA-owned railroad right-of-way, which parallels Canoga Avenue in a dedicated transitway. The route proceeds north on the railroad right-of-way to Plummer Street, where two options have been investigated for the final leg to the northern terminus at the Chatsworth Metrolink Station; (1) a grade separation could cross over the Metrolink/Amtrak rail lines to continue the busway to Lassen Street, or (2) the route would travel on-street in mixed flow via Plummer Street, Owensmouth Avenue and Lassen Street to the Chatsworth Metrolink Station. Figure 4-3 illustrates the Canoga Railroad right-of-way alternative.

Stations are located at the Warner Center Transit Center, Vanowen Street, Sherman Way, Roscoe Boulevard, Nordhoff Street and the Chatsworth Metrolink Station. An existing park-and-ride lot is located at the Chatsworth Metrolink Station, which would also serve this route. Additional parking can be provided as part of this alternative on several parcels of MTA-owned land or

source: Meyer, Mohaddes Associates

Figure 4-3. Canoga Railroad ROW Alternative

through a shared use agreement on private property in the Warner Center area. MTA owns several parcels on Marilla Street near the north end of this corridor that could be developed as park-and-ride lots

The MTA-owned railroad right-of-way south of Sherman Way widens from 100 feet to 275 feet, providing room for a park-and-ride lot adjacent to the Sherman Way Station. The concept for a park-and-ride lot at Sherman Way is illustrated in Section 4.4 of this chapter.

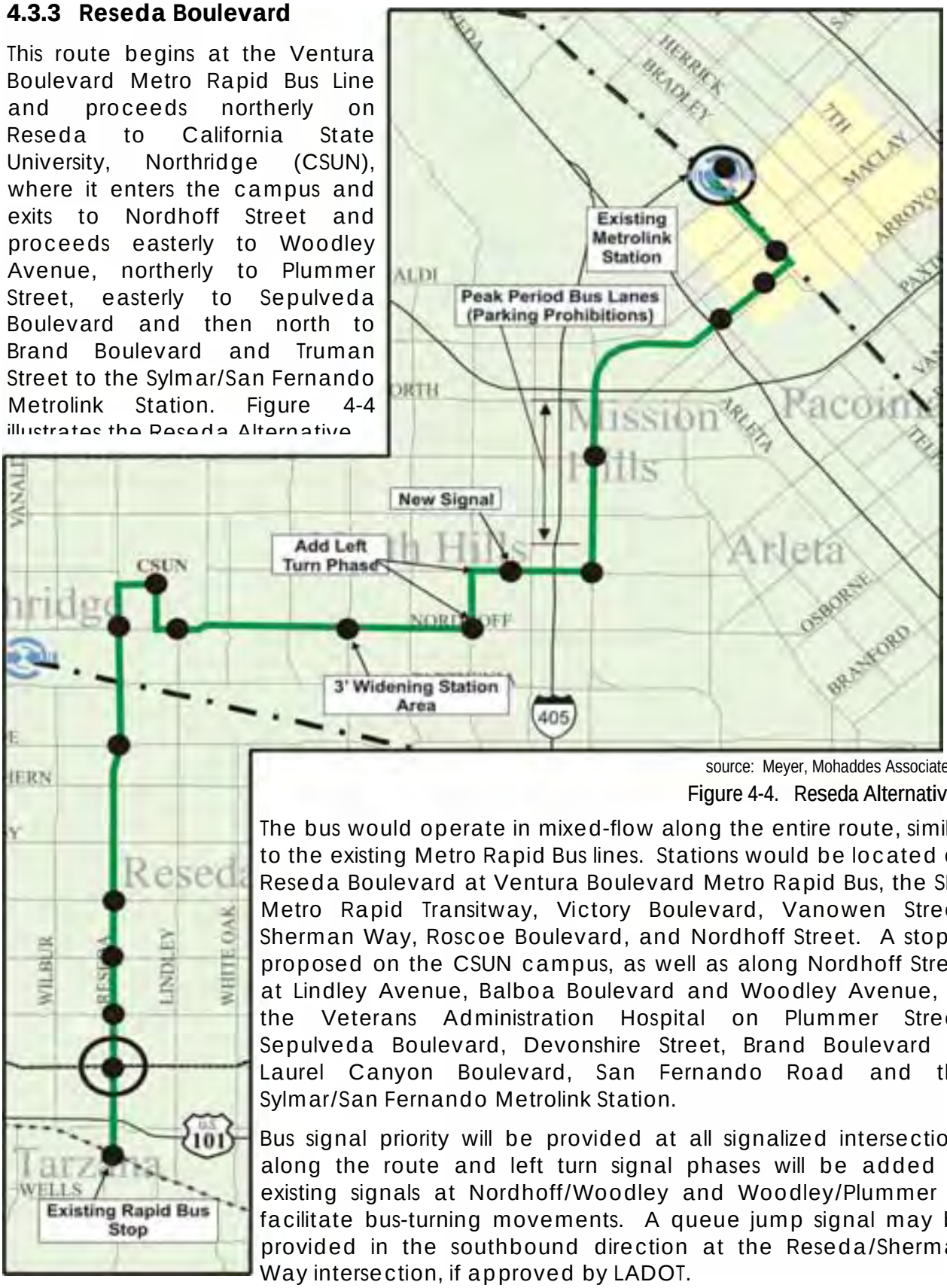
The design of the transitway will be similar to the SFV Metro Rapid Transitway, with a 26-foot wide roadway with one bus lane in each direction. The roadway widens adjacent to stations so that a bus could pass another bus stopped at the station. The stations will be similar to a rail station with platforms and canopies. The remainder of the right-of-way that is not used for the roadway will be landscaped and a bikeway/pedestrian pathway will parallel the transitway. At the Variel Street intersection with the SFV Metro Rapid Transitway, the intersection will be reconfigured to create a "wye" intersection between the Canoga Transitway and the SFV Metro Rapid Transitway, so that it would be possible for buses to connect between the two and travel exclusively on the dedicated busway all the way from Chatsworth to North Hollywood.

Transit priority will be provided at cross street intersections similar to the SFV Metro Rapid Transitway. Bus loop detectors will be installed in the transitway far enough in advance of each signalized cross street in order to allow the signal system to have sufficient warning to adjust the signal phases on the cross street so that the bus will receive a green indication when it reached the cross street. At each cross street where there are nearby traffic signals on Canoga Avenue, the transitway is located as close as possible to Canoga Avenue and will be signalized so that buses have their own signal indications. The signals will be integrated to create one signalized intersection to control both automobiles and buses. The buses will receive a green signal indication simultaneously with Canoga Avenue. Turn movements from Canoga Avenue will require separate signal phases with red arrows when the buses are crossing the east-west street. This will be necessary to prevent a left or right turn across the transitway when a transit vehicle is moving in conjunction with the through traffic on Canoga Avenue.

At the northern end of the corridor, a grade separation could be provided over the Metrolink/Amtrak tracks to link the transitway directly to Lassen Avenue where the entrance to the Chatsworth Metrolink Station is located. Alternatively, the transitway could end at Plummer Street and the buses could circulate on-street via Plummer, Owensmouth and Lassen to reach the Metrolink Station.

4.3.3 Reseda Boulevard

This route begins at the Ventura Boulevard Metro Rapid Bus Line and proceeds northerly on Reseda to California State University, Northridge (CSUN), where it enters the campus and exits to Nordhoff Street and proceeds easterly to Woodley Avenue, northerly to Plummer Street, easterly to Sepulveda Boulevard and then north to Brand Boulevard and Truman Street to the Sylmar/San Fernando Metrolink Station. Figure 4-4 illustrates the Reseda Alternative.



source: Meyer, Mohaddes Associates

Figure 4-4. Reseda Alternative

The bus would operate in mixed-flow along the entire route, similar to the existing Metro Rapid Bus lines. Stations would be located on Reseda Boulevard at Ventura Boulevard Metro Rapid Bus, the SFV Metro Rapid Transitway, Victory Boulevard, Vanowen Street, Sherman Way, Roscoe Boulevard, and Nordhoff Street. A stop is proposed on the CSUN campus, as well as along Nordhoff Street at Lindley Avenue, Balboa Boulevard and Woodley Avenue, at the Veterans Administration Hospital on Plummer Street, Sepulveda Boulevard, Devonshire Street, Brand Boulevard at Laurel Canyon Boulevard, San Fernando Road and the Sylmar/San Fernando Metrolink Station.

Bus signal priority will be provided at all signalized intersections along the route and left turn signal phases will be added to existing signals at Nordhoff/Woodley and Woodley/Plummer to facilitate bus-turning movements. A queue jump signal may be provided in the southbound direction at the Reseda/Sherman Way intersection, if approved by LADOT.

A queue jump signal provides a special indication to the bus, which allows it to proceed prior to the rest of the through traffic. The queue jump signal will allow the buses to stop at the near side station in the curb lane and then to advance ahead of any queues of cars in the through lane. A new traffic signal will be installed on Plummer Street at the entrance to the Veterans Administration Hospital to improve the safety of pedestrians who will be crossing the street at that station location.

The operations plan for this alternative calls for the buses to travel in mixed flow, so there is no additional right-of-way required, nor conversion of a travel or parking lane to a dedicated bus lane. There are some physical changes to the existing roadway at several locations where median islands are proposed along Reseda Boulevard and where sidewalk curb extensions are proposed at stations. These are described in the Station Accessibility Enhancements Section 4.4 of this chapter. In addition, a minor 3-foot widening is also proposed at the station on Nordhoff at Balboa to straighten the curb alignment at the station and facilitate bus maneuvers and passenger loading. This widening will not require additional right-of-way and will narrow the sidewalk from 13 feet to 10 feet. In the City of San Fernando, the turn from Truman Street onto Brand Boulevard has a tight radius and is difficult for buses to maneuver. The property adjacent to this corner is a City of San Fernando-owned public parking lot. As part of this project, the curb return on the northwest corner of the intersection will be expanded and the parking lot modified to facilitate bus turns should this alternative be implemented.

source: Meyer, Mohaddes Associates

Figure 4-5. Sepulveda Boulevard Alternative

4.3.4 Sepulveda Boulevard

This route begins at the Ventura Boulevard Metro Rapid Bus line and extends north on Sepulveda Boulevard to Brand Boulevard then on Brand Boulevard to Truman Street and terminates at the Sylmar/San Fernando Metrolink Station as shown in Figure 4-5. The alternative includes the implementation of a PM peak period northbound bus lane in the curb lane from Ventura Boulevard to Chatsworth Street, just south of the 118 Freeway. Space for the third northbound lane is obtained by restriping the entire roadway to shift all of the lanes to the west and prohibiting PM peak period parking along the east side of the street. A typical cross section illustrating this restriping is shown in Figure 4.6

The curb lane would be signed for the use of buses and right turns only during PM peak hours. Figure 4.7 illustrates how such a facility has been implemented on Figueroa Street in downtown Los Angeles. Bus signal priority will be provided at all signalized intersections with LADOT's transit priority system (TPS).

In order to provide room for the northbound bus lane through two intersections where curb parking has already been prohibited to provide room for dual left turn lanes, some additional right-of-way will be required to accommodate roadway widening on the intersection approaches. The two locations are at Burbank Boulevard and Sherman Way. Right-of-way to accommodate a 12-foot widening of the east side of the street for approximately 250 to 300 feet north and south of the cross streets will be required. This could be purchased as a narrow strip along the frontage of the commercial parcels or the entire parcels could be purchased and the excess property beyond the 12-foot strip re-sold by MTA. If funds are not available for the widening through these two intersections, the northbound peak period lane could still be implemented with buses merging into mixed flow lanes to travel through these two locations. Such a merge would be facilitated by the use of queue jump signals at the Clark Street and Vose Street intersections (one block in advance of Burbank and Sherman, respectively). Widening of the east side of the street will also be required for several hundred feet on either side of the Metrolink tracks overpass to provide a third northbound lane due to the bridge abutments in the center of the street. This widening can be accomplished within the existing right-of-way.

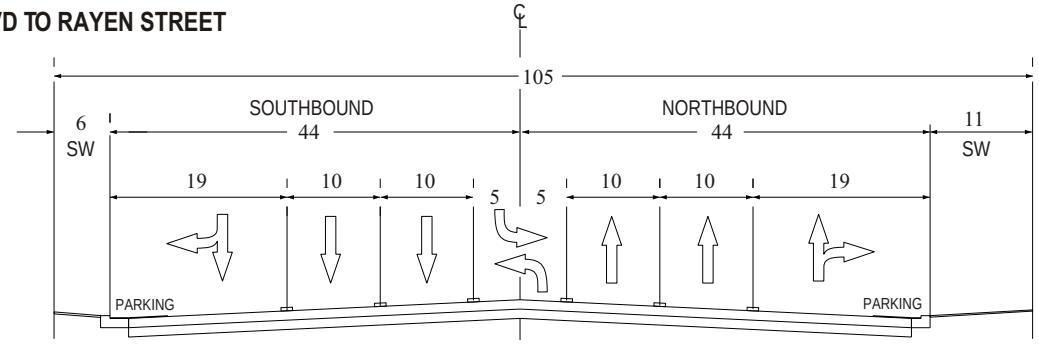
North of Parthenia Street, a dedicated bus lane can be provided in each direction within the existing street width up to Chatsworth Street. This was illustrated earlier on Figure 4-6.

Stations are located at the Ventura Boulevard Metro Rapid Bus, the SFV Metro Rapid Transitway, Victory Boulevard, Vanowen Street, Sherman Way, Roscoe Boulevard, Nordhoff Street, Devonshire Street, and on Brand Boulevard at Laurel Canyon Boulevard and San Fernando Boulevard and at the Sylmar/San Fernando Metrolink Station.

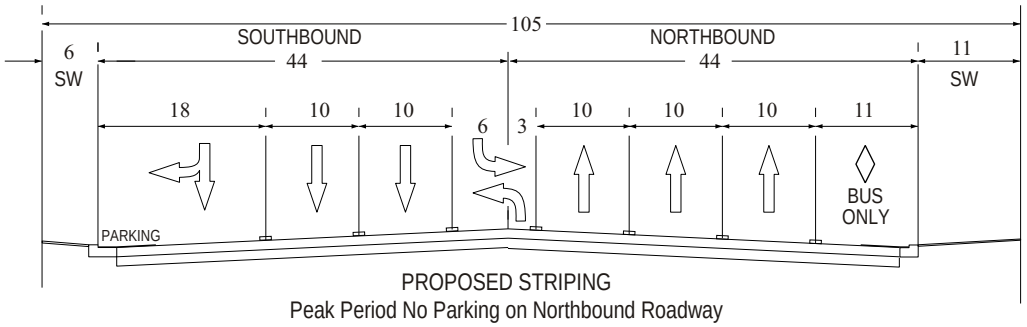
It should be noted that the portion of this alternative north of Plummer Street overlaps with the Reseda Alternative. If the Reseda Alternative and the Sepulveda Alternative were both implemented, they would share stations north of Plummer Street. This could result in the relocation of the Nordhoff station on Sepulveda Boulevard to Plummer Street. The cost estimates for these two alternatives have been developed independently of one another, but the costs of the shared portion of the routes can be separated out to avoid double counting of the costs.

A sub-alternative has also been considered which would extend the Sepulveda Boulevard line to the Olive View Medical Center. This would add one additional Metro Rapid Bus station to the line.

VENTURA BLVD TO RAYEN STREET

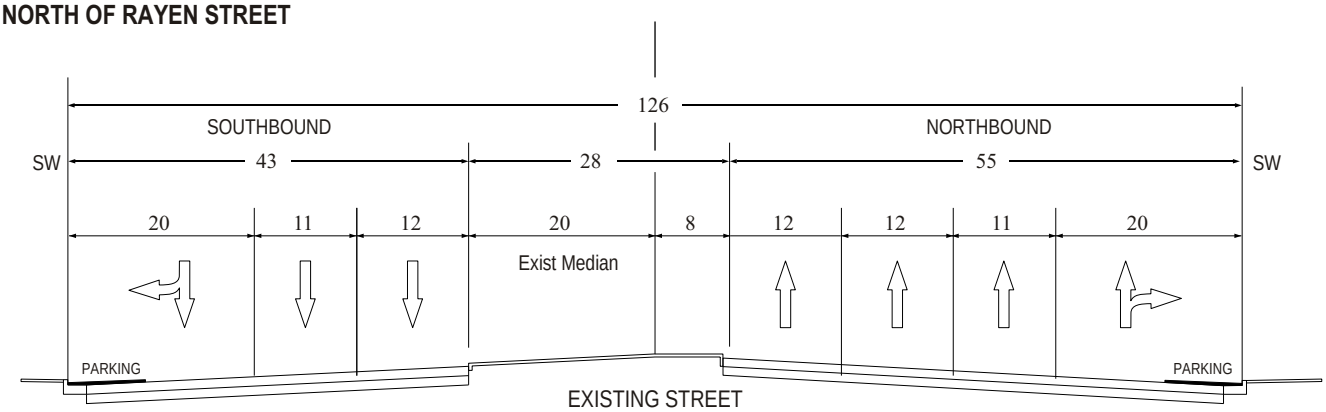


EXISTING STREET



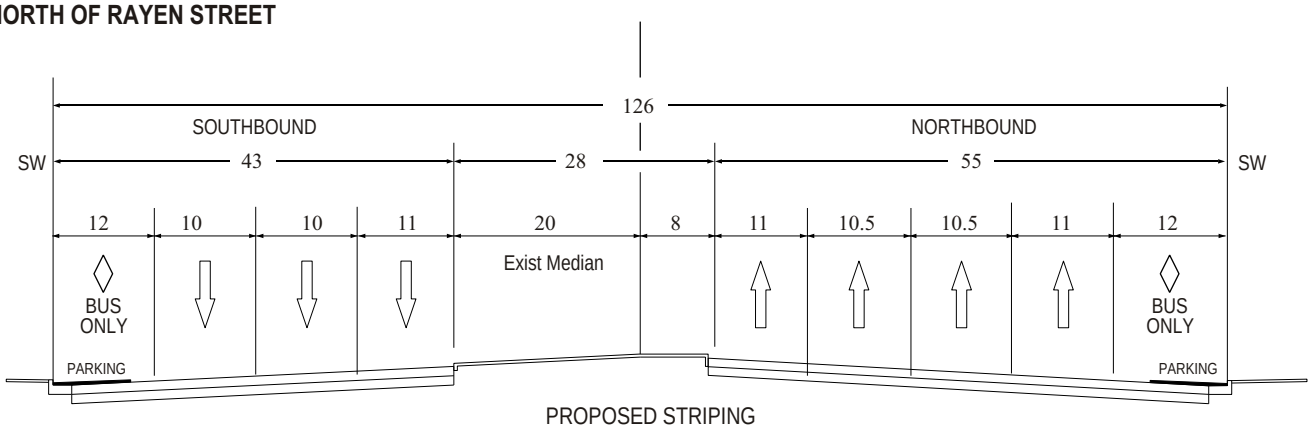
PROPOSED STRIPING
Peak Period No Parking on Northbound Roadway

NORTH OF RAYEN STREET



EXISTING STREET

NORTH OF RAYEN STREET



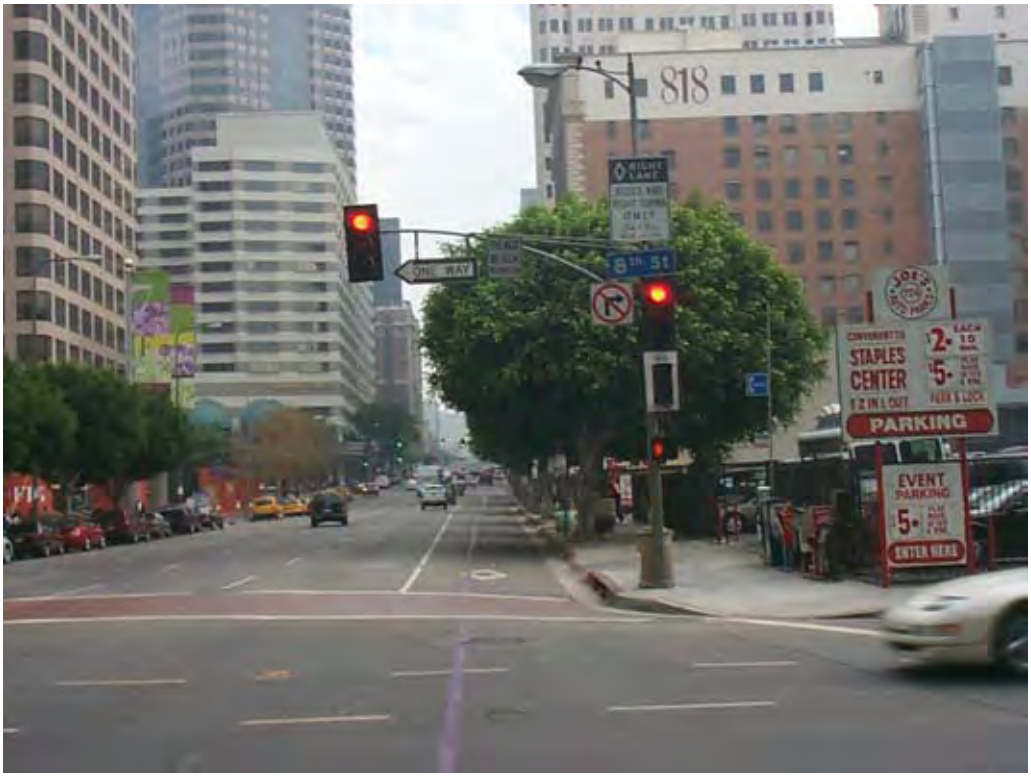
PROPOSED STRIPING
Peak Period No Parking on Both Directions

SEPULVEDA BLVD

Source: Meyer, Mohaddes Associates

NO SCALE

Off Peak Curb Lane Used for Parking



Peak Period(s) Curb Lane Used for Buses

Source: San Fernando Valley East-West Transit Corridor Final EIR, February 2002

4.3.5 Van Nuys Boulevard

This Alternative builds upon the Van Nuys Metro Rapid Bus, which is scheduled for implementation in June 2003. The alignment and station locations are illustrated in Figure 4-8. This alternative includes the extension of the service to the Sylmar/San Fernando Metrolink Station via Foothill Boulevard and Hubbard Street. The planned Van Nuys Metro Rapid Bus service will end at Van Nuys Boulevard/Foothill Boulevard. This proposed alternative will continue the service on Foothill Boulevard and Hubbard Street, adding stations on Foothill Boulevard at Arroyo Avenue and Hubbard Street, and at Hubbard/Glen Oaks Boulevard. The planned transit priority system will also be expanded along this portion of the route.

source: Meyer, Mohaddes Associates

Figure 4-8. Van Nuys Alternative

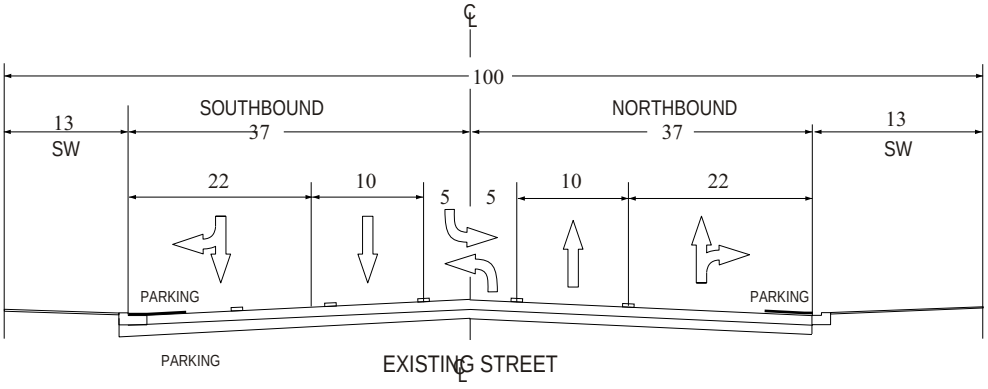
The additional features that would be added to the Metro Rapid Bus program by this alternative include the following:

- **Contribution to 101 Interchange Project** – The City of Los Angeles is working with Caltrans on the design and implementation of an interchange improvement project at the Van Nuys Boulevard interchange on the 101 Freeway. The project will entail the replacement of the westbound 101 Freeway diamond interchange off ramp with a new hook ramp that will terminate on Riverside Drive. It will be accompanied by a new hook on-ramp from Riverside Drive to westbound 101. These new ramps will eliminate the need for left turns on northbound Van Nuys Boulevard onto the freeway and will result in the removal of the traffic signal at that location. The removal of the traffic signal and elimination of left turns will reduce congestion and improve bus speeds through the interchange area. The City has obtained partial funding for the $18 Million project, but is still short of full funding to move forward with the project. A contribution of $5 Million is included in the costs for this alternative to help implement the interchange project to improve Metro Rapid Bus speeds through the interchange area.
- **Peak Period Bus Lanes, Addison Street to Chandler Boulevard –** The only portion of Van Nuys Boulevard in the southern portion of the corridor that does not already have three travel lanes in each direction, at least during peak periods, is the segment between Addison Street and Chandler Boulevard. South of this segment, parking is prohibited in the AM and PM peak periods to gain the third travel lane. North of Chandler Boulevard, where the roadway is wider, there are three lanes in each direction at all times. This Alternative proposes to implement

peak period parking restrictions in the segment between Addison and Chandler and to designate the curb lane as a bus-only lane as shown in cross section on Figure 4-9. A new traffic signal will also be installed at Chandler Boulevard/Van Nuys Boulevard to control the currently free-flowing traffic on Chandler, which currently flows into the third northbound lane on Van Nuys Boulevard. This will allow the buses in the new bus-only lane to proceed into the third northbound lane on Van Nuys Boulevard, north of Chandler. Figure 4-10 illustrates this improvement.

- **Curb Extension/Sidewalk Widening at Stations –** At nine of the stations along the route, the sidewalk adjacent to the bus stop will be widened to provide a larger area for the station canopy and other street furniture and landscaping. These improvements are described in detail in Section 4.4. They are shown in cross section in Figure 4-11.
- **Curb/Sidewalk Reconstruction at Metrolink Station –** An existing bus stop is located on the east sides of Van Nuys Boulevard, just north of the roadway accessing the Metrolink Station opposite Keswick Street. The roadway was widened at the time of construction of the Metrolink parking lot to provide an acceleration lane from the parking lot exit. This results in the bus stop being located on a curved section of sidewalk. As part of this project, the curb will be reconstructed to create a straight alignment parallel to the travel lanes. This will result in a widened sidewalk and will allow the buses to more easily stop adjacent to the curb.
- **Parthenia Street/Van Nuys Boulevard Intersection Redesign –** At the intersection of Parthenia Street and Van Nuys Boulevard, a redesign of the intersection is proposed to improve bus speeds through the intersection in the southbound direction. The redesign is illustrated in Figure 4-12. Currently, there are two lanes southbound on Van Nuys Boulevard north of the intersection and three lanes southbound, south of the intersection. The intersection redesign will provide a third southbound lane, north of the intersection, which will be designated a bus-only lane. This will allow the buses to bypass the queue of southbound through traffic stopped at the traffic signal. The redesign does not require any additional right-of-way.
- **Woodman Avenue/Van Nuys Boulevard Median Removal/Sidewalk Widening –** At the station at Woodman Avenue, there is a narrow paved median island in the center of the street. In order to enhance the sidewalk area adjacent to the station, the median will be removed and the right-of-way currently dedicated to the median will be used for sidewalk widening.
- **Widen Bridge over Flood Control Channel –** The existing bridge over the flood control channel between Beachy Avenue and Arleta Avenue is narrow and presents a constriction that slows traffic. Van Nuys Boulevard is 74 feet wide on either side of the bridge, with two lanes in each direction, parking and a striped median. It narrows to 40 feet across the bridge providing room for four 10-foot lanes and no parking. The inclusion of funds to widen the bridge will eliminate this pinch point which slows buses traveling on Van Nuys Boulevard.

All of the improvements described above are designed to enhance the planned Metro Rapid Bus service on Van Nuys Boulevard by either improving bus speeds on the corridor or improving the station areas for patrons.

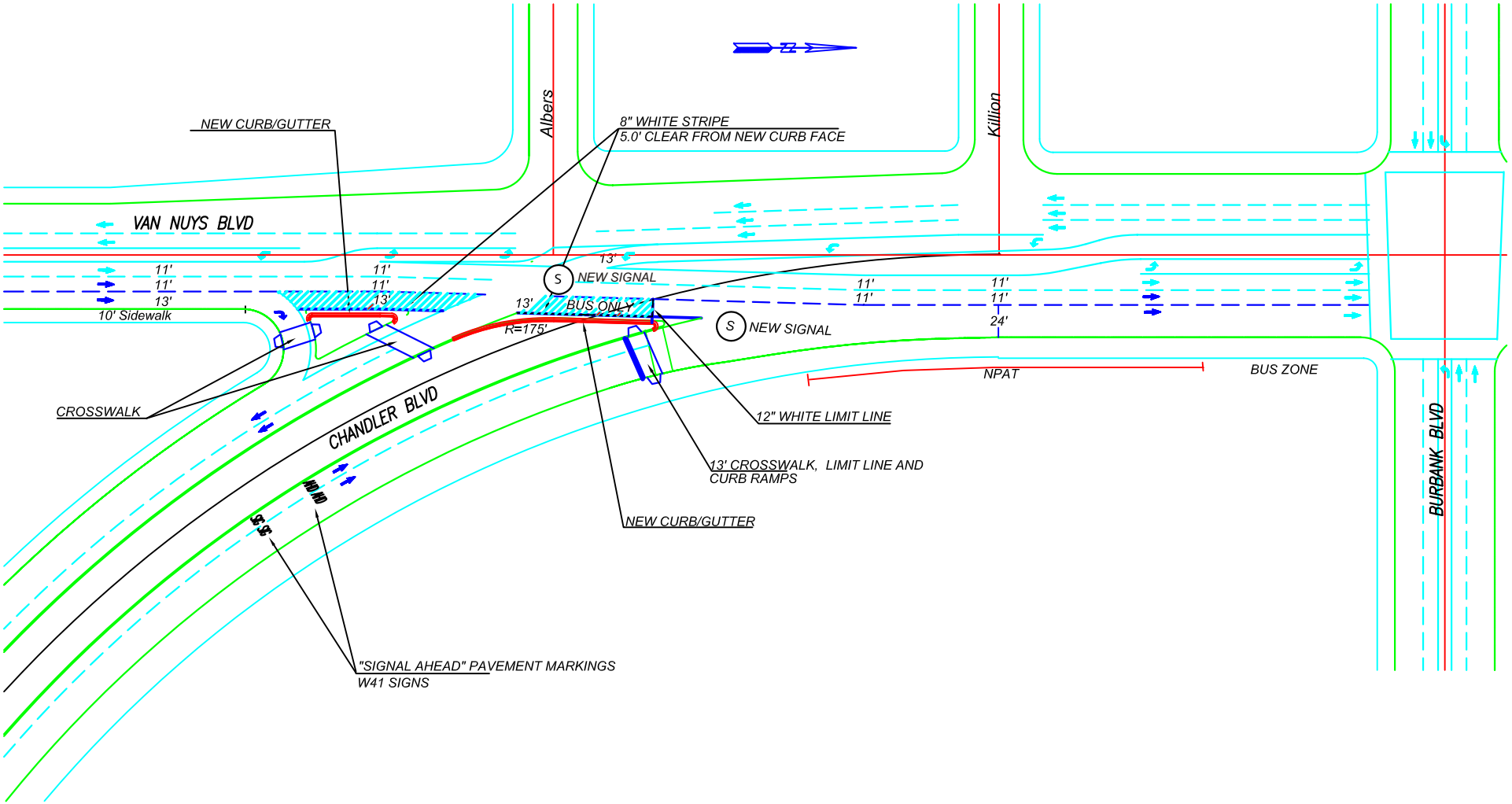


PROPOSED STRIPING
Peak Period No Parking Prohibited for Bus Lane

VAN NUYS BLVD
ADDISON STREET TO CHANDLER BLVD

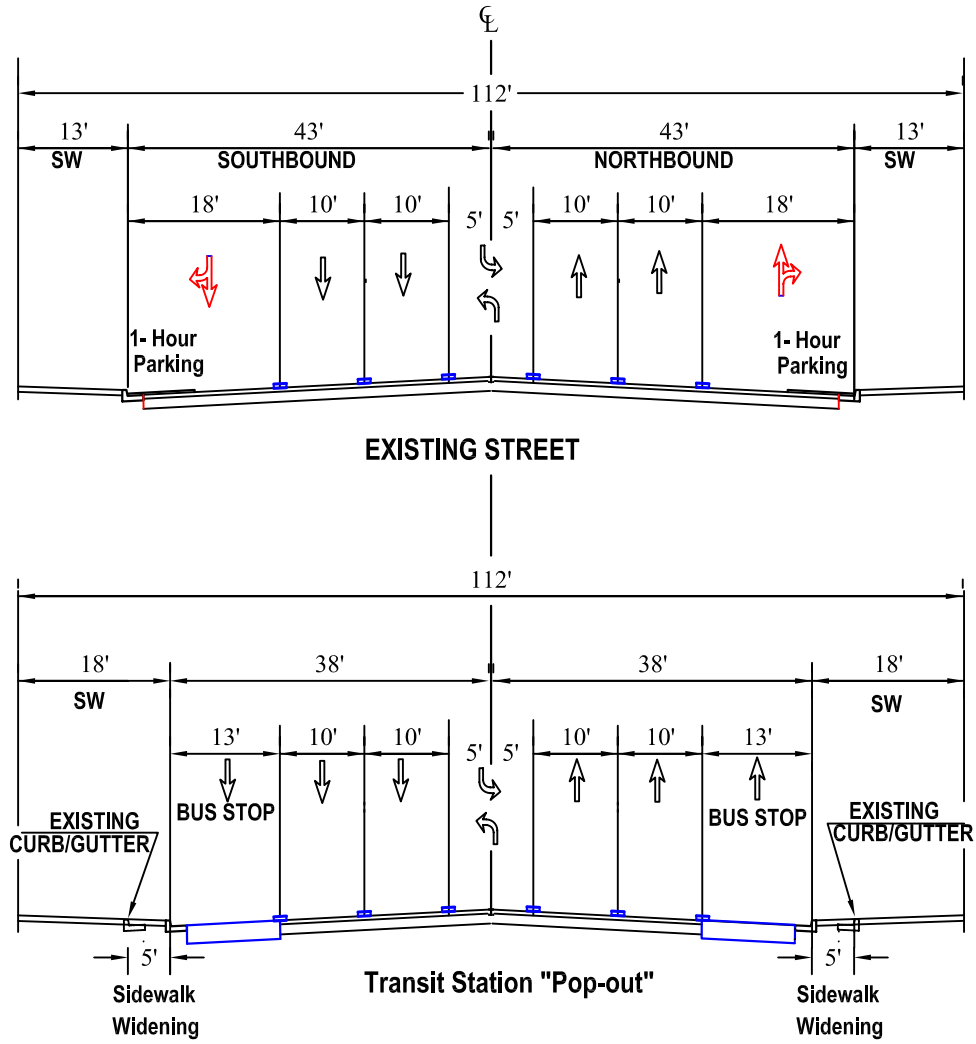
Source: Meyer, Mohaddes Associates

Figure 4-10
Bus Lane Treatement



Van Nuys Blvd at Chandler Blvd

Source: Meyer, Mohaddes Associates

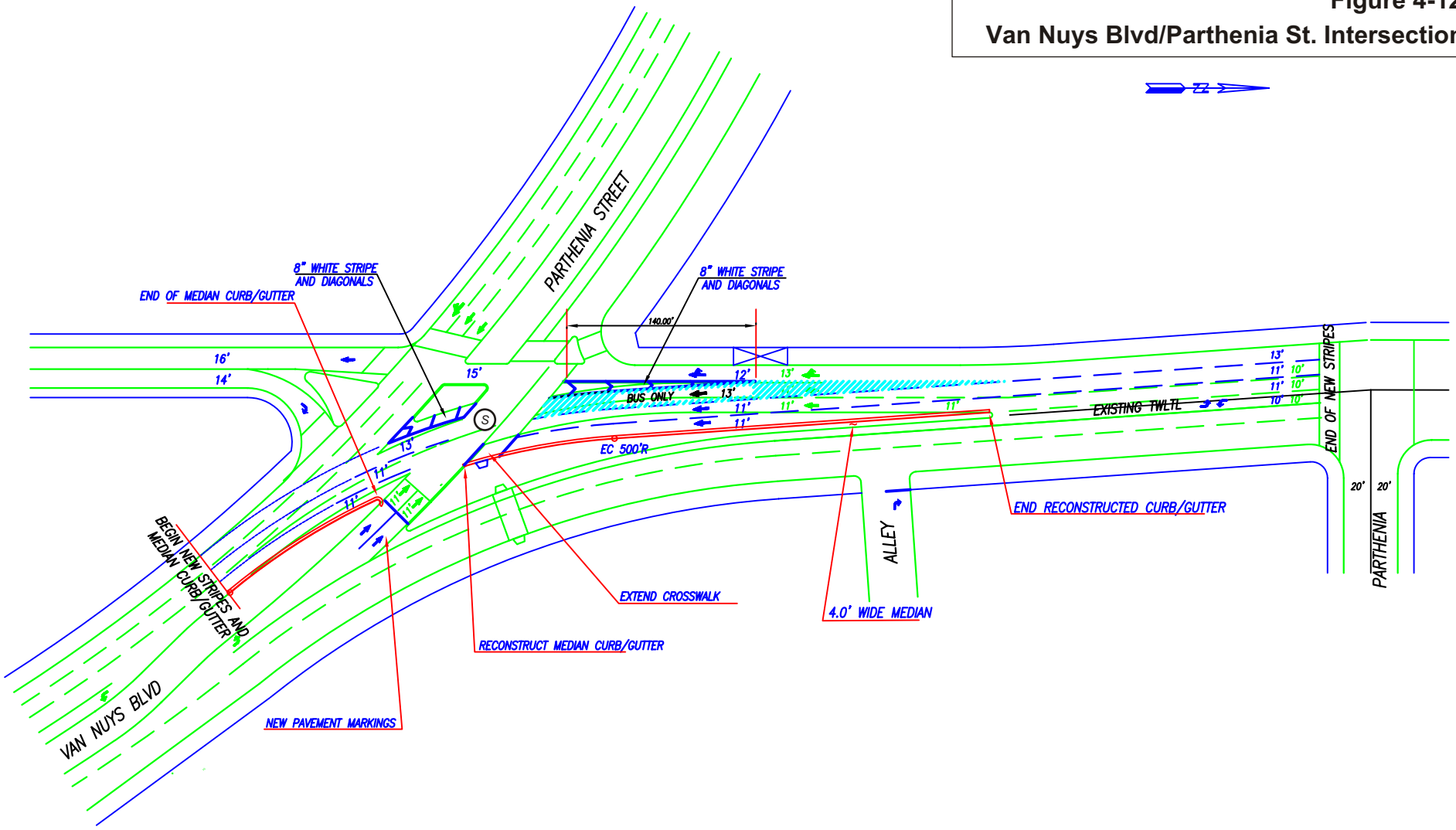


VAN NUYS BLVD
AT TRANSIT STATION

Source : Meyer, Mohaddes Associates

NO SCALE

Figure 4-12
Van Nuys Blvd/Parthenia St. Intersection



Source: Meyer, Mahaddes Associates

Van Nuys Blvd at Parthenia Street

Source: San Fernando Valley East-West Transit Corridor Final EIR, February 2002

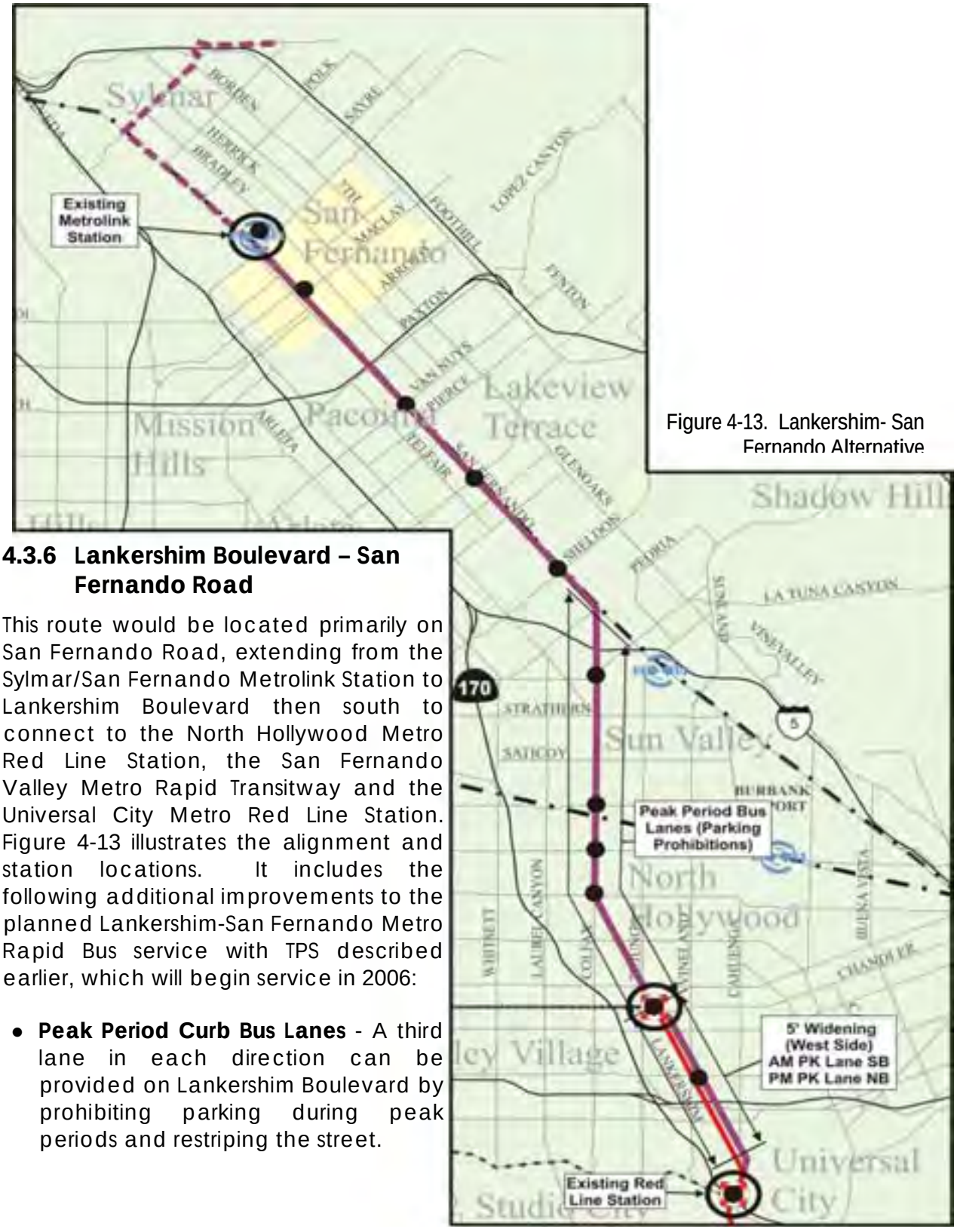


Figure 4-13. Lankershim- San Fernando Alternative

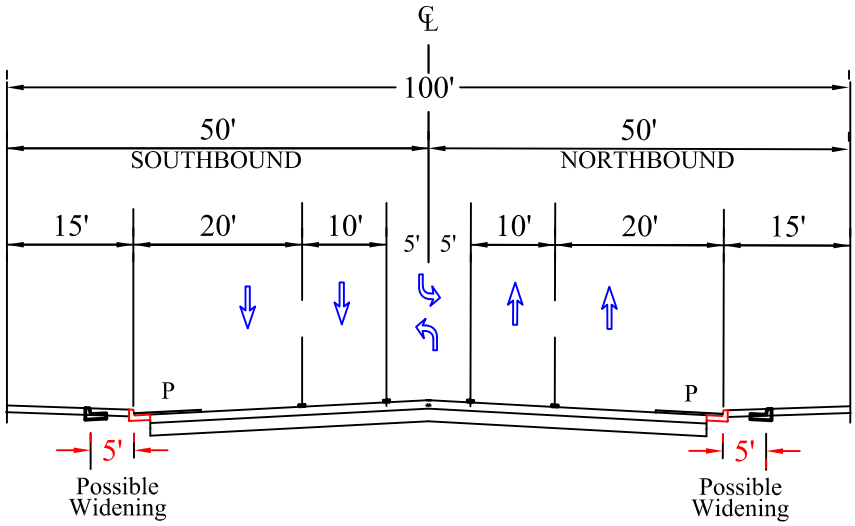
4.3.6 Lankershim Boulevard – San Fernando Road

This route would be located primarily on San Fernando Road, extending from the Sylmar/San Fernando Metrolink Station to Lankershim Boulevard then south to connect to the North Hollywood Metro Red Line Station, the San Fernando Valley Metro Rapid Transitway and the Universal City Metro Red Line Station. Figure 4-13 illustrates the alignment and station locations. It includes the following additional improvements to the planned Lankershim-San Fernando Metro Rapid Bus service with TPS described earlier, which will begin service in 2006:

- **Peak Period Curb Bus Lanes** - A third lane in each direction can be provided on Lankershim Boulevard by prohibiting parking during peak periods and restriping the street.

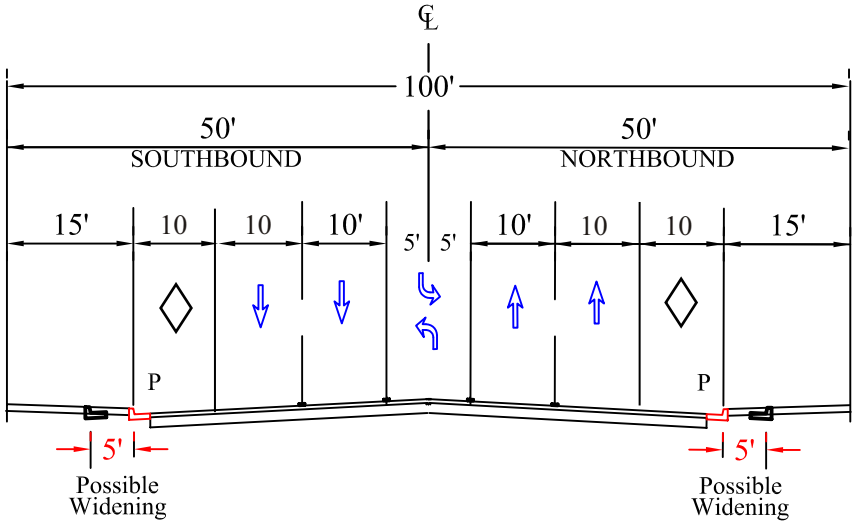
Peak period parking restrictions are frequently implemented in the City of Los Angeles to provide additional travel lanes. Such lanes could be provided from San Fernando Road, south to Cahuenga Boulevard. It is proposed as part of this alternative, that the curb lane be dedicated to buses and right turns only during both the AM and PM peak periods. Initially, the bus lane would likely be operated in the peak commute direction only. In the AM peak period, the bus lane would be operated in the southbound direction on the west side of the street. In the PM peak period, it would be operated in the northbound direction on the east side of the street. Over time, if congestion worsens to the point that buses are slowed in both directions during both peak periods, the lanes could be operated in both directions in both peak periods. The curb lane would be implemented within the width of the existing street. South of Magnolia, the lane could also be implemented within the existing curb-to-curb width by restriping the street. LADOT has also requested that an alternative also be considered which would narrow the sidewalk on the west side of the street from 15-feet to 10-feet in order to provide a 75-foot cross section. The typical cross sections on Lankershim Boulevard are illustrated in Figure 4-14.

- **Additional Portal to North Hollywood Metro Red Line Station** – A second portal for the North Hollywood Red Line Station is included as a potential element of this alternative. The portal would be located on the west side of Lankershim Boulevard adjacent to the terminus of the SFV Metro Rapid Transitway. A knock-out panel was provided during the construction of the Red Line to facilitate this additional portal. With the second portal on the west side of Lankershim Boulevard, Red Line patrons would not have to cross the street at grade when transferring to the Metro Rapid Bus services.



Route 134 to Victory Blvd

LANKERSHIM



Route 134 to Victory Blvd

LANKERSHIM

TYPICAL CROSS SECTIONS
LANKERSHIM BLVD

NO SCALE

4.4 Station Design And Accessibility

4.4.1 Station Design Concept

Stations are the interface between the built environment and a bus rapid transit (BRT) system like the Metro Rapid Bus. Particularly for at-grade systems, stations are highly visible to both current transit riders and potential riders. Stations for the North-South corridors will be multipurpose facilities, providing:

- Shelter, comfort and amenities for waiting riders
- Space for Metro Rapid buses to safely stop and reenter traffic
- Multi-modal interface between transit riders, pedestrians, and cyclists
- System information (system maps, variable message signs, next bus arrival information, potential ticket vending/validation machines, etc.)
- Information about the surrounding area (neighborhood maps, station names, etc.)
- Safety and security for transit users and passersby (i.e. lighting)
- Integration with the surrounding built environment

The design of the station and its component pieces address these varied functional requirements. For the North-South corridors, two types of stations have been considered:

(1) On-street stations would be based upon the Metro Rapid Bus canopy design (Figure 4-15) with additional enhancements (described in this section). These on-street stations would be utilized along the Reseda, Sepulveda, Van Nuys, and Lankershim-San Fernando corridors.

(2) For the exclusive transitway alternative being considered along the Canoga railroad right-of-way, stations similar to those used for the SFV Metro Rapid Transitway (Figure 4-16) are under consideration.

source: Suisman Urban Design

Figure 4-15. Renderings of Typical Metro Rapid Bus Station Design

source: Gruen Associates/George Bungarda

Figure 4-16. Rendering of Tampa Avenue Station illustrating East-West Metro Transitway Station Concept

4.4.1.1 On-Street Station Design

The on-street station design proposed for the Reseda, Sepulveda, Van Nuys, and Lankershim corridors would be a based on standard Metro Rapid Bus stations (such as those on Ventura Boulevard) with additional design refinements and enhancements unique to the North-South corridors to further improve service.

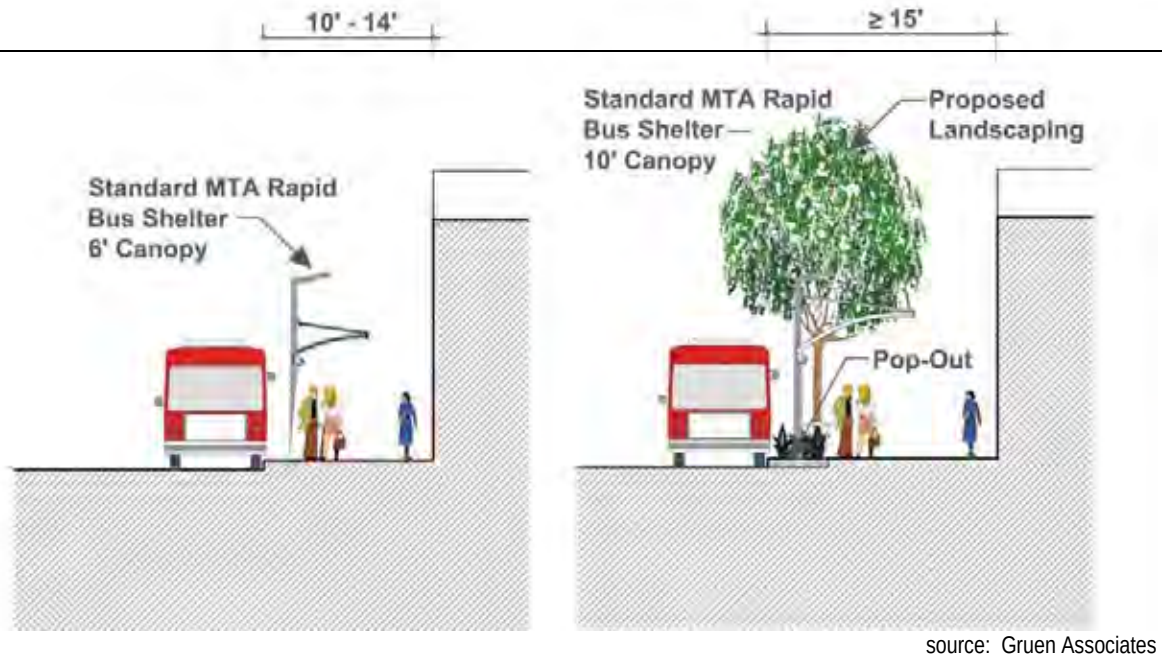
Station Site Planning

Station locations were selected to maximize ridership along the corridor while keeping station spacing about once per mile in order to reduce overall trip times. Typically, stations have located at major cross-streets of the north-south corridors and/or major multi-modal destinations, such as existing or proposed Metrolink, Metro Red Line, and SFV Metro Rapid Transitway stations. A detailed list of all station locations is included, by corridor, in Sections 4.4.3 through 4.4.7.

At the site planning level, stations have been located wherever possible on the far side of the intersection, as close to the intersection as possible to facilitate transfers with local and east-west bus service. (Far side stations assist transit signal priority and reduce conflicts with vehicles that are turning right, thereby improving travel times.) In general, local bus stops would be located on the near side of the intersection, separate from BRT stops. Individual stations have been located as close as possible to the intersection without blocking the crosswalk. Station site plans would comply with MTA and City of Los Angeles standards for bus stops, as well as ADA requirements.

The major right-of-way constraints which affect station site planning are:

- *Curb cuts*
  Buses should stop at a level, unbroken curb in order to ease boarding and alighting. Additionally, driveways into adjacent development must be kept clear other than on a temporary basis. Therefore, BRT stations have been located so that station elements (canopies, etc.) do not block driveways and boarding occurs along a level curb. In order to locate stations as close as possible to the



source: Gruen Associates

Figure 4-17. Varied Rapid Bus Canopy Sizes depending on the Overall Width of the Sidewalk

major cross-street, later design phases should consider closure of intervening driveways that are currently unused or that could be closed/narrowed without affecting access to adjacent parcels.

- *Obstructions in the sidewalk*
  Similar to curb cuts, objects in the sidewalk such as power poles and street lights can prevent stations from being located as close as possible to the major cross-street.

- *Sidewalk width*
  Metro Rapid Bus canopies vary in depth (front to back), with variations that are 6', 8' and 10' wide. Because Rapid Bus canopies must have approximately two feet of clearance at both the front and back of the sidewalk, the narrowest sidewalk width which can accommodate a canopy is 10'. Wider sidewalks are desirable, because they can accommodate wider canopies, as well as provide additional circulation space on the sidewalk for BRT riders and passersby (Figure 4-17).

Typical Metro Rapid Bus Station Elements

Typical Metro Rapid Bus stations have already been implemented on several corridors in Los Angeles County, including Wilshire/Whittier Boulevard, Ventura Boulevard (Figure 4-18), and Vermont/Broadway. The standard Metro Rapid Bus station design for these corridors has been refined to include a lower canopy providing more shelter, the addition of some seating, and potentially a solar collector on the canopy. As illustrated in Figures 4-15, 4-18 and 4-19, the Rapid Bus Station design considered for the on-street corridors would provide several amenities, including:

- Gateway canopy over the boarding area,
- Colored paving designating the bus boarding zone,
- Variable message sign indicating the time until next bus arrival,
- Lean bars / seating,

- Trash can,
- System map, and
- Station identification signage (the red areas on the vertical poles),
- Overhead lighting,
- Potential solar collector.

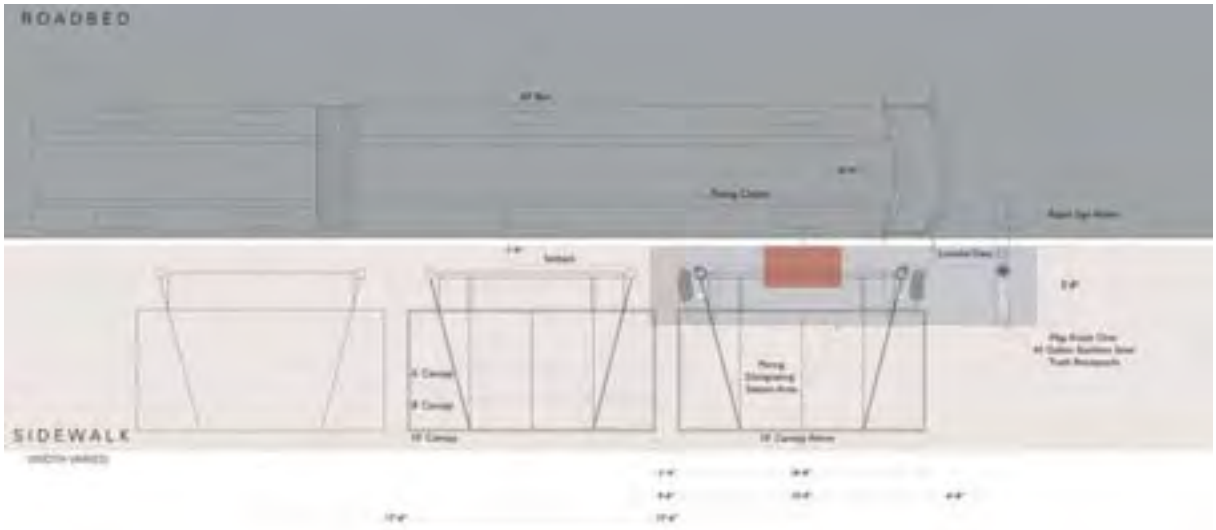
source: Gruen Associates

Figure 4-18. Existing Rapid Bus Station along Ventura Boulevard Corridor (Universal City Station)

The stations could also include fare payment machines, should the MTA decide to implement an advance fare payment system in the Metro Rapid Bus system. Figure 4-19 illustrates a standard Metro Rapid Bus Station in plan. For maintenance of bus stations/stops, the City of Los Angeles contracts with a private company. To fund the maintenance the company includes advertising panels as part of the Rapid Bus and local bus stops. These panels are either attached to the bus stops or are free standing and optimally located on the far side of the bus stop. Along the North-South corridors, the advertising kiosk would be freestanding and located, where practical, on the far side of the bus station.

On-Street Station Enhancements

In addition to the standard Metro Rapid Bus station elements, on-street stations would include the following additional enhancements:



source: Suisman Urban Design

Figure 4-19. Plan of Standard Metro Rapid Bus Station, accommodating a 60' articulated bus

- *Advertising / Neighborhood kiosk*
  As described above, each station would have an advertising kiosk, located on the far side of the system map / trash receptacle from the station boarding area. In some cases, curb cuts and/or other obstructions along the sidewalk may require that the kiosk, as well as other station enhancements, be located further down the sidewalk to avoid the obstructions. Figure 4-20 shows a typical triangular kiosk used by the City of Los Angeles. When sidewalks are narrow, a two panel version of the kiosk would be used.

  One or two panels of the kiosk would be used for advertising with the remaining panel being used by the community to provide information such as a neighborhood map or a community calendar. The design of kiosks should be selected for each corridor during later design phases, working with the community to create a consistent theme within neighborhoods.

source: Viacom Decaux

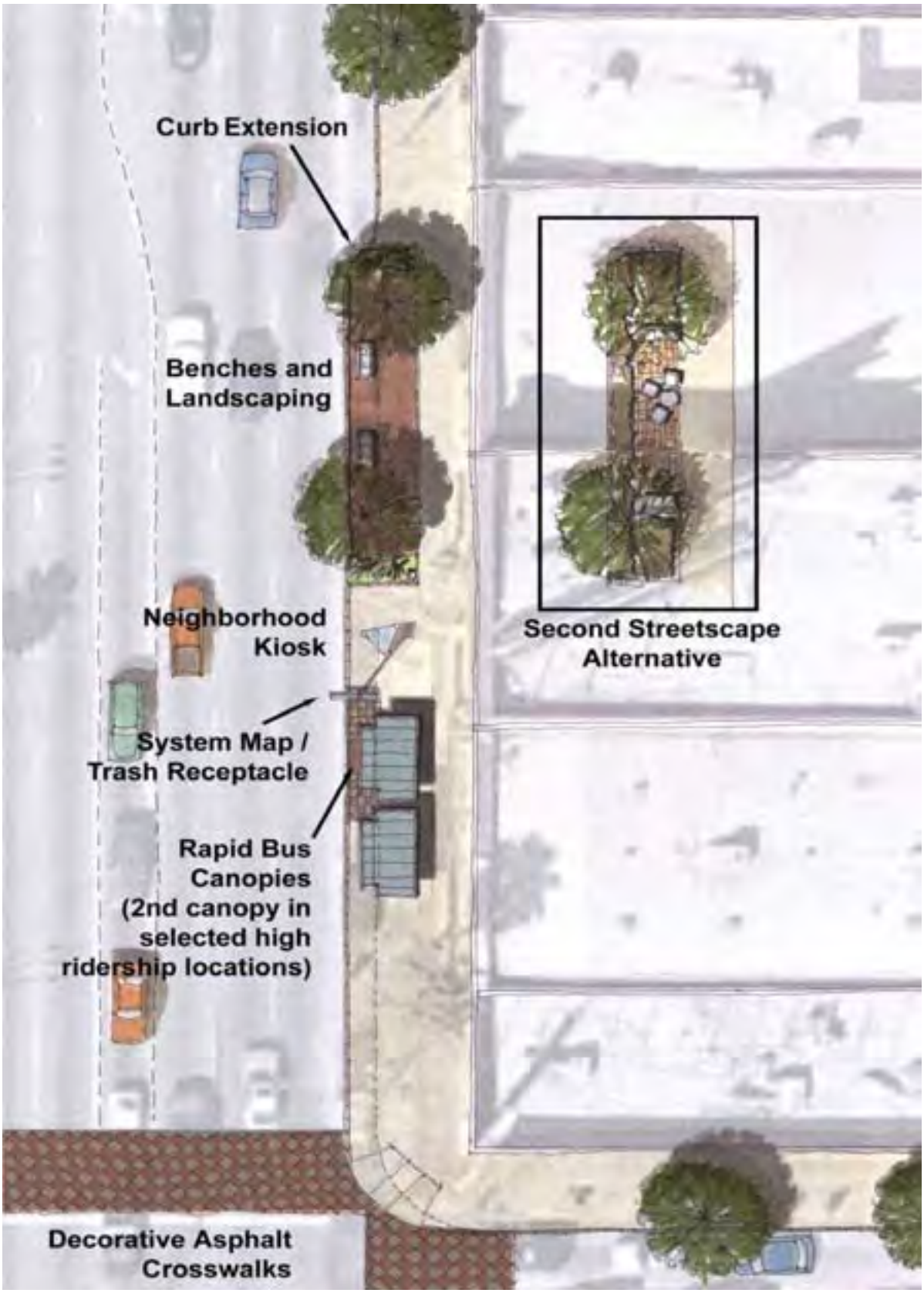
Figure 4-20. Advertising / Neighborhood Kiosk

- *Landscaping adjacent to the canopy / boarding area*
  Landscaping, including trees and shrubs, would provide a buffer between the street and passengers on the sidewalk. Landscaping would be located in the area of the neighborhood kiosk, on the far side of the system map/ trash receptacle from the boarding area.

- *Bicycle racks*
  Transit patrons frequently use bicycles to complete the trip between the bus and their ultimate origins and destinations, particularly trips from home to bus stop. Providing bicycle racks at stations would allow patrons to leave their bicycles at the station instead using the often limited space on buses for bicycle storage. Racks would be provided in the area of the neighborhood kiosk, as space/sidewalk width allows.

- *Curb pop-outs/bump-outs at selected locations*
  Along the Reseda and Van Nuys corridors, there is an opportunity at some stations to widen the sidewalk at stations with curb extensions, also referred to as pop-outs or bump-outs. At these stations, the sidewalk would be widened into the unused parking lane, providing an additional 8' of sidewalk width. The pop-outs/bump-outs would provide a significant benefit in terms of both station functionality and circulation. Wider sidewalks would allow the use of the widest (10') Metro Rapid Bus canopies, and provide more space for queuing and through-circulation of pedestrians.

  Additionally, pop-outs/bump-outs would provide additional sidewalk area for amenities around the kiosk, including benches, bicycle racks, and landscaping, and decorative paving. Figure 4-21 illustrates the concept, including two streetscape alternatives for the area beyond the neighborhood kiosk. The specific locations where curb pop-outs/bump-outs are recommended are described in Sections 4.4.4 (Reseda) and 4.4.6 (Van Nuys).



source: Gruen Associates

Figure 4-21. Curb extension concept for selected stations along the Reseda and Van Nuys corridors

- *Second canopy at selected locations*

At stations with high ridership, a second canopy could be installed adjacent to the first Rapid Bus canopy, as illustrated in Figure 4. The determination of which stations would most benefit from a second canopy should be based on the most recent ridership counts available during later design phases.

- *Decorative colored asphalt crosswalks at station intersections*

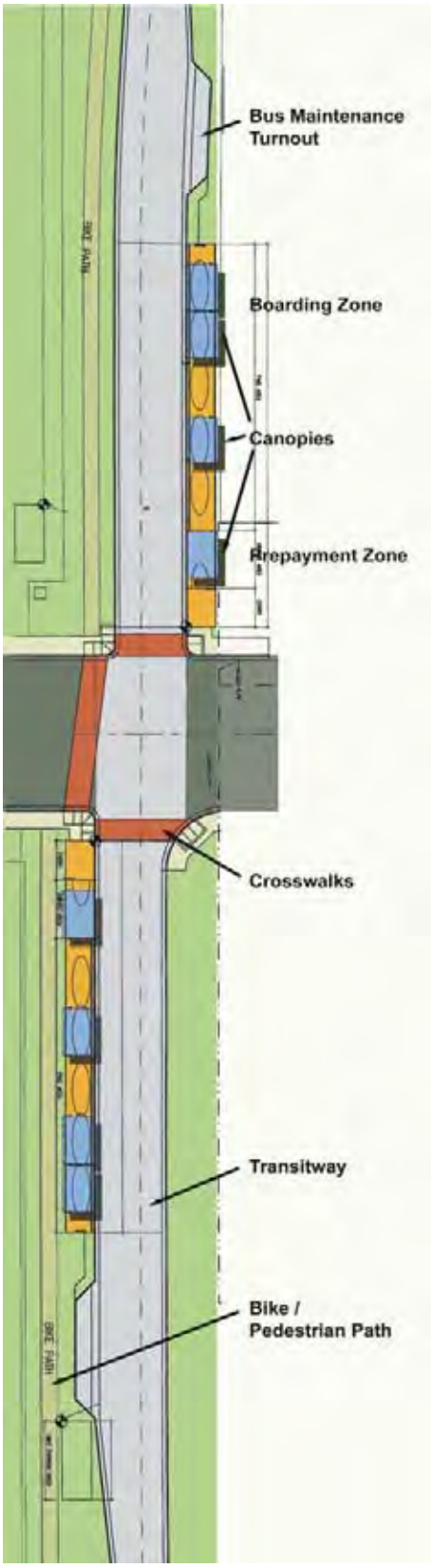
Decorative colored asphalt crosswalks, similar to the type typically installed by the City of Los Angeles, would be installed at station intersections if not already installed. These decorative crosswalks, in addition to being attractive, improve the visibility of crosswalks to both pedestrians and motorists. Crosswalks of this type can currently be found along Van Nuys Boulevard in the vicinity of the Valley Government Center.

4.4.1.2 Transitway Station Design

Rather than operating on-street, the Canoga corridor would operate within an exclusive transitway along a former railroad right-of-way. The design of the transitway and its stations would be similar to that developed for the East-West Metro Rapid Transitway, of which the Canoga corridor would in fact be an extension.

Station Concept

Each station area would be comprised of two separate side platforms along the transitway, one for northbound travel, the other for southbound travel. Each platform (Figure 4-22) would be divided into two "zones," a prepayment zone and the boarding platform itself. The prepayment zone would typically be located adjacent to the cross-street. In this zone, patrons would purchase and potentially validate tickets for the transitway, and other amenities such as bicycle racks/lockers, and telephones would be located in this area. The other zone, the transitway boarding platform,



source: Gruen Associates

Figure 4-22. Typical Transitway Station

would be fenced and access would be limited to paid transit patrons.

Station platforms would be able to accommodate three standard buses or two articulated buses. Station curbs would provide level boarding for low-floor buses. Canopies would provide shade and shelter over portions of the platform, including the prepayment zone. The station design should be similar to that of the SFV Metro Rapid Transitway in order to establish a unifying theme throughout the line, giving the transitway a clear visual and functional impression in the context of the Valley.

Amenities such as seating, lighting, screen walls (where needed), bicycle racks/lockers, and ticket vending machines would be included at each station. Artist-designed elements, including screen walls at station entries and decorative paving of platforms would also be included in the station design. Stations would be equipped with an Advanced Travelers' Information System (ATIS) similar to that used by the on-street Metro Rapid Bus that would inform travelers of the wait time until the next time and provide other real-time transitway operating information.

4.4.2 Accessibility Improvements

Bus transit trips are most often completed with a secondary walking or bicycle trip between the transit station and the traveler's ultimate origin or destination. Because of this, transit users are particularly sensitive to the environment along local streets. Improved pedestrian and bicycle accessibility will also improve the attractiveness of transit travel.

At the most basic level, transit users need a functional network of sidewalks/bicycle routes and street crossings in order to access destinations. However, accessibility is also affected by factors such as comfort, safety, and security. The accessibility improvements proposed here have been divided into three categories:

(1) On-Street Accessibility Improvements,
(2) Future On-Street Accessibility Enhancements, and
(3) Transitway Urban Design Enhancements (along the Canoga corridor only).

4.4.2.1 On-Street Accessibility Improvements

Street Trees along North-South Corridors

As a part of the basic improvements being made along each on-street North-South corridor, new trees would be planted along the corridor's sidewalk within one-quarter mile of each station intersection (Figure 4-23). The quarter-mile distance represents a typical walking trip length for people using transit. Trees would provide shade for pedestrians traveling to the stations, and would form a buffer between pedestrians and vehicular traffic.

Street trees and tree grates would be installed on both sides of the street (in locations without existing trees), and trees would be planted according to City of Los Angeles tree planting standards. New tree species should either match existing tree species or be coordinated with streetscape plans and the local community to create a consistent tree pattern along the corridor.

source: Gruen Associates

Figure 4-23. Typical Plan of Tree Planting Within ¼ Mile of Station (San Fernando / Osborne Station)

intersections and designers would work with the community and business owners locate breaks in the medians).

4.4.2.3 Transitway Accessibility and Urban Design Improvements / Enhancements

The urban design enhancements proposed for the Canoga railroad right-of-way corridor would be similar to those that will be implemented along the East-West Metro Rapid Transitway. These improvements would include drought-tolerant landscaping, a Class I bike path / pedestrian path, and berms and landscaping to the reduce the visibility of soundwalls. As these improvements would only be implemented along the Canoga corridor, they are described in greater detail in Section 4.4.3.

4.4.3 Canoga Avenue Railroad Right-of-Way

The Canoga corridor is different from the other North-South corridors in that the proposed alternative would run within a former railroad right-of-way (instead of on-street). The exclusive transitway proposed for the alignment, similar the East-West Metro Transitway to which it will connect, provides more space for station area improvements and corridor urban design enhancements.

4.4.3.1 Existing Physical Conditions along Canoga Corridor

The Canoga Avenue railroad right-of-way is generally 100 feet wide between the end of the SFV Metro Rapid Transitway (at Variel Avenue / Victory Boulevard) and the Chatsworth Metrolink Station. The right-of-way, however, is up to 225 feet wide between Vanowen Street and Sherman Way, and as narrow as 65 feet just north of Sherman Way.

Few urban amenities are currently found within the railroad right-of-way. In undeveloped stretches of the right-of-way, the corridor largely consists of exposed dirt, with a very small number of trees (Figure 4-24). The old railroad tracks are still largely present in the right-of-way.

source: Gruen Associates

Figure 4-24. Undeveloped portion of Canoga Avenue railroad right-of-way

Portions of the right-of-way which have been leased for commercial or industrial use also have only limited urban design enhancements and appear from Canoga Avenue to be a jumble of fences, parking lots, and storage. The east edge of Canoga Avenue, which runs along the right-of-way, has no sidewalk or street trees. Development along either side of the railroad right-of-way is largely commercial or industrial in nature. However, some single and multifamily housing lies to the east of the right-of-way, particularly between Roscoe Boulevard and Nordhoff Street.

4.4.3.2 Existing Plans and Initiatives for Canoga Corridor

Current streetscape/urban design plans are focused on two portions of the Canoga corridor – Warner Center and the Canoga Park area. Designers will have to take into consideration the requirements of these plans when the detailed design of the Canoga corridor transitway is undertaken.

Warner Center

The *Warner Center Specific Plan* contains urban design and streetscape regulations for the area between the Ventura Freeway and Vanowen Street and from Topanga Canyon Boulevard to De Soto Avenue , including both Canoga Avenue and the Warner Center Transit Hub. The *Specific Plan* contains tree species recommendations for both Owensmouth Avenue, the location of the Warner Center Transit Hub and for Canoga north to Vanowen:

- Along Owensmouth, the street tree map indicates London Plane Trees, California Live Oak, and Red Ironbark trees.
- Along Canoga, the street tree map indicates Magnolia and Chinese Pistache trees.

Canoga Park

The Canoga Park area, which generally runs along Sherman Way in the vicinity of Canoga, has several community design and streetscape plans. They are generally divided into two zones, Downtown Canoga Park (extending between Topanga Canyon and Canoga along Sherman Way) and the Canoga Park Commercial Corridor (extending from Eton Avenue to De Soto along Sherman Way).

Two plans have been established for Downtown Canoga Park: (1) *Downtown Canoga Park Community Design Overlay* and (2) *Downtown Canoga Park Streetscape Plan*. The community design overlay has been established by the City generally to improve the character of buildings in the area and retain the viability of the area as a pedestrian-oriented shopping district. The streetscape plan provides recommendations for landscaping and new street furniture. Along Sherman Way, the plan recommends the planting of Queen Palm and Pink Trumpet trees.

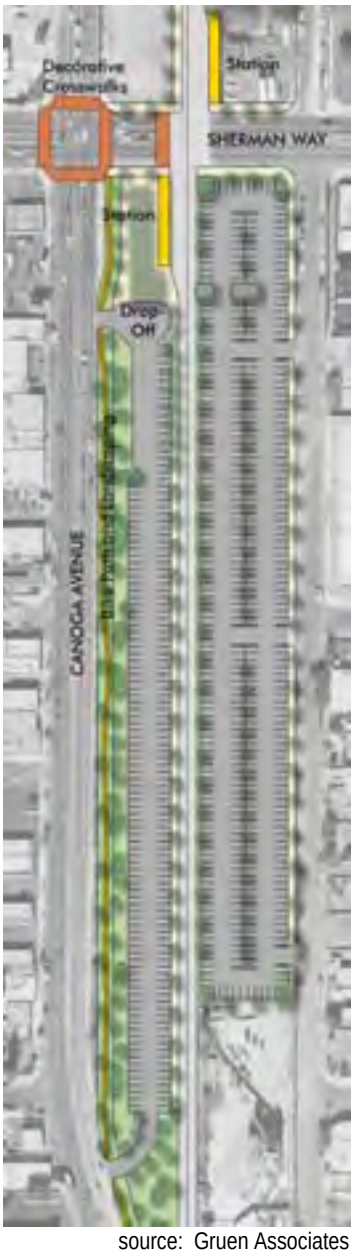
The Canoga Park Commercial Corridor also has community design overlay and streetscape plans, but this area is more distant from the MTA right-of-way than the Downtown Canoga Park area. In addition, the entire Canoga Park area is part of a Targeted Neighborhood Initiative.

4.4.3.3 Station Locations and Design Concept for Canoga Corridor

Stations would be located along the Canoga corridor at the following locations, proceeding from north to south:

- *Chatsworth Metrolink Station*
  The Chatsworth Metrolink Station would be the northern terminus of the Canoga corridor. Buses would unload and pick up passengers at existing bus bays adjacent to the rail station. The existing park-and-ride facility at this location accommodates approximately 375 vehicles.

- *Nordhoff Street*
  Platforms for the Nordhoff Street station would both be located on the far side of the intersection. The conceptual design would be similar to that shown earlier in Figure 4-22.
- *Roscoe Boulevard*
  Platforms for the Roscoe Boulevard station would both be located on the far side of the intersection. The conceptual design would be similar to that shown earlier in Figure 4-22.
- *Sherman Way*
  The Sherman Way station would provide a major opportunity both for a large park-and-ride facility and potential joint development (Figure 4-25). The wide (approximately 225 feet) right-of-way south of Sherman Way could accommodate up to 1000 spaces in a park-and-ride facility. Figure 4-25 illustrates a concept which leaves some space available for existing lease holders to remain, while providing 650 parking spaces. Additional land would remain to create open space (for water retention and recreation) near the Los Angeles River, as well as potential commercial development at Sherman Way, adjacent to the Downtown Canoga Park planning area. The northbound station platform might be located south of Sherman Way and integrated into the joint development site to place it closer to the parking lot.
- *Vanowen Street*
  The Vanowen Street station would be a typical station with far side platforms. However, the wide right-of-way available between Vanowen and the Los Angeles River could potentially be used for future joint development opportunities.



source: Gruen Associates

Figure 4-25. Conceptual Design of Sherman Way and Vanowen Street Stations

- *Warner Center Transit Hub*
  The Warner Center Transit Hub is currently being developed by the City of Los Angeles. Served by the SFV Metro Rapid Transitway, the Ventura Boulevard Metro Rapid Bus, several Commuter Express bus routes, as well as many local bus routes, this station will be a major transfer point for Canoga corridor users. The integration of Canoga corridor service into the Hub should be coordinated between MTA Operations and the City of Los Angeles Department of Transportation.

  MTA is also exploring the possibility of constructing a parking structure in the general vicinity of the transit hub in order to provide 500-1,000 park-and-ride spaces in the area.

4.4.3.4 Urban Design Concept

The urban design concept for the Canoga corridor is a "multi-modal transportation facility within a greenway," similar to the concept for the SFV Metro Rapid Transitway. The route would be landscaped, including trees to visually define the transitway. In general, drought-tolerant ground cover and native planting would be used along the corridor. In addition, a Class I bike path/pedestrian path would be constructed along the length of corridor within the railroad right-of-way, adjacent to Canoga Avenue. Several types and heights of fencing would be used along the corridor depending on adjacent uses and visibility from public streets.

Treatment Adjacent to Residential Areas

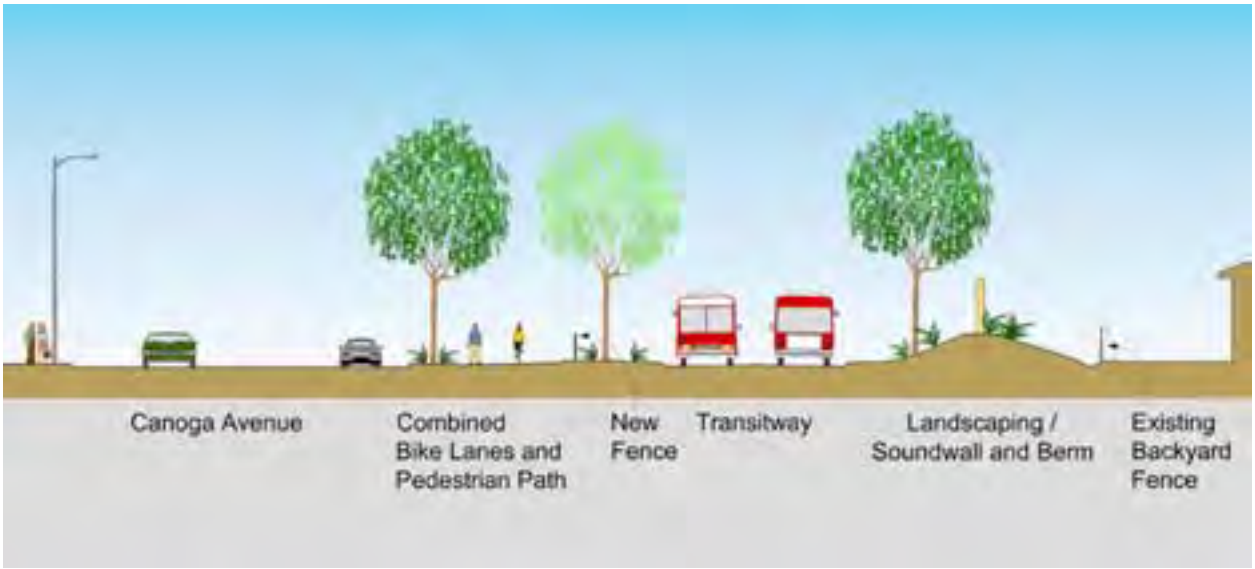
Where needed in the vicinity of residential uses, noise walls would be constructed on top of earthen berms between the transitway and adjacent properties (Figure 4-26). By building up landscaped berms on the sides of soundwalls, the perceived height of the soundwalls would be reduced, making their presence less noticeable.

Treatment in Commercial/Industrial Areas

Along portions of the right-of-way that are adjacent to commercial or industrial development, soundwalls and the visual buffer of landscaping are generally unnecessary. In these areas, portions of the right-of-way have been leased to businesses, generally for commercial or storage use. Therefore, in commercial/industrial areas, there is potential to retain some leased area on the far side of the transitway from the bicycle path/pedestrian path (Figure 4-27). The precise configuration of these leases should be determined during later phases of design.

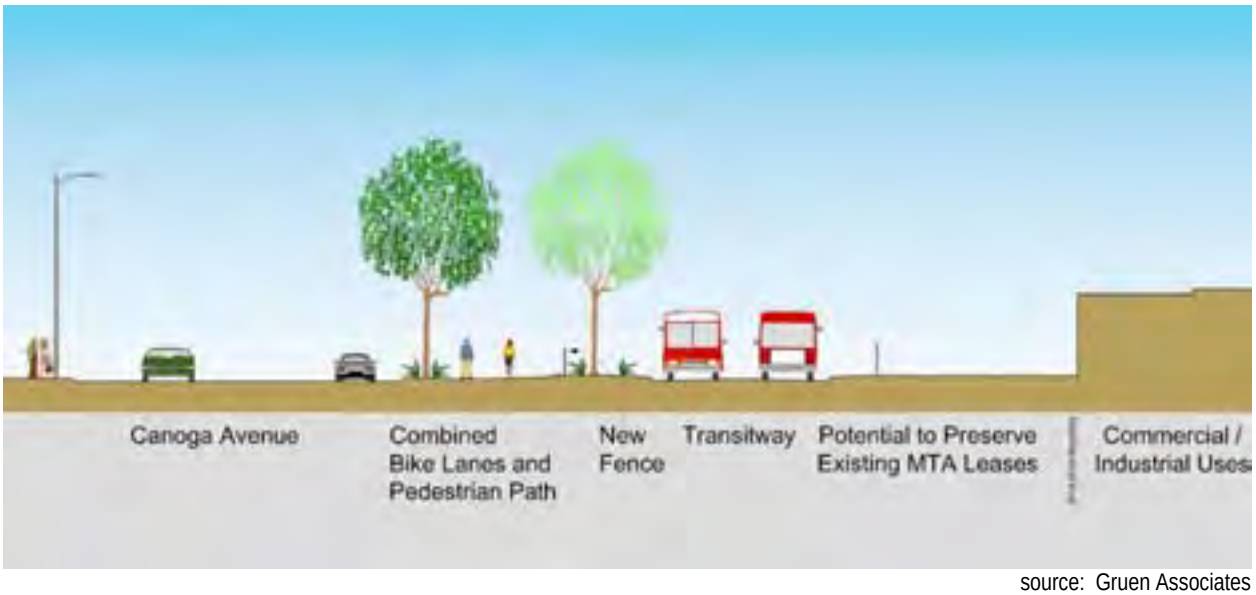
Potential Joint Development

The Canoga corridor presents several opportunities for joint development. Already described above are the opportunities for joint development adjacent to the Vanowen Street and Sherman Way stations. In addition, the MTA owns two large parcels near the northern end of the corridor, both just south of Lassen Street. Both could provide



source: Gruen Associates

Figure 4-26. Typical Section of Transitway where adjacent to Residential Property



source: Gruen Associates

Figure 4-27. Typical Section of Transitway where adjacent to Commercial/Industrial Property

opportunities for mixed-use development in close proximity to the Chatsworth Metrolink Station. During later design phases, linkages between the Metrolink station and these parcels should be considered.

4.4.4 Reseda Boulevard

4.4.4.1 Existing Physical Conditions along Reseda Corridor

The Reseda corridor, which also includes portions of the California State University Northridge (CSUN) campus, Nordhoff Street, Woodley Avenue, and Plummer Street, has a varied urban character. (The portion of the Reseda corridor which overlaps the Sepulveda corridor is described in Section 4.4.5.) Along Reseda Boulevard itself, between Ventura Boulevard and Nordhoff Street, most development is either commercial or multifamily residential. Most commercial development is either small street front- (pedestrian-) oriented or small strip retail. Civic uses include a hospital and a park.

Sidewalks along Reseda are typically 8 to 10' wide (Figure 4-28), although there are exceptions where sidewalks are narrower, particularly at intersections with heavy traffic, such as near the 101 freeway interchange. Street trees have been planted intermittently along the corridor, usually Crepe Myrtle trees.

source: Gruen Associates

Figure 4-28. Typical Sidewalk along Reseda Boulevard

The Reseda corridor has two major centers, downtown Reseda (at the intersection of Reseda and Sherman Way) and CSUN:

- *Downtown Reseda*
  Downtown Reseda is a classic neighborhood center, with most retail being located directly on the sidewalk. Recent improvements to this area have been made by the Los Angeles Neighborhood Initiative (LANI) and the City of Los Angeles, and include new Sycamore street trees, new street lights and traffic signals, pedestrian lighting at bus stops, and a landscaped median along Sherman Way.

- *CSUN*
  While somewhat isolated from Reseda Boulevard, the CSUN campus is an attractive, pedestrian-friendly campus with many tree-line pathways and plazas.

4.4.4.2 Existing Plans and Initiatives along Reseda Corridor

A number of pedestrian-focused plans and initiatives have been established for portions of the Reseda corridor, including:

- *Reseda Central Business District Specific Plan and Pedestrian-Oriented District Plans*
- *Los Angeles Neighborhood Initiative: Reseda*
- *Ventura-Cahuenga Blvd. Corridor Specific Plan and Pedestrian-Oriented District Plans*
- *Tarzana Streetscape Plan*
- *Northridge Business Improvement District*
- *Reseda Business Improvements District*
- *Tarzana Business Improvement District*

During later phases of design, improvements proposed for Reseda should be coordinated with these plans and initiatives.

4.4.4.3 Station Locations and Design Concept along Reseda Corridor

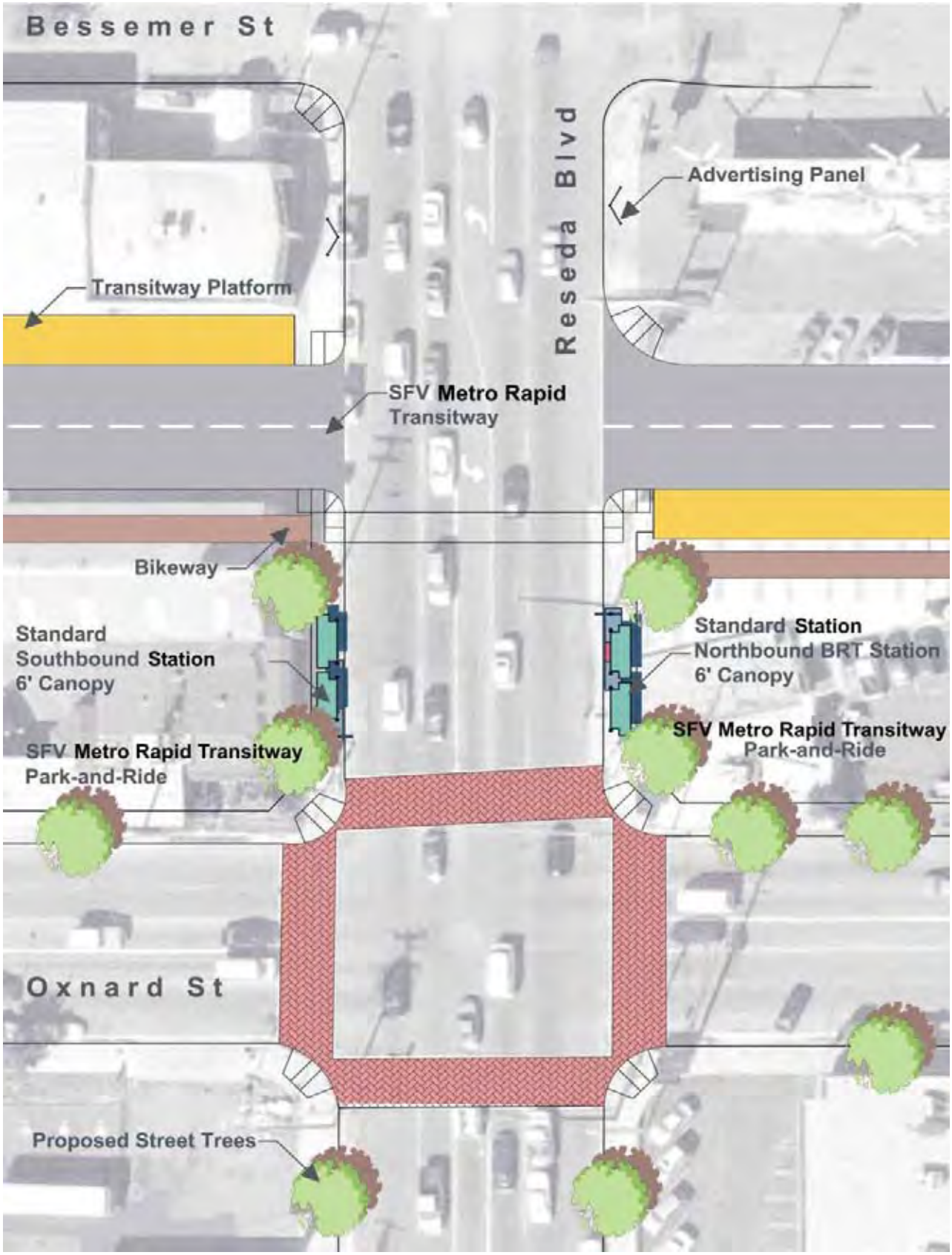
Stations would be located along Reseda at the locations shown in Table 4-1. Where nearside stations are listed, it was typically because there was not adequate room between driveways close to the farside of the intersection to accommodate potential future 60-foot articulated buses. Curb pop-out concepts at on-street stations are shown in Figure 4-21. The conceptual design of the on-street stations was described earlier in Section 4.4.1.1 and shown in Figures 4-15, 4-18 and 4-19. If local bus stops require relocation, they would typically be moved to the near side of the intersection.

Figures 4-29 and 4-30 are site plans for the East-West Metro Rapid Transitway and Sherman Way stations, respectively. Figure 4-31 is an artist rendering of the Sherman Way station, showing station area improvement such as canopies, curb pop-outs, special paving, and landscaping, as well as the potential for constructing a landscaped median along Reseda Boulevard to improve traffic operations and the appearance of the street.

Table 4-1: Reseda[1] Corridor Stations

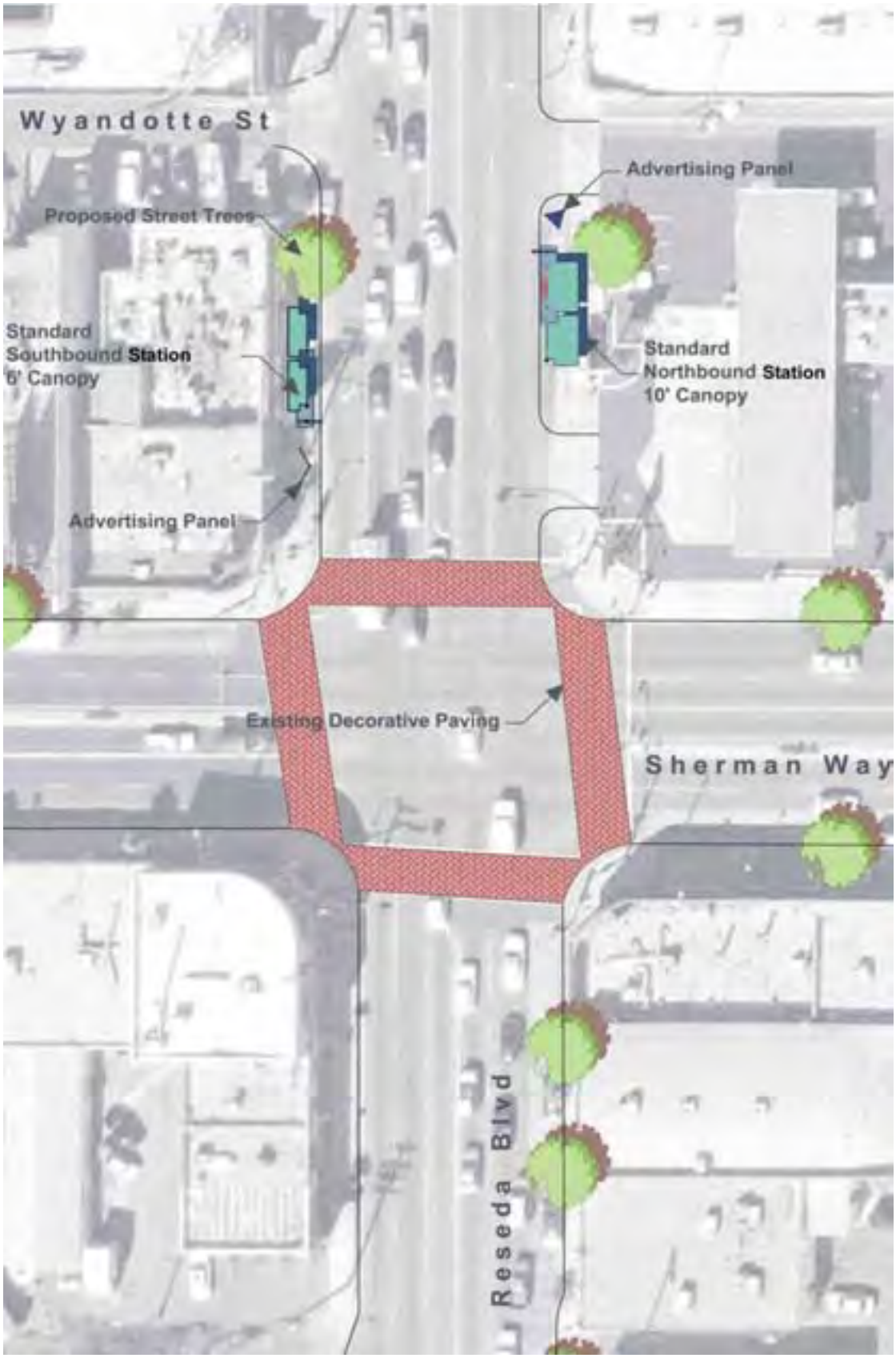
Major Cross-Street / Destination	Direction	Location of station	Curb Extension
Ventura Boulevard	Northbound	Farside	No
	Southbound	Farside (Ventura EB)	No
East-West Metro Rapid Transitway	Northbound	Nearside of transitway	No
	Southbound	Farside of transitway	No
Victory Boulevard	Northbound	Farside	Yes
	Southbound	Farside	Yes
Sherman Way	Northbound	Farside	Yes
	Southbound	Nearside	No
Roscoe Boulevard	Northbound	Farside	Yes
	Southbound	Farside	Yes
Nordhoff Street	Northbound	Farside	Yes
	Southbound	Farside	Yes
California State University Northridge	Transit Center	--	--
Lindley Avenue (at Nordhoff)	Eastbound	Farside	No
	Westbound	Farside	No
Balboa Boulevard (at Nordhoff)	Eastbound	Farside	No
	Westbound	Nearside	No
Woodley Avenue (at Nordhoff)	Eastbound	Farside (NB Woodley)	No
	Westbound	Farside	No
Veterans Administration (at Plummer)	Eastbound	Farside of VA entry	No
	Westbound	Nearside of VA entry	No
Plummer Street (at Sepulveda)	Northbound	Farside	No
	Southbound	Nearside	No

1 – Reseda corridor would extend along Sepulveda and Brand to the City of San Fernando. Stations for this portion of the corridor are described in Section 4.4.5.



source: Gruen Associates

Figure 4-29. Site Plan of On-Street Station along Reseda Boulevard at SFV Metro Rapid Transitway



source: Gruen Associates

Figure 4-30. Site Plan of On-Street Station along Reseda Boulevard at Sherman Way

Figure 4-31
Artist Rendering of Reseda Blvd and Sherman Way

Artist Rendering of Intersection of Reseda Blvd and Sherman Way Showing Stations and Accessibility Enhancements

Source: George Bungarda/Gruen Associates

4.4.4.4 Urban Design / Streetscape Concept along Reseda Corridor

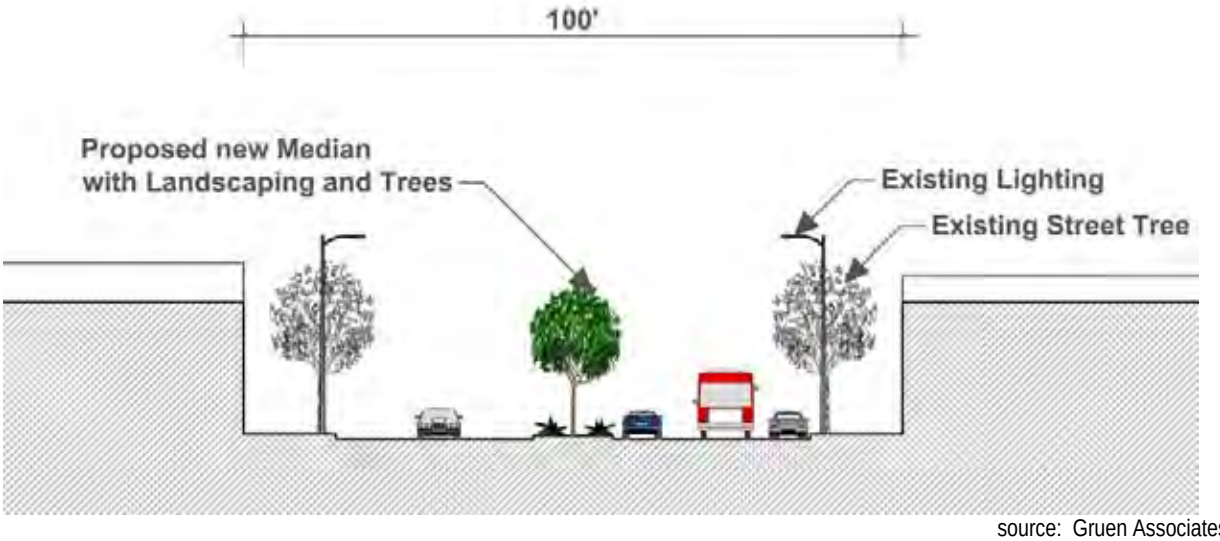
If selected as the Locally Preferred Alternative, precise corridor streetscape concepts for the Reseda corridor would be established by the City of Los Angeles, the City of San Fernando and the community during later phases of this project. The types of improvements being considered along the corridor are described in Section 4.4.2.1 and summarized here:

Basic Improvements

- Enhanced Rapid Bus stations installed at all station locations, with double canopies at approximately half of stations based on ridership estimates
- Curb pop-outs at stations at Victory, Vanowen, Sherman Way (northbound only), Roscoe, and Nordhoff to expand the sidewalk and queuing area
- Decorative asphalt crosswalks at each station
- Continuation of Sycamore tree planting in downtown Reseda area, up to ¼ mile from the station
- Continuation of tree planting up to ¼ mile along Reseda (or other corridor street) from all stations, with tree species to be determined in consultation with City of Los Angeles and the community

Potential Accessibility Enhancements

- By converting existing two-way left turn lanes along the Reseda corridor into landscaped medians (Figure 4-32), traffic flow along the corridor would be improved, reducing travel times for buses in the corridor, as well as improving the appearance of the corridor. The locations of medians would be developed in consultation with the community (property owners, residents, business owners). These medians would be particularly beneficial along the portions of Reseda Boulevard lined with multi-family housing. Breaks in the medians would be provided as needed to allow access to properties along the corridor.
- Tree planting within ¼ mile of stations along cross-streets would improve shelter and comfort for pedestrians approaching stations from all directions (Figure 4-22).
- Installing pedestrian lighting along the corridor within ¼ mile of stations would improve safety and security from pedestrians using the Reseda corridor at night.



source: Gruen Associates

Figure 4-32. Conversion of two-way left turn lanes into landscaped medians

4.4.5 Sepulveda Boulevard

4.4.5.1 Existing Physical Conditions along Sepulveda Corridor

The Sepulveda Corridor would extend from Ventura Boulevard to the Sylmar/San Fernando Metrolink Station, and includes portions of Brand Boulevard and Truman Street. The southern portion of the corridor, from Ventura Boulevard to just south of Nordhoff Street is largely a commercial corridor with strip commercial, warehouse retail, and offices, as well as some multifamily housing. Sidewalks are very narrow along this portion of the corridor, often only 6' wide. Additionally, power poles and numerous curb cuts limit locations in which street trees can be planted.

From Nordhoff north to Brand Boulevard, the Sepulveda right-of-way becomes very wide and includes a broad median that in many locations has been landscaped with trees and groundcover (Figure 4-33). In this area, adjacent development is mostly multifamily residential, although commercial development is present, particularly at major cross-streets. Sidewalks are also wider (generally 10' wide), and greater numbers of trees have been planted along the sidewalk.

Development along the Brand Boulevard segment of the corridor is largely single family residential up to downtown San Fernando. A large number of mature street trees line the street, including palms adjacent to Brand Park. In front of homes, trees are generally planted in a parkway between the sidewalk and the street.

Downtown San Fernando along Brand Boulevard is pedestrian-oriented, with wide sidewalks, a landscaped median, and most stores built right to the sidewalk. The San Fernando Road pedestrian mall crosses Brand at this point. The final corridor segment along Truman Street between Brand and the Sylmar / San Fernando Metrolink Station is almost entirely commercial, with most development fronted by parking lots abutting the 8' wide sidewalk.

4.4.5.2 Existing Plans and Initiatives along Sepulveda Corridor

Few existing streetscape/urban design plans or initiatives focus on Sepulveda Boulevard. However, portions of the corridor do fall within the following plans focused on other corridors:

- *Ventura-Cahuenga Boulevard Corridor Specific Plan and Pedestrian-Oriented District*
- *Sherman Oaks Streetscape Plan*
- *Van Nuys Central Business District Community Design Overlay*
- *Van Nuys Boulevard Targeted Neighborhood Initiative*

During later stages of design, station area and portions of the corridor which fall within these plan areas should be coordinated with the plan requirements.

source: Gruen Associates

Figure 4-33. Sepulveda Boulevard Median between Brand Boulevard and Nordhoff Street

4.4.5.3 Station Locations and Design Concept along Sepulveda Corridor

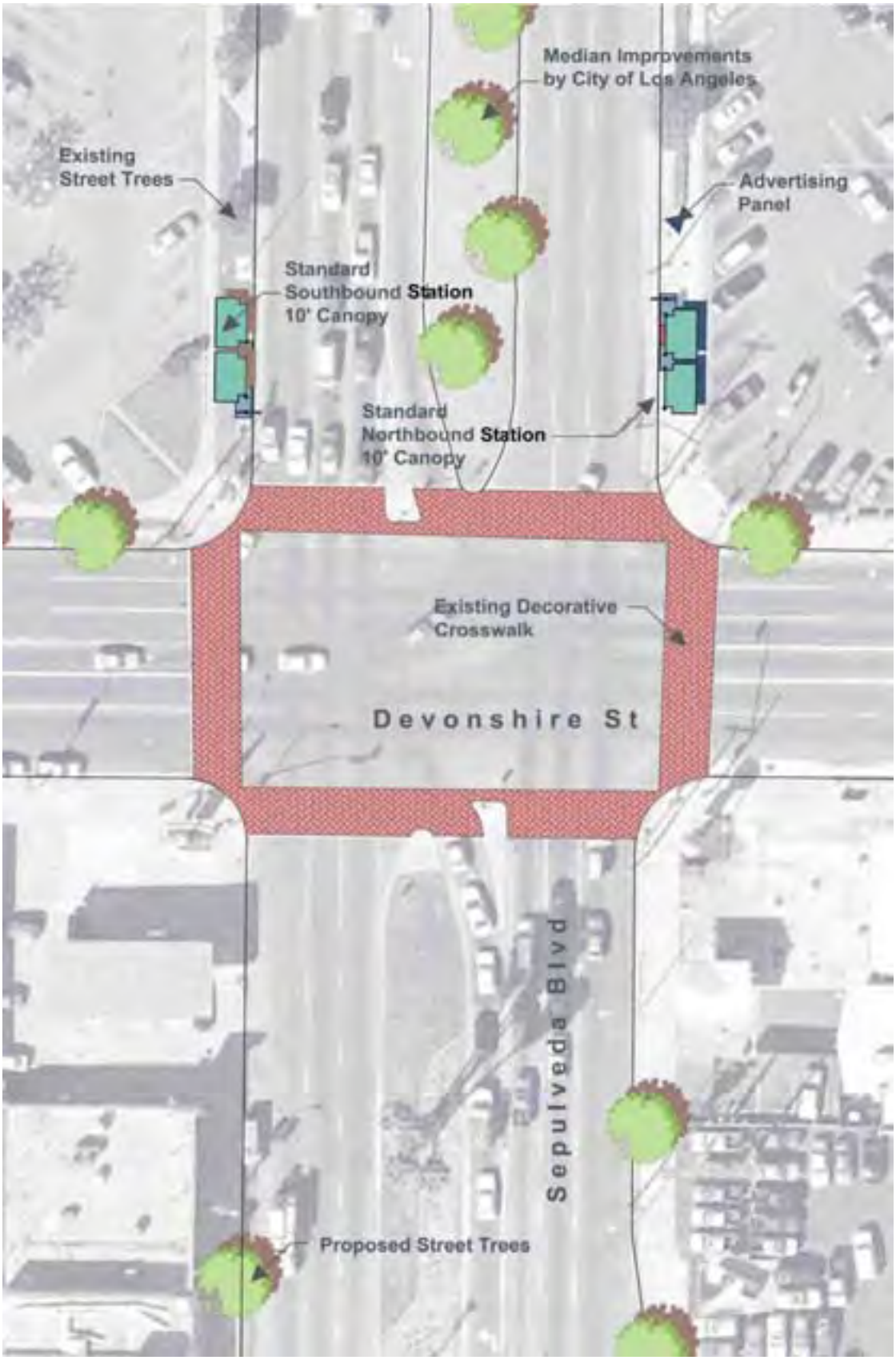
Stations would be located along the Sepulveda corridor at the locations shown in Table 4-2 below. Nearside stations are shown at three locations where there was not sufficient room between driveways on the farside of the intersection to provide a station which could accommodate a 60-foot articulated bus. In general, curb pop-outs are not recommended along the Sepulveda corridor because service proposed for Sepulveda would utilize the existing northbound parking lane. However, the configuration of Brand Boulevard at San Fernando Road would allow for the installation of curb pop-outs for the enhanced stations at that intersection.

If local bus stops require relocation, they would typically be moved to the near side of the intersection. The conceptual design of on-street stations was described in Section 4.4.1.1 and shown in Figures 4-15, 4-18 and 4-19. Figures 4-34 and 4-35 are site plans for the Devonshire and Brand / San Fernando stations, respectively.

Table 4-2: Sepulveda Corridor Stations

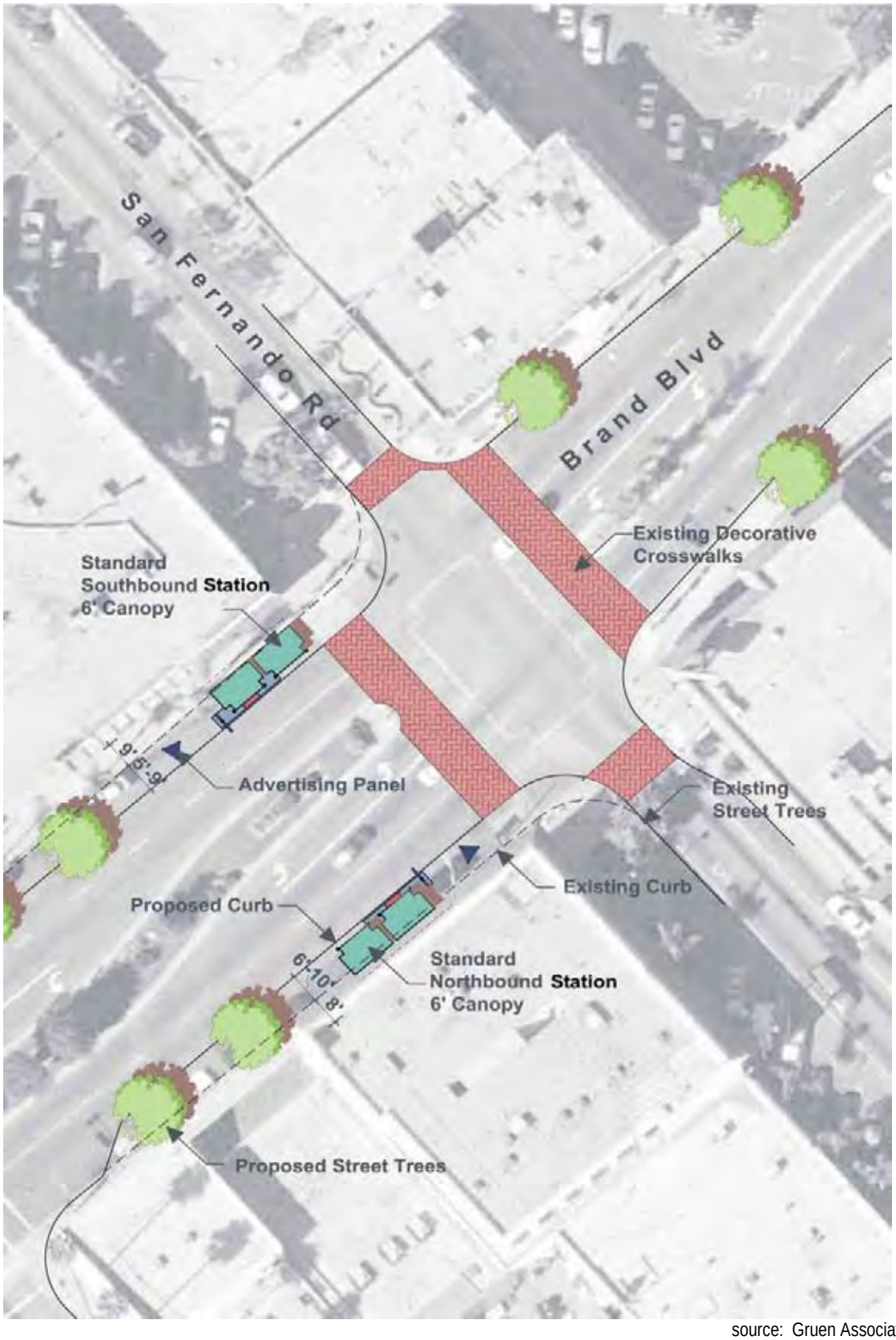
Major Cross-Street / Destination	Direction	Location of station
Ventura Boulevard	Northbound	Farside
	Southbound	Farside
Burbank Boulevard	Northbound	Farside
	Southbound	Farside
SFV Metro Rapid Transitway	Northbound	Farside
	Southbound	Farside
Victory Boulevard	Northbound	Farside
	Southbound	Nearside
Vanowen Street	Northbound	Farside
	Southbound	Farside
Sherman Way	Northbound	Farside
	Southbound	Farside
Roscoe Boulevard	Northbound	Farside
	Southbound	Farside
Nordhoff Street[1]	Northbound	Farside
	Southbound	Farside
Plummer Street[1] (at Sepulveda)	Northbound	Farside
	Southbound	Nearside
Devonshire Street	Northbound	Farside
	Southbound	Nearside
Brand / Laurel Canyon Boulevard	Northbound	Farside
	Southbound	Farside
Brand / San Fernando Road	Northbound	Nearside(with curb extension)
	Southbound	Farside (with curb extension)
Sylmar / San Fernando Metrolink Station	Transit Center	At existing bus bay

1 – If both the Reseda and Sepulveda corridors were selected, then the intersection of Plummer Street and Sepulveda Boulevard would be a joint station for both corridors, and there would be no station at Nordhoff for the Sepulveda corridor.



source: Gruen Associates

Figure 4-33. Site Plan of On-Street Station along Sepulveda Boulevard at Devonshire Street



source: Gruen Associates

Figure 4-35. Site Plan of On-Street Station along Brand Boulevard and San Fernando Road, Sepulveda Corridor

4.4.5.4 Urban Design/Streetscape Concept Along Sepulveda Boulevard

If selected as the Locally Preferred Alternative, precise corridor streetscape concepts for the Sepulveda corridor would be established by the City of Los Angeles, the City of San Fernando and the community during later phases of this project. The types of improvements being considered along the corridor are described in Section 4.4.2.1 and summarized here:

- Enhanced Rapid Bus stations installed at all station locations, including an advertising/neighborhood kiosk, landscaping, and bicycle racks.
- Decorative asphalt crosswalks at each station
- Tree planting along the corridor up to ¼ mile from stations, with tree species to be determined in consultation with City of Los Angeles and the community

In addition to these basic improvements, potential enhancements that could be implemented along the Sepulveda corridor include trees planted within ¼ mile of stations along major cross-streets and pedestrian lighting along the corridor within ¼ mile of stations.

4.4.6 Van Nuys Corridor

4.4.6.1 Existing Physical Conditions along Van Nuys Corridor

The Van Nuys corridor includes nearly the entire length of Van Nuys Boulevard, plus portions of Foothill Boulevard and Hubbard Street to complete the trip to the Sylmar/San Fernando Metrolink Station.

Character of Development along the Corridor

Along Van Nuys Boulevard are many of the most prominent civic and commercial destinations in the San Fernando Valley. Development along the corridor is among the densest in the San Fernando Valley, particularly in terms of pedestrian-oriented retail and services (Figure 4-36). From Ventura Boulevard to Plummer Street, development along Van Nuys is almost entirely commercial or institutional. Many of the businesses and government buildings are built directly onto the street front. The Van Nuys Central Business District is considered to be the Valley's "downtown." However, some newer development, such as "The Plant" Shopping Center (just north of the Van Nuys Metrolink Station) are largely auto-oriented with stores set back from the street, behind parking lots.

source: Gruen Associates

Figure 4-36. Commercial development along Van Nuys Boulevard

Between Plummer and Interstate 5, a significant amount of multifamily housing has been constructed along Van Nuys, with neighborhood-oriented commercial at major intersections. From Interstate 5 to San Fernando Road, Van Nuys Boulevard is lined with the pedestrian-oriented stores of the Pacoima Town Center.

Past San Fernando Road, Van Nuys is again a mix of multi-family housing and neighborhood commercial. Foothill Boulevard from Van Nuys to Hubbard Street is largely a mix of light industrial and regional commercial development (and a small amount of multi-family housing), with little pedestrian activity. Hubbard Street, which provides access to the Sylmar/San Fernando Metrolink Station, is mostly lined with multi- and single-family residential development. If the Van Nuys Metro Rapid Bus ends at Foothill Boulevard, as currently planned, riders could reach the Metrolink Station by transferring to the Metro Rapid Bus on San Fernando Road.

Streetscape Improvements

Several streetscape plans have been implemented in the Van Nuys Central Business District (CBD), including the government center, and along its Auto Row.

In the Van Nuys CBD, the following have been installed:

- Three-pronged standard street lights
- Mexican fan palms at the curb with Chinese flame and maidenhair trees in between.
- Green metal benches and trash receptacles
- Red brick-patterned asphalt crosswalks at intersections
- Façade improvements

Recent streetscape improvements along the Van Nuys Auto Row include:

- Pear trees on both sides of the street
- Palms and flax in within small medians at the entries to the area
- A gateway sign near Aetna/Bessemer

In the Pacoima Town Center (between Laurel Canyon Boulevard and San Fernando Road), the following improvements have been made:

- Chinese flame trees along the curb
- Narrow landscaped median
- Red brick-patterned decorative crosswalks

In the remainder of the corridor, a variety of trees exist, including palms, Chinese flame, sycamores, ficus, oaks, carrotwood, and jacaranda.

4.4.6.2 Existing Plans and Initiatives along Van Nuys Corridor

The long Van Nuys corridor does not have a single, unified streetscape concept. Instead, the corridor has a variety of planning initiatives including the following:

- Ventura Boulevard Specific Plan
- Van Nuys Auto Row Business Improvement District (BID)
- Van Nuys Targeted Neighborhood Initiative (TNI), Community Design Overlay District (CDO) and Streetscape Plan
- Pacoima Interim Control Ordinance (ICO)
- Pacoima TNI, Proposed Multiphase CDO, and Proposed Streetscape Plan

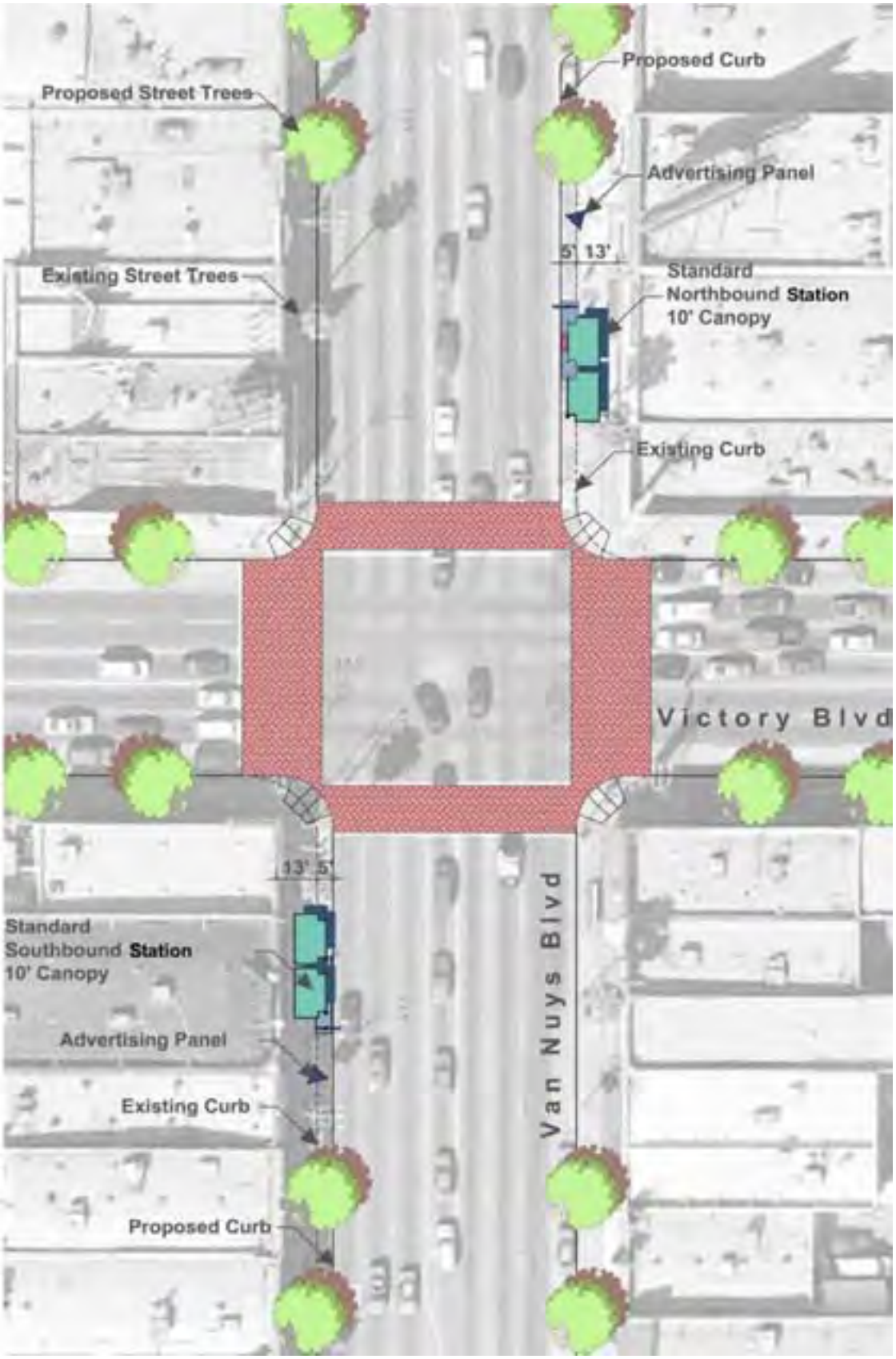
These would have to be reviewed by designers in the final design of improvements along Van Nuys Boulevard. Also along Van Nuys, MTA plans to operate Metro Rapid service (discussed in other sections), the San Fernando Valley SFV Metro Rapid Transitway will cross Van Nuys near Aetna, LAUSD has proposed several schools, and CRA has several study areas.

4.4.6.3 Station Locations and Design Concept along Van Nuys Corridor

Stations would be located along the Van Nuys corridor at the locations shown in Table 4-3 below. In general, the enhanced Rapid Bus stations would remain in the same location as stations which will be installed for standard Rapid Bus service along Van Nuys Boulevard. A station at Calvert Street would be relocated to be adjacent to the SFV Metro Rapid Transitway when it opens. This would include a nearside stop to shorten the transfer walking distance between the North-South and East-West corridors. The nearside station at San Fernando Road is necessary because of the adjacent Metrolink tracks on the farside of the intersection. The conceptual design of the on-street stations along corridor was described in Section 4.4.1.1 and shown in Figures 4-15, 4-18 and 4-19. Curb pop-out concepts at on-street stations was also shown earlier in Figure 4-21. If local bus stops require relocation, they would typically be moved to the near side of the intersection. Figures 4-36 and 4-37 are site plans for the Victory Boulevard and Roscoe Boulevard stations, respectively.

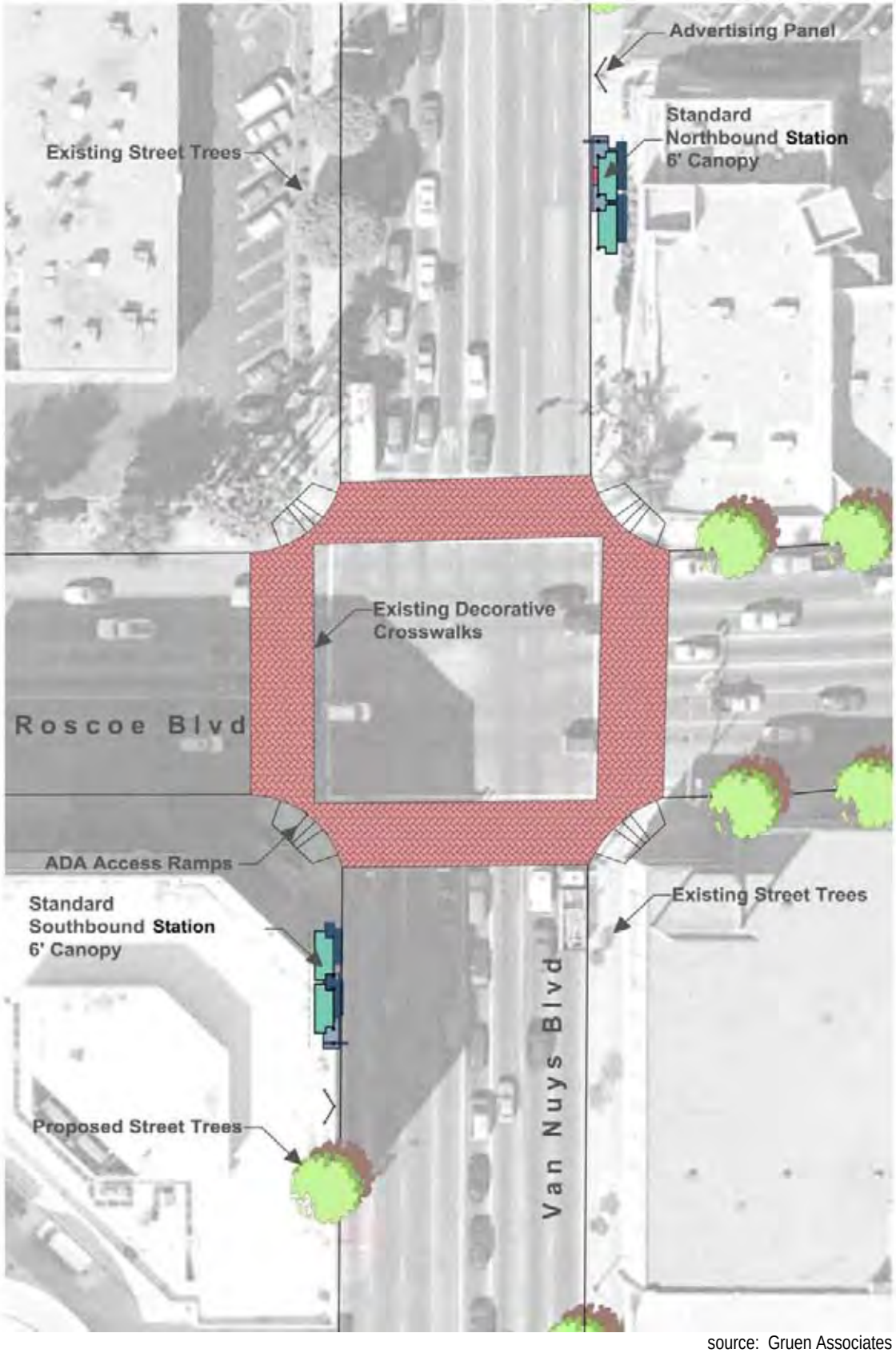
Table 4-3: Van Nuys Corridor Stations

Major Cross-Street / Destination	Direction	Location of station	Curb Extension
Ventura Boulevard	Northbound	Farside	No
	Southbound	Farside (Ventura EB)	No
Magnolia Boulevard	Northbound	Farside	No
	Southbound	Farside	No
Burbank Boulevard	Northbound	Farside	No
	Southbound	Farside	No
SFV Metro Rapid Transitway	Northbound	Farside	No
	Southbound	Nearside	No
Victory Boulevard	Northbound	Farside	Yes
	Southbound	Farside	Yes
Vanowen Street	Northbound	Nearside	No
	Southbound	Farside	No
Sherman Way	Northbound	Farside	Yes
	Southbound	Farside	Yes
Van Nuys Metrolink Station	Northbound	Farside of Keswick St.	No
	Southbound	Farside of Keswick St.	No
Roscoe Boulevard	Northbound	Farside	No
	Southbound	Farside	No
Nordhoff Street	Northbound	Farside	Yes
	Southbound	Farside	Yes
Woodman Avenue	Northbound	Farside	Yes
	Southbound	Farside	Yes
Arleta Avenue	Northbound	Farside	Yes
	Southbound	Farside	Yes
San Fernando Road	Northbound	Nearside	No
	Southbound	Farside	No
Glenoaks Boulevard	Northbound	Farside	No
	Southbound	Farside	No
Dronfield Avenue	Northbound	Farside	No
	Southbound	Farside	No
Foothill / Arroyo Avenue	Northbound	Farside	No
	Southbound	Farside	No
Hubbard / Glenoaks Boulevard	Southbound	Farside	No
	Northbound	Farside	No
Sylmar / San Fernando Metrolink Station	Transit Center	At existing bus bay	No



source: Gruen Associates

Figure 4-37. Site Plan of On-Street Station along Van Nuys Boulevard at Victory Boulevard



source: Gruen Associates

Figure 4-38. Site Plan of On-Street Station along Van Nuys Boulevard at Roscoe Boulevard

4.4.6.4 Urban Design/Streetscape Concept along Van Nuys Corridor

If selected as the Locally Preferred Alternative, precise corridor streetscape concepts for Van Nuys would be established by the City of Los Angeles and the community during later phases of this project. For this MIS, the following urban design improvements have been assumed:

- Additional canopies installed at planned Rapid Bus stations, as well as enhancements including the advertising/neighborhood kiosk, landscaping, and bicycle racks
- Alternating palms and shade trees spaced approximately every 40' within a quarter mile of each station (in locations where trees do not exist today). This concept is similar to the Van Nuys CBD streetscape concept with skyline palm trees to delineate the street and shade trees in between. Shade trees could include Chinese flame, pear, jacaranda, sycamore, or oaks to denote specific neighborhoods
- Decorative asphalt crosswalks at each station where they do not currently exist
- Curb extensions at stations at Victory, Sherman, Nordhoff, Woodman, and Arleta

Potential additional enhancements include trees planted within ¼ mile of stations along major cross-streets and pedestrian-scale lighting within ¼ mile of stations along the corridor.

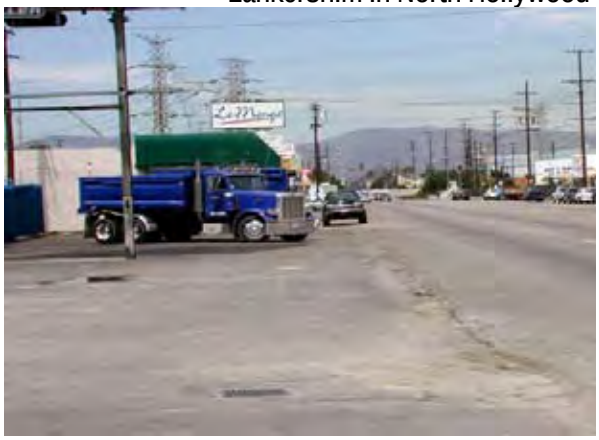
4.4.7 Lankershim Boulevard / San Fernando Road

4.4.7.1 Existing Physical Conditions along Lankershim / San Fernando Corridor

The Lankershim/San Fernando corridor extends from the Universal City Metro Red Line station to the Sylmar / San Fernando Metro Red Line station. Along the southernmost portion, along Lankershim Boulevard from Universal City to the North Hollywood Metro Red Line station, development is largely commercial. Near the 134 Freeway there is substantial auto-oriented commercial development, including auto dealerships. However, from Camarillo Street to the North Hollywood Metro Red Line, Lankershim Boulevard is a neighborhood-oriented commercial street, with shops, restaurants, galleries, and theaters in properties built right up to the sidewalk. The wide sidewalks in this area have been improved with trees planted by the Los Angeles Neighborhood Initiative (LANI) program, creating a very pleasant, comfortable pedestrian corridor in this area (Figure 4-39).

source: Gruen Associates

Figure 4-39. Tree-lined wide sidewalk along Lankershim in North Hollywood



source: Gruen Associates

Figure 4-40. Unimproved sidewalks near Vanowen Street along Lankershim Boulevard

North of the North Hollywood Metro Red Line station, Lankershim rapidly shifts in character.

While some sidewalk-oriented neighborhood commercial development continues, the street largely transitions to auto-oriented and auto-serving uses, as well as some light industrial uses. Pedestrian amenities are often poor or even non-existing, with some stretches of Lankershim not even having sidewalks (Figure 4-40). Few trees have been planted along the street.

The corridor runs along north San Fernando Road from Lankershim Boulevard to the City of San Fernando. An old intra-city highway route paralleling a railroad, San Fernando Road has a non-urban character, with varied commercial development (of little design consistency), plus some industrial uses, west of the street and heavy industrial uses east of the street, past the railroad tracks. There are currently no sidewalks on the east side of the street, in the railroad right-of-way, although some space has been carved out of the right-of-way for bus stops.

In the City of San Fernando, the corridor transitions to Truman Street in order to reach the Sylmar / San Fernando Metrolink station. This stretch of the corridor is almost entirely commercial, with 8' sidewalks in front of parking lots of strip retail development. However, one block west of Truman Street is the San Fernando Road pedestrian mall with street-front shops along wide, tree-lined sidewalks.

4.4.7.2 Existing Plans and Initiatives along Lankershim / San Fernando Corridor

Existing plans and initiatives along the Lankershim / San Fernando corridor are largely focused on the North Hollywood area. Plans and initiatives in this area include:

- North Hollywood Commercial Artcraft District
- North Hollywood Community Redevelopment Area
- Los Angeles Neighborhood Initiative Improvement Project – North Hollywood
- North Hollywood Targeted Neighborhood Initiative

These plans and initiatives have already served to improve the urban environment along Lankershim Boulevard and around the North Hollywood Metro Red Line station. In addition, several new developments are planned by the Community Redevelopment Agency, and the construction (completion by 2005) of the East-West Metro Rapid Transitway will continue to contribute the areas importance as a transit- and pedestrian-oriented center.

Along San Fernando Road, the City of Los Angeles plans to construct an exclusive bike path within the railroad right-of-way on the east side of the road. Proposed stations for this project would be integrated with this bike path (Figure 27).

4.4.7.3 Station Locations and Design Concept along Lankershim / San Fernando Corridor

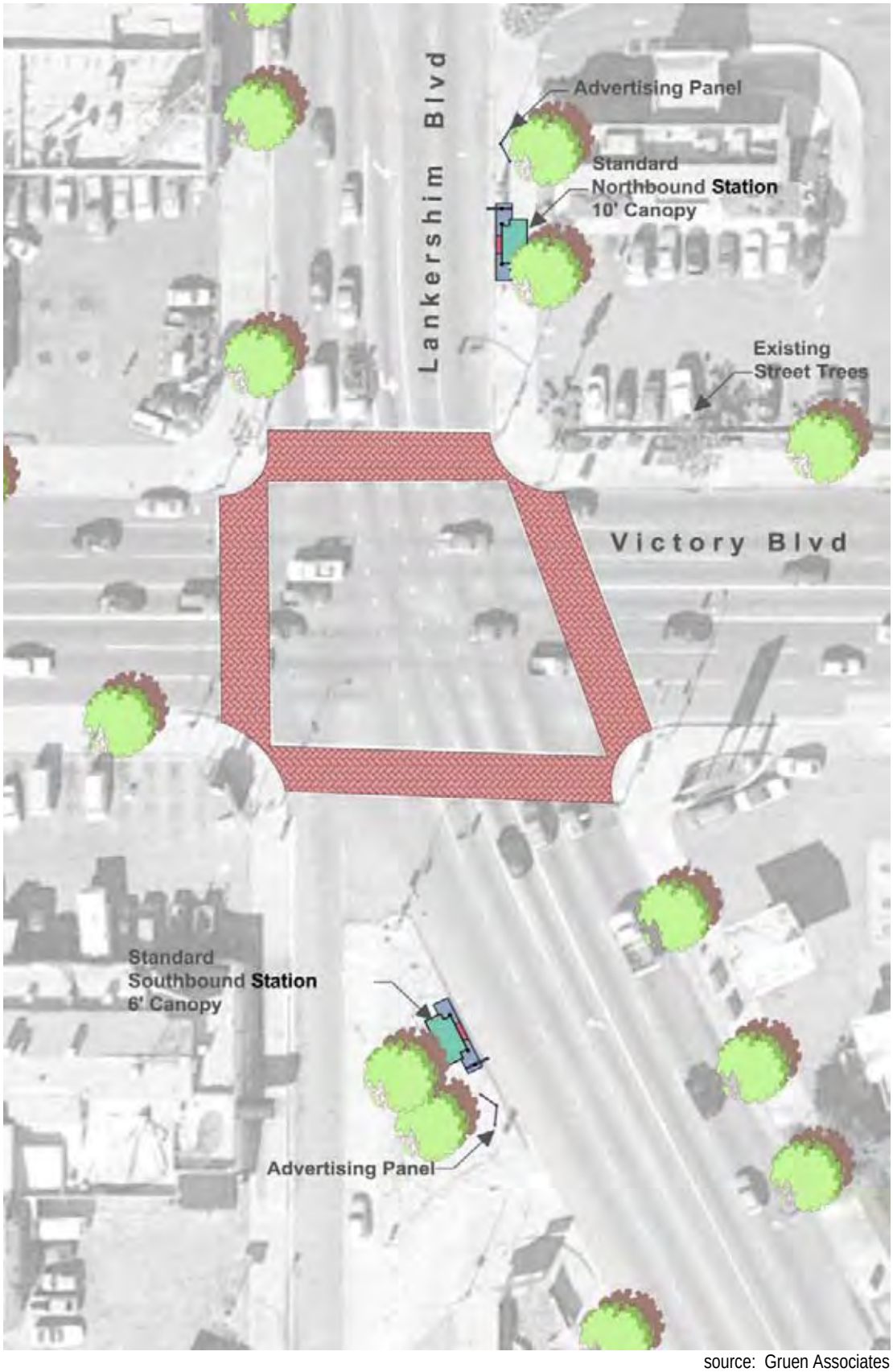
Stations would be located along the Lankershim/San Fernando corridor at the locations shown in Table 4-4 below. The nearside stop on San Fernando Road at Van Nuys Boulevard is the result of numerous driveways on the farside of the intersection and it facilitates transfers to the Van Nuys Metro Rapid Bus. The conceptual design of the on-street stations along corridor is described in Section 4.4.1.1 and shown in Figures 4-14, 4-

16 and 4-18. Curb pop-outs are not recommended for this corridor as the exclusive peak hour lanes proposed for this corridor alternative would use the existing parking lanes. If local bus stops require relocation, they would typically be moved to the near side of the intersection.

Figures 4-41 and 4-42 are site plans for the Lankershim/Victory Boulevard and San Fernando/Osborne Street stations, respectively. Figure 4-43 is an artist rendering of the Lankershim/North Hollywood Metro Red Line/SFV Metro Rapid Transitway station, showing station area improvements such as canopies, the peak hour exclusive bus lanes, special paving, and landscaping. The figure illustrates buses stopping on Lankershim Boulevard adjacent to the terminus of the SFV Metro Rapid Transitway next to the North Hollywood Red Line Station.

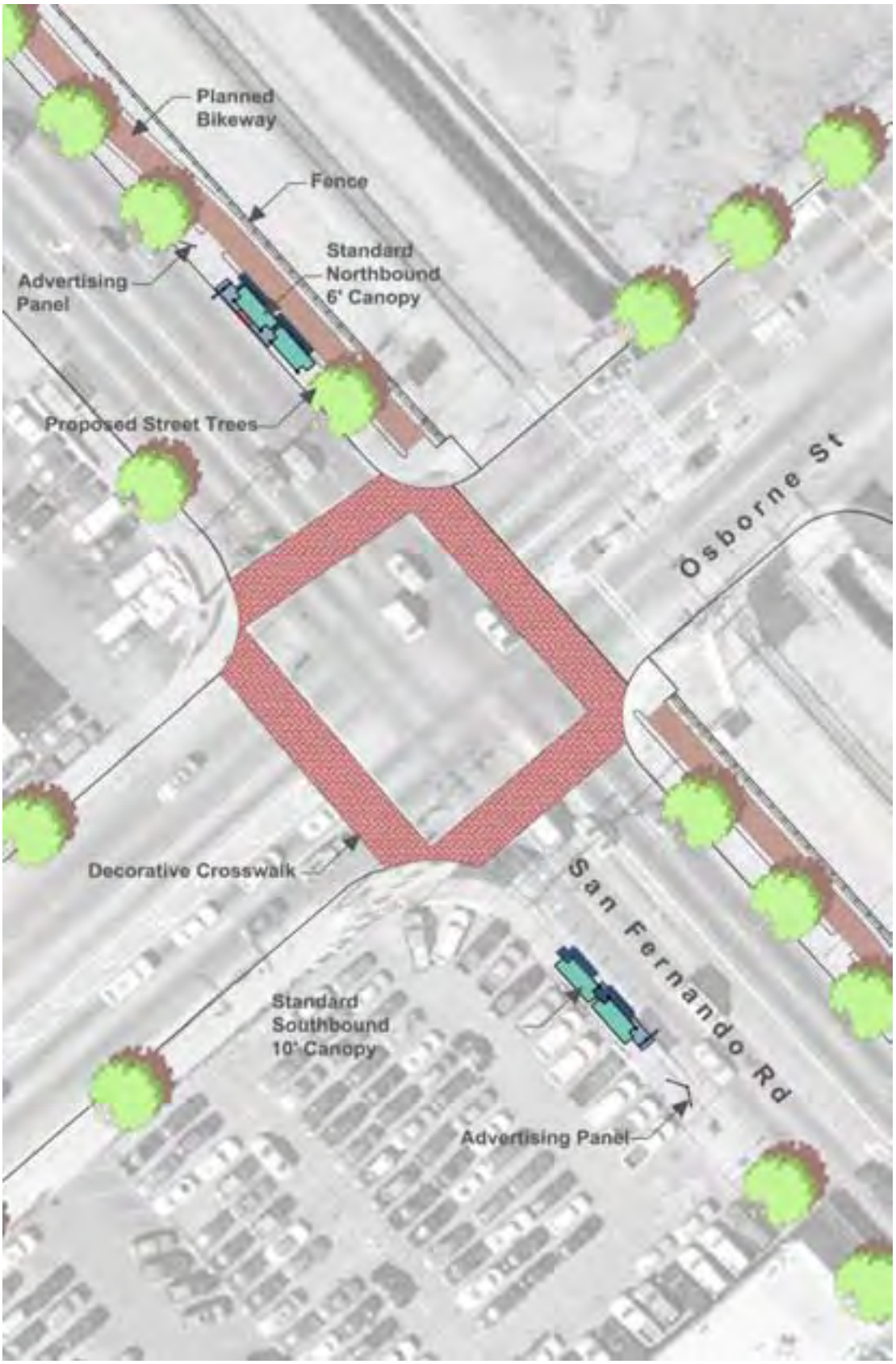
Table 4-4: Lankershim / San Fernando Corridor Stations

Major Cross-Street / Destination	**Direction**	**Location of station**
Universal City Metro Red Line Station	Transit Center	Existing bus bay
North Hollywood Metro Red Line Station / SFV Metro Rapid Transitway	Northbound	Farside
	Southbound	Farside
Lankershim / Victory Boulevard	Northbound	Farside
	Southbound	Farside (on triangular island)
Lankershim / Vanowen Street	Northbound	Farside
	Southbound	Farside
Lankershim / Sherman Way	Northbound	Farside
	Southbound	Farside
Lankershim / Roscoe Boulevard	Northbound	Farside
	Southbound	Farside
San Fernando / Sheldon Street	Northbound	Farside
	Southbound	Farside
San Fernando / Osborne Street	Northbound	Farside
	Southbound	Farside
San Fernando / Van Nuys Boulevard	Northbound	Farside
	Southbound	Nearside
Truman Street / Maclay Avenue	Northbound	Farside
	Southbound	Farside
Sylmar / San Fernando Metrolink Station	Transit Center	At existing bus bay



source: Gruen Associates

Figure 4-41. Site Plan of On-Street Station along Lankershim Boulevard at Victory Boulevard



source: Gruen Associates

Figure 4-42. Site Plan of On-Street Station along San Fernando Road at Osborne Street

Artist Rendering of Lankershim Boulevard Station at North Hollywood Metro Red Line/SFV Metro Rapid Transitway Station

Source: George Bungarda/Gruen Associates

4.4.7.4 Urban Design / Streetscape Concept along Lankershim / San Fernando Corridor

If selected as the Locally Preferred Alternative, precise corridor streetscape concepts for the Lankershim/San Fernando corridor would be established by the City of Los Angeles, the City of San Fernando and the community during later phases of this project. The types of improvements being considered along the corridor are described in Section 4.4.2.1 and summarized here:

- Enhanced Rapid Bus stations installed at all station locations, including an advertising/neighborhood kiosk, landscaping, and bicycle racks.
- Decorative asphalt crosswalks at each station
- Tree planting along the corridor up to ¼ mile from stations, with tree species to be determined in consultation with City of Los Angeles and the community
- New sidewalks within ¼ mile of stations along the corridor where sidewalks are currently unimproved.

In addition to these basic improvements, potential enhancements that could be implemented along the Lankershim/San Fernando corridor include trees planted within ¼ mile of stations along major cross-streets and pedestrian lighting along the corridor within ¼ mile of stations.

4.5 Cost Estimates

4.5.1 Capital Costs

Capital costs represent the expenses incurred to design and build the project alternatives. They include right-of-way, roadway improvements or dedicated transitway facilities, stations, parking facilities, transit vehicles, urban design elements, and system equipment and maintenance facilities. Capital cost estimates were developed in a format provided by MTA by Meyer, Mohaddes Associates, Hernandez Kroone Associates and Gruen Associates based on unit cost factors from other recent MTA projects, most notably the San Fernando Valley SFV Metro Rapid Transitway. Costs for the TSM and Rapid Bus Alternatives reflect the cost of vehicles and stations only, since these alternatives do not entail other physical improvements.

The Capital Costs for the alternatives were divided into Base costs for each alternative and Enhanced costs. The Base costs include the minimum costs to implement the alternative. The Enhanced costs include the additional items that would improve the performance of the alternative by increasing ridership, enhancing accessibility to the corridor and improving bus speeds. These include such items as parking facilities, grade separations, freeway interchange improvements, station accessibility improvements, or a new Metro Red Line portal.

The initial capital costs presented to the public in the December, 2002 workshops are shown in Table 4.5. The costs were expressed in ranges to reflect the preliminary nature of the estimates and that enhancement options were still in development.

Table 4.5 Preliminary Capital Cost Estimates

Alternative	Range of Capital Costs ($million)
Canoga	$75-80
Reseda	$22-25
Sepulveda	$55-35
Van Nuys	$30-35
Lankershim-San Fernando	$36-40

The Canoga Railroad Right-of-Way alternative is the most costly alternative to construct because it entails building a new off-street transitway, whereas the other alternatives run on existing roadways. The Reseda Alternative is the least costly because it does not include any major changes to the existing roadways.

Refined Construction Costs

As additional detailed analysis of the alternatives was conducted and elements were categorized as Base and Enhanced elements, the construction costs were refined, as reflected in Table 4.6.

The TSM Alternative does not result in any physical construction, so it has no construction costs. The Rapid Bus Alternative includes the cost of stations and transit signal priority for a total construction cost of $4.51 million.

The refined costs for the Canoga Railroad Right-of-Way Alternative range from $40.91 million for the Base alternative to $67.31 million for the enhanced alternative. The enhancements could include some station access improvements, a grade separation over the Amtrak/Metrolink tracks to reduce in-street running at the north end of the corridor, and park-and-ride facilities at one or more station.

The costs for the Reseda Alternative range from $8.28 million to $16.18 million with the enhancements related to station access improvements. (Pedestrian lighting and street trees on cross streets at stations).

The Sepulveda Alternative ranges in cost from $27.81 million to $33.29 million, with station access improvements representing the only enhancements. It should be noted that it would also be possible to defer part of the Base cost of the alternative if the roadway widening at Burbank Boulevard and Sherman Way were deferred and the transit vehicles operated in mixed flow through these congestion points. The $17.97 million in right-of-way and $3.6 million of the roadway improvement costs could be deferred to a second stage of implementation of the Base alternative.

The costs for the Van Nuys Alternative range from $7.39 million to $20.84 million. The enhancements include station access improvements as well as a contribution to the 101 Freeway interchange improvement project on Van Nuys Boulevard. It should be noted that the costs of most of the stations and the signal priority system along the Van Nuys Corridor are not included in these capital costs because they have been funded as part of the Metro Rapid Bus program.

Table 4.6 Summary of SFV North-South Corridor Costs ($millions)

Cost Category	Rapid Bus	Canoga RR ROW		Reseda		Sepulveda		Van Nuys		Lankershim-SF	
		Base	*Enhanced*	*Base*	*Enhanced*	*Base*	*Enhanced*	*Base*	*Enhanced*	*Base*	*Enhanced*
Station Elements	$4.51	$10.74		$4.30		$2.92		$1.98		$1.94	
Station Access Improvements			$0.58		$7.90		$5.48		$8.45		$5.01
Base Roadway Improvements		$25.14		$3.98		$6.92		$5.41		$4.14	
Additional Roadway Improvements									$5.00		$1.10
Grade Separations			$10.00								
Parking Facilities			$9.75								
Red Line Portal											$11.50
Right of Way		$5.03	$6.07			$17.97					
Total; Base & Enhanced	**$4.51**	**$40.91**	**$26.40**	**$8.28**	**$7.90**	**$27.81**	**$5.48**	**$7.39**	**$13.45**	**$6.08**	**$17.61**
Total With Enhancements			**$67.31**		**$16.18**		**$33.29**		**$20.84**		**$23.69**

New Sidewalks (Lankershim corridor only)

Along the Lankershim corridor, in several locations within a quarter mile of proposed stations, sidewalks have not yet been constructed between the road and adjacent private properties. In some cases a dirt strip has been left open, and in other cases the asphalt of private parking lots simply extends right to the street. These conditions impede pedestrian access to the transit stations. As a part of the Lankershim corridor alternative, unimproved sidewalks would be improved to standard within a quarter-mile of proposed stations.

4.4.2.2 Future On-Street Accessibility Enhancements

In addition to the basic accessibility improvements described in Section 4.4.2.1, there are several other enhancements which would benefit transit users, all well as other pedestrians in the area. While not included in the base corridor alternatives, these enhancements should be considered for future implementation.

Street Furniture along Corridor

Many pedestrians, particularly the young and elderly, may wish to rest at some point along their walking trip to the station. In addition, cyclists may wish to park the bicycles near destinations that aren't in the immediate vicinity of the transit station. The provision of street furniture including benches, trash receptacles, and bicycle racks at a distance of about ¼ mile from the transit station would create an intermediate "rest stop" for pedestrians and cyclists. The quarter-mile distance was chosen because walking trips of more than ¼ mile from transit stations are typically considered "longer than average." Benches could be located under the proposed corridor street trees in order to provide shade and comfort.

Street Trees along Cross Streets

Pedestrians will access the stations from all directions, and trees could also be planted along the major cross-streets at which stations have been located, in a manner similar to that described for street trees along the corridors (see Section 4.4.2.1).

Pedestrian Lighting along Corridor

Transit trips are made at all hours, including early morning before sunrise and nighttime, and during winter the sun sets even before the evening peak commute. While standard arterial street lighting provides a broad swath of light across the entire street, pedestrian-scale lighting would provide additional light to the sidewalk, enhancing both safety and perceived security for pedestrians and cyclists traveling between transit stations and their ultimate destinations. Similar to the other accessibility enhancements described here, these improvements could be installed along the on-street corridors within ¼ mile of transit stations.

Landscaped Medians

Replacing mid-block striped two-way left turn lanes with landscaped medians would both improve the appearance of the corridor and improve travel by channelizing traffic and reducing the number of locations for turning movements which slow traffic flow. Landscaped medians would only be installed along portions of the corridor where they would be appropriate (i.e., they would not replace designated left turn lanes at

The Lankershim-San Fernando Alternative capital costs range from $6.08 million to $23.69 million. The elements considered enhancements include station access improvements, the widening of Lankershim Boulevard, south of Magnolia, and the construction of a second portal at the Metro Red Line station in North Hollywood. Like the Van Nuys alternative, the costs of the stations and the signal priority system are not included in these capital costs because they have been funded as part of the Metro Rapid Bus program.

If all five corridor alternatives were to be implemented in the Valley, the total construction cost of the five would range from $109.42 million to $175.87 million for the Base and Enhanced corridor alternatives, respectively.

Equipment and Maintenance Costs

The cost for the TSM Alternative represents the costs of the additional buses needed to improve service on existing routes under this alternative and facilities to maintain them. The cost for maintenance facilities is a pro-rated cost per new bus. A new maintenance facility will eventually be needed in the San Fernando Valley, but none of the North-South Corridor Alternatives would require its own maintenance facility. A typical maintenance facility requires a 10-15 acre site and costs about $50 Million and can service 200-250 buses. It would not be feasible to include the entire cost of a maintenance facility as part of one of the North-South Corridors, so it was decided that a pro-rated cost of $250,000 per new bus ($50 M/200 buses) should be included in the capital costs of the alternatives as a contribution toward the future construction of a new maintenance facility.

Table 4-7 illustrates the equipment and maintenance facility costs for each alternative. The cost of new vehicles on the North-South corridors was based on the assumption that they could be articulated buses and would cost $650,000 each. The new vehicles which would be used for the TSM Alternative and the enhanced feeder services were assumed to be standard 40 foot coaches at a cost of $325,000. Table 4.7 illustrates that the equipment and maintenance facility costs range from $18.40 million for the Rapid Bus Alternative to $104.25 million for the Sepulveda Alternative.

It should be noted that these costs reflect the costs of vehicles needed to provide the level of service modeled for 2025 to meet 2025 passenger demands. Initial implementation of the alternatives could be feasible with reallocation of existing buses from other lines. For example, buses from an express route converted to Metro Rapid Bus service could be repainted/upgraded to serve as Metro Rapid Buses. MTA has various programs to procure buses and/or reallocate them from one route to another, so it is not necessarily the case that all of these equipment costs would be paid for by the North-South Transit Corridor alternative when implemented.

Table 4-7 SFV North –South Transit Corridor Alternative Equipment Costs ($Millions)

Cost Category	TSM	Rapid Bus	RR ROW Canoga Base	Reseda Base	Sepulveda Base	Van Nuys Base	Lankershim-SF Base
Equipment (Corridor Buses)		$10.40	$6.50	$18.85	$27.95	$23.40	$9.10
Equipment (Feeder Buses)	$20.15		$23.08	$25.68	$37.05	$38.68	$31.20
Maint. Facility Contribution	$15.50	$8.00	$20.25	$27.00	$39.25	$38.75	$27.50
Base Total	**$35.65**	**$18.40**	**$49.83**	**$71.53**	**$104.25**	**$100.83**	**$67.80**
Number Corridor Buses		32	10	29	43	36	14
Number Feeder Buses	62		71	79	114	119	96

4.5.2 Operating Costs

Operating and Maintenance (O&M) costs were calculated based on the additional annual vehicle hours of bus operations forecast by the MTA travel demand forecasting model which was executed for each alternative to forecast transit ridership. The model forecasts the vehicle fleet requirements to meet the headways planned on each route, taking into consideration the anticipated operating speeds based on forecast highway conditions (congested highway speeds). The annual operating costs forecast for the year 2025 (in current dollars) are shown in Table 4.8, based on an average transit vehicle hourly O&M cost of $70 per hour.

Table 4.8 Annual Operating & Maintenance Cost in 2025 (Current Dollars)

Alternative	Annual Vehicle Hours	Increase in Annual Vehicle Hours over Baseline	Annual O&M Cost of Alternatives ($million)
Baseline	11,031,250		
TSM	11,153,600	122,350	$8.56
Rapid Bus	11,222,700	191,450	$13.40
Canoga	11,264,000	232,750	$16.29
Reseda	11,357,550	326,300	$22.84
Sepulveda	11,457,000	425,750	$29.80
Van Nuys	11,453,950	422,700	$29.59
Lankershim-SF	11,325,950	294,700	$20.63

The O&M costs range from $8.56 million for the TSM Alternative to $29.80 million for the Sepulveda Alternative. The O&M cost for the Rapid Bus Alternative is lower than the corridor alternatives because additional feeder service was not included in the Rapid Bus Alternative as it was in the corridor alternatives. The Sepulveda and Van Nuys Alternatives have higher O&M costs than the other North-South corridor alternatives largely because of the cost to provide service over the Sepulveda Pass to Westwood at five-minute headways. In Chapter 5, the results of sensitivity analysis runs are presented with regard to which alternative, Sepulveda or Van Nuys, performs best in terms of ridership over the Sepulveda Pass, in the event that both Metro Rapid Bus routes are implemented and only one is extended to Westwood. Also in Chapter 5, comparative data on cost per mile and cost per rider are presented.

5.0 EVALUATION OF ALTERNATIVES

5.1 Evaluation Framework

The evaluation measures used to evaluate the alternatives are based on Federal Transit Administration (FTA) guidelines for assessing major transit investments. It is not known whether or not federal funds will be sought to implement the North-South Transit Corridor improvements, but in order to preserve that option, the RSTIS process has been followed and the federal New Starts evaluation criteria have been used.

The Transportation Equity Act for the 21st Century (TEA-21) requires that New Start projects be evaluated by the FTA. Projects are rated as "highly recommended," "recommended" or "not recommended" based on a review of mobility improvements, environmental benefits, cost-effectiveness, operating efficiencies, transit supportive land use and other considerations. This chapter of the RSTIS provides the comparative rating of the alternatives.

5.2 Mobility/Ridership

Ridership forecasts for each alternative were prepared using the MTA's travel simulation model. Forecasts were prepared for the year 2025 with the Baseline (No Project) Alternative represented by the adopted Long Range Plan (Scenario G model run). The only modification made to the Long Range Plan model was the correction of the San Fernando Road Metro Rapid Bus, which had been modeled as a single route from Sylmar/San Fernando Metrolink Station to downtown Los Angeles. This route was re-coded in the Baseline model run as it is now planned; as two routes, one from Sylmar/San Fernando Metrolink down San Fernando Road to Lankershim Boulevard and the North Hollywood Metro Red Line Station, and a second, South San Fernando Road route from Burbank to downtown Los Angeles.

Individual model runs were performed for the following scenarios:

- Baseline (No Project)
- TSM
- Rapid Bus
- Lankershim-San Fernando to Sylmar/San Fernando Metrolink
- Van Nuys Boulevard to Sylmar/San Fernando Metrolink
- Sepulveda Boulevard to Sylmar/San Fernando Metrolink
- Reseda Boulevard to Sylmar/San Fernando Metrolink
- Canoga Railroad Right-of-Way Transitway

In addition, sensitivity analyses were conducted through model runs for the following scenarios:

- Lankershim- San Fernando extended to Olive View Medical Center
- Sepulveda Boulevard extended to Los Angeles Mission College
- Van Nuys Boulevard terminating at Foothill Boulevard
- Only Sepulveda Boulevard or only Van Nuys extended over Sepulveda Pass to Westwood, not Sepulveda and Van Nuys

The purpose of these sensitivity analyses was to assess the cost effectiveness of potential extensions versus shorter routes and to determine which line is best extended over the Sepulveda Pass, should Metro Rapid Bus service be provided on both the Sepulveda and Van Nuys corridors.

5.2.1 Ridership by Alternative

It should be noted that the Baseline model runs include the Van Nuys Metro Rapid Bus, which is scheduled for service in June 2003, and the Lankershim-San Fernando Metro Rapid Bus, which is scheduled to be implemented in 2006. The project alternative runs reflect the physical and operational improvements associated with the alternatives, such as peak period bus lanes, transit priority system (TPS) and other improvements to improve bus speeds. The project alternative runs all included the modeling of the north-south route on each corridor at five-minute headways in the peak period and ten minute headways in the off-peak for consistency between the alternatives. They also included improvements to some of the transit routes that intersect the north-south alternatives to better coordinate headways for transfers at the north-south corridor stations. These improvements were similar to those in the TSM Alternative, but not identical. Table 5-1 lists the headway improvements modeled for feeder services to each alternative in the Peak Periods and Table 5-2 illustrates the feeder service improvements assumed in the Off-Peak Period. These headway adjustments were input to the MTA travel demand forecasting model by Meyer, Mohaddes Associates staff who conducted the travel demand model runs.

Table 5-1 Peak Headway Improvements on Feeder Services		Headways (minutes)							
Route	Street	Base	RB	TSM	Lankershim	Van Nuys	Sepulveda	Reseda	Canoga
164-WARNER CTR-BRBNK/MTR	Victory	23	23	23	20	20	20	20	20
94-OLIVEVIEW-SF/ROXFORD	Olive View	60	60	60	30	60	60	60	60
96-TYRON/VENTR-BROAD/VEN	Riverside	40	40	40	30	30	40	40	40
152-LANK/UNIV-BRBNK MTRL	Riverside	30	30	30	20	30	30	30	30
152-FALL/VENT-LANK/UNVSL	Vineland/Roscoe/Fallbrook	15	15	10	10	10	10	10	10
154-RINA/TAMPA-BRBNK/MTL	Tampa/Burbank/Oxnard	30	30	30	20	20	20	25	30
158-DEVN/VCIR-VCYN/WDMN	Devonshire/Arleta/Woodman	30	30	30	30	30	30	30	30
161-OWNS/VOWN-WSTL/TOWN	Ventura (West)	30	30	30	30	30	30	30	30
163-ORNG/HLYWD-WARNER CT	Sherman/Hollywood	8	8	8	5	5	5	5	5
165-WARNER CTR-BRBNK/MTR	Vanowen	10	10	10	5	5	5	5	5
166-UNIVCTY STA-CHATSMTR	Nordhoff/Osborne/Lankershim	15	15	10	10	10	10	15	15
168-TPGA/NORD-ARYO/FOOT	Lassen/Paxton	30	30	30	20	20	20	30	30
169-W.H.HOSP-FOOT/MT GLS	Saticoy/Sunland	30	30	30	20	20	20	30	30
230-SYLMR/MTRL-LCYN/VENT	Laurel Canyon	15	15	10	15	15	15	10	15
239-WHTOAK/VENT-SYLM/MTL	White Oak/Rinaldi	45	45	30	30	30	30	45	45
234-SLYMAR ML-SEP/VENT	Sepulveda	15	15	10	15	15	15	15	15
236-BALBOA/VNTR-VNYS/TYR	Balboa/Woodley	30	30	20	30	30	30	20	30
236-BLB/VNTR-BLB/DVNSHR	Balboa	60	60	40	60	60	60	40	60
243-CHATS METR-MASN/DEVN	Winnetka/DeSoto	20	20	20	20	20	20	20	20
245-CHATS MTRNK-WSTHL MD	Topanga	30	30	30	30	30	30	30	30
167-CHATSML-MRPRK/WHITST	Plummer/Coldwater	22	22	22	22	20	20	20	22
234-HUBRD/GARIK-SLYMAR M	Mission College	30	30	30	15	15	15	15	30
240-UNIV CTY STA-DEVON/R	Reseda/Ventura	8	8	8	8	5	5	8	8
156-VNUYS/PARTH-LA CTY C	Van Nuys/Burbank	5	5	4	5	5	5	5	5
156-VNUYS/PARTH-LANK/UNI	Van Nuys/Burbank	11	11	11	10	10	11	11	11
150-SHERM/TOPAN-UNIVCTY	Topanga/Ventura	12	12	12	10	10	10	10	10
326-TPNGA/NORD-CHAND/LAN	Sherman/Victory	10	10	10	10	10	10	10	10
233- VAN NUYS	Van Nuys	6	6	5	6	6	6	6	6
413-WARNER CTR-BRBNK TRN	Commuter Express	20	20	20	15	15	15	15	15
L-VNUYS/VCTRY-VNUYS-OXNR		20	20	20	20	15	20	20	20
DASH - SHERMAN OAKS		20	20	20	20	15	15	20	20
DASH PANORAMA CITY-VAN N	Victory/Van Nuys/Parthenia	30	30	30	30	20	30	30	30

Table 5-2 Off-Peak Headway Improvements on Feeder Services		Headways (minutes)							
Route	Street	Base	RB	TSM	Lankershim	Van Nuys	Sepulveda	Reseda	Canoga
164-WARNER CTR-BRBNK/MTR	Victory	60	60	60	40	40	40	40	40
94-OLIVEVIEW-SF/ROXFORD	Olive View	60	60	60	30	60	60	60	60
96-TYRON/VENTR-BROAD/VEN	Riverside	55	55	55	45	45	55	55	55
152-LANK/UNIV-BRBNK MTRL	Riverside	60	60	60	40	60	60	60	60
152-FALL/VENT-LANK/UNVSL	Vineland/Roscoe/Fallbrook	30	30	30	20	20	20	20	20
154-RINA/TAMPA-BRBNK/MTL	Tampa/Burbank/Oxnard	60	60	30	40	40	40	50	40
158-DEVN/VCIR-VCYN/WDMN	Devonshire/Arleta/Woodman	60	60	30	60	30	30	30	30
161-OWNS/VOWN-WSTL/TOWN	Ventura (West)	60	60	60	60	60	60	60	30
163-ORNG/HLYWD-WARNER CT	Sherman/Hollywood	40	40	40	30	30	30	30	30
165-WARNER CTR-BRBNK/MTR	Vanowen	60	60	60	30	30	30	30	30
166-UNIVCTY STA-CHATSMTR	Nordhoff/Osborne/Lankershim	30	30	20	20	20	20	30	30
168-TPGA/NORD-ARYO/FOOT	Lassen/Paxton	60	60	60	40	40	40	60	60
169-W.H.HOSP-FOOT/MT GLS	Saticoy/Sunland	60	60	60	40	40	40	60	60
230-SYLMR/MTRL-LCYN/VENT	Laurel Canyon	30	30	30	30	30	30	30	30
239-WHTOAK/VENT-SYLM/MTL	White Oak/Rinaldi	60	60	45	45	45	45	60	60
234-SLYMAR ML-SEP/VENT	Sepulveda	20	20	15	20	20	20	20	20
236-BALBOA/VNTR-VNYS/TYR	Balboa/Woodley	60	60	60	60	60	60	40	60
236-BLB/VNTR-BLB/DVNSHR	Balboa	999	999	999	999	999	999	60	999
243-CHATS METR-MASN/DEVN	Winnetka/DeSoto	60	60	30	60	60	60	60	60
245-CHATS MTRNK-WSTHL MD	Topanga	45	45	30	45	45	45	45	45
167-CHATSML-MRPRK/WHITST	Plummer/Coldwater	30	30	30	30	25	25	25	30
234-HUBRD/GARIK-SLYMAR M	Mission College	30	30	30	15	15	15	15	30
240-UNIV CTY STA-DEVON/R	Reseda/Ventura	15	15	10	15	10	10	15	15
156-VNUYS/PARTH-LA CTY C	Van Nuys/Burbank	12	12	10	10	10	12	12	12
156-VNUYS/PARTH-LANK/UNI	Van Nuys/Burbank	24	24	24	20	20	24	24	24
150-SHERM/TOPAN-UNIVCTY	Topanga/Ventura	12	12	12	10	10	10	10	10
326-TPNGA/NORD-CHAND/LAN	Sherman/Victory	999	999	999	30	30	30	30	30
233- VAN NUYS	Van Nuys	10	10	10	10	10	10	10	10
413-WARNER CTR-BRBNK TRN	Commuter Express	999	999	999	30	30	30	30	30
L-VNUYS/VCTRY-VNUYS-OXNR		20	20	20	20	15	20	20	20
DASH - SHERMAN OAKS		20	20	20	20	15	15	20	20
DASH PANORAMA CITY-VAN N	Victory/Van Nuys/Parthenia	30	30	30	30	20	30	30	30

In the MTA's travel simulation model, there are separate modes designated for local, express, Rapid Bus and Bus Rapid Transit (BRT), with different assumptions about speed and interference from other traffic on the roadways. In the model runs for the North-South Project alternatives, the routes were coded as Metro Rapid Buses where they travel in mixed flow with automobiles and as BRT where they travel in dedicated lanes.

Table 5.3 summarizes the ridership forecast data.

Table 5.3 Ridership in 2025

Alternative	Total Daily Transit Trips in LA County	New Transit Trips Compared to Baseline	Percent Change Transit Trips
Baseline*	1,852,050		
TSM	1,865,400	13,350	0.72%
Rapid Bus	1,855,100	3,100	0.17%
Lankershim-San Fernando	1,872,100	20,100	1.08%
Van Nuys	1,872,950	20,900	1.13%
Sepulveda	1,873,400	21,350	1.15%
Reseda	1,870,350	18,300	0.99%
Canoga	1,865,300	13,250	0.72%

*Incudes expected ridership on New Metro Rapid Bus routes on Van Nuys Boulevard and Lankershim/San Fernando Road.

The new riders attracted to transit range from 3,100 for the Rapid Bus Alternative to 21,350 for the Sepulveda Alternative. The Rapid Bus Alternative attracted fewer riders than the other alternatives partially because there were no improvements made to the background bus network to improve feeder service to these new Metro Rapid Bus lines. It should be noted that the Van Nuys and Lankershim-San Fernando Alternatives each attract about 20,000 additional transit trips by the enhanced services included in those alternatives, in addition to the riders on the Metro Rapid Bus routes that are included in the corridors in the Baseline scenario. The Reseda Alternative attracts 18,300 new transit riders with the implementation of a new North-South Rapid Bus service in the West Valley. The Canoga Railroad ROW Alternative attracts the fewest riders of the corridor alternatives, 13,250, less than the TSM Alternative. A portion of the additional ridership attracted to the Alternatives is generated by the enhancements in feeder service to the North-South Corridors and is not all on the North-South Corridors themselves. Table 5.4 illustrates how much of the new ridership is on the North-South Corridor versus how much is on other feeder services that were enhanced to provide better access to the corridors.

Table 5.4 North-South and Feeder Service Ridership in 2025

Alternative	New Ridership on North-South Corridor	New Ridership on Feeder Services	Total New Transit Trips
Lankershim-San Fernando	10,700	9,400	20,100
Van Nuys	14,400	6,500	20,900
Sepulveda	13,050	8,300	21,350
Reseda	10,000	8,300	18,300
Canoga	4,000	9,250	13,250

The new ridership on the North-South corridors on Lankershim-San Fernando and Van Nuys corridors, where Metro Rapid service is included in the Baseline, is due to the improved feeder services, as well as improved travel times for the Metro Rapid Buses associated with the corridor improvements, as well as the improved headways to five minutes in the peak period.

The new ridership on the North-South corridors on Sepulveda and Reseda is attributable to the new Metro Rapid services on those corridors. For the Canoga Alternative, more of the new riders were attracted to the east-west feeder routes in the West Valley than to the actual Canoga Railroad Right-of-Way Metro Rapid Bus route itself.

5.2.2 Sensitivity Runs

The model runs with the extensions to Olive View Medical Center and Los Angeles Mission College were conducted to determine the number of additional riders on those extensions and to assess whether or not it was cost effective to extend the Metro Rapid Service to those destinations or if they could best be served by local or shuttle bus services.

The additional model run with the Van Nuys line shortened to end at Foothill Boulevard was conducted to reflect the routing of the Metro Rapid Bus that will be implemented in June 2003, rather than the corridor alternative which extended the service along Foothill Boulevard and Hubbard Street to the Sylmar-San Fernando Metrolink station. This sensitivity run also provides a determination as to the cost effectiveness of the extension of the Van Nuys route to the Metrolink station versus serving that connection with local buses or shuttles.

Table 5-5 illustrates the results of the sensitivity runs related to the terminus of Metro Rapid Bus service in the Sylmar/San Fernando area. The initial model runs for the Lankershim-San Fernando and Sepulveda Alternatives included the enhancement of local feeder service to the Sylmar/San Fernando Metrolink Station. For the Lankershim – San Fernando model run, the Route 94 local bus to Olive View Medical Center was improved from 60-minute headways to 30-minute headways. In the Sepulveda model run, the Route 234 to Los Angeles Mission College was improved from 30-minute to 15-minute headways. In the sensitivity analysis runs, the local routes were not modified, in terms of headways, and instead the Metro Rapid Bus service was extended to the new terminus locations, operating at five-minute headways. Both of the sensitivity runs showed a decrease in total ridership, indicating that the enhanced local service with numerous stops was preferable to frequent Metro Rapid Bus service with widely-spaced stops, given the nature of the development patterns in the Sylmar area.

Table 5.5 Sylmar/San Fernando Sensitivity Run Ridership Results

Model Run	Total Daily Transit Trips in LA County	Change in Transit Ridership
Lankershim-San Fernando to Sylmar/San Fernando Metrolink	1,872,120	
Lankershim-San Fernando to Olive View Medical Center	1,871,940	-180
Sepulveda to Sylmar/San Fernando Metrolink	1,873,390	
Sepulveda to Los Angeles Mission College	1,873,210	-180
Van Nuys to Sylmar/San Fernando Metrolink	1,872,950	
Van Nuys to Foothill Boulevard Terminus	1,874,780	+1,830

Similarly, when the Van Nuys Alternative was modeled with a terminus at Foothill Boulevard, rather than extending along Foothill Boulevard and Hubbard Street to the Metrolink Station and the Route 233 local bus into Lakeview Terrace was enhanced, the ridership increased. These sensitivity analyses indicate that some form of multiple-stop, local fixed route or shuttle service to the Metrolink Station and feeding the Metro Rapid Bus routes provides greater accessibility to the Metro Rapid Bus network than extensions of the Metro Rapid Bus system into low-density areas.

The Baseline Alternative includes a Metro Rapid Bus on Van Nuys Boulevard which extends over the Sepulveda Pass to Westwood. In the Sepulveda Boulevard Alternative, the Sepulveda Metro Rapid Bus is also extended over the Sepulveda Pass to Westwood. Sending Metro Rapid Buses over the Pass at five-minute headways requires a significant number of buses. Two sensitivity runs were conducted to determine if it would be more cost-effective to extend the Sepulveda or Van Nuys Alternatives over the Pass, if Metro Rapid Buses were implemented in both of these corridors in the San Fernando Valley. Table 5-6 illustrates the difference in ridership depending upon which line is extended to Westwood. The Van Nuys alternative attracts 770 additional daily trips, less than a one percent difference in total transit trips.

Table 5.6 Sepulveda Pass Sensitivity Analysis

Alternative	Total Daily Transit Ridership in LA County
Van Nuys Metro Rapid Bus Extended to Westwood, Sepulveda Rapid Bus Ends at Ventura Boulevard	1,875,710
Sepulveda Metro Rapid Bus Extended to Westwood, Van Nuys Rapid Bus Ends at Ventura Boulevard	1,874,940

5.2.3 Mobility Index

In addition to changes in transit ridership associated with the alternatives, the change in mode split associated with people switching from auto trips to transit trips also effects travel conditions on the roadways in the San Fernando Valley and beyond. Table 5.7 lists some of the statistics from the travel demand model related to travel on the highway system. The TSM and Rapid Bus Alternatives decrease total vehicle trips in Los

Table 5.7 Mobility Statistics in 2025

Alternative	Total Daily Vehicle Trips in LA County	Percent Change in Vehicle Trips	Mobility Index
Baseline	27,113,500		29.09
TSM	27,102,900	-0.04%	29.09
Rapid Bus	27,111,100	-0.01%	29.08
Lankershim-San Fernando	27,097,400	-0.06%	29.15
Van Nuys	27,095,300	-0.07%	29.10
Sepulveda	27,096,300	-0.06%	29.19
Reseda	27,098,800	-0.05%	29.23
Canoga	27,102,600	-0.04%	29.07

Angeles County by 0.04 percent and 0.01 percent, respectively. The North-South Corridor Alternatives decrease vehicle trips by 0.04-0.07 percent. The corridor alternatives have the potential to reduce vehicle trips on the highway network by 13,000 to 23,000 daily trips. The removal of trips from the highway system increases overall mobility as reflected in the Mobility Index in table 5.7. The Mobility Index is a model output that is a weighted formula that considers person miles of travel, person hours of travel, vehicle miles of travel and vehicle hours of travel. The higher the value of the index, the better the overall mobility associated with the alternative. The Reseda Alternative results in the highest Mobility Index, with the Sepulveda Alternative second.

5.3 Land Use & Development

The existing patterns of development in the San Fernando Valley were described in Chapter 1, "Purpose and Need," of this report. It is desirable to provide high-capacity transit services in the areas where land use and development patterns warrant enhanced transit accessibility. The types of land uses that are typically considered transit supportive are those that include higher density, both housing and employment, institutions, such as government centers and medical facilities, colleges and universities, recreational facilities, and other high concentrations of people.

In Chapter 1, activity centers were identified and concentrations of population and employed described. The largest university in the San Fernando Valley is the CSU Northridge campus, which is served by the Reseda Alternative.

Some of the land use driven socio-economic factors associated with each of the alternatives that influence transit ridership are illustrated in Table 5.8.

Table 5.8 Socio-economic Factors

	Canoga RR ROW	Reseda - Nordhoff	Sepulveda	Van Nuys	Lankershim-San Fernando
2000 Population within 1/2 mile (Corridor)	53,506	123,174	120,383	162,643	134,716
2000 Population within 1/2 mile (Stops)	34,688	99,308	100,723	141,915	108,739
2000 Employment within 1/2 mile (Corridor)	64,020	46,590	43,837	45,321	42,496
Households in Poverty	14.9%	14.1%	18.1%	18.8%	18.0%
Zero Vehicle Households	12.9%	9.9%	13.4%	15.4%	13.2%
Transit Dependant Population	27.7%	26.5%	30.4%	31.7%	29.6%
Commute to Work in Transit	7.3%	5.4%	8.0%	10.3%	7.7%
Average Passenger trip length	3.2mi	3.9mi	3.5mi	4.2mi	5.7mi

Source: Transportation Management & Design

The Van Nuys Alternative serves the highest concentration of population along the corridor and within ½ mile of the stations along the corridor, with 142,000 people living with 1/2 mile of the stations. The Reseda, Sepulveda and Lankershim-San Fernando Alternatives all serve similar population bases, with about 100,000 people living within ½ mile of the stations. The Canoga Alternative has the lowest population along the corridor, with 35,000 people living within ½ mile of stations.

The Canoga Alternative on the other hand, serves the largest number of employees within ½ mile of stations along the corridor, with 64,000 employees along the corridor. The other four corridors have 42-46,000 employees along them.

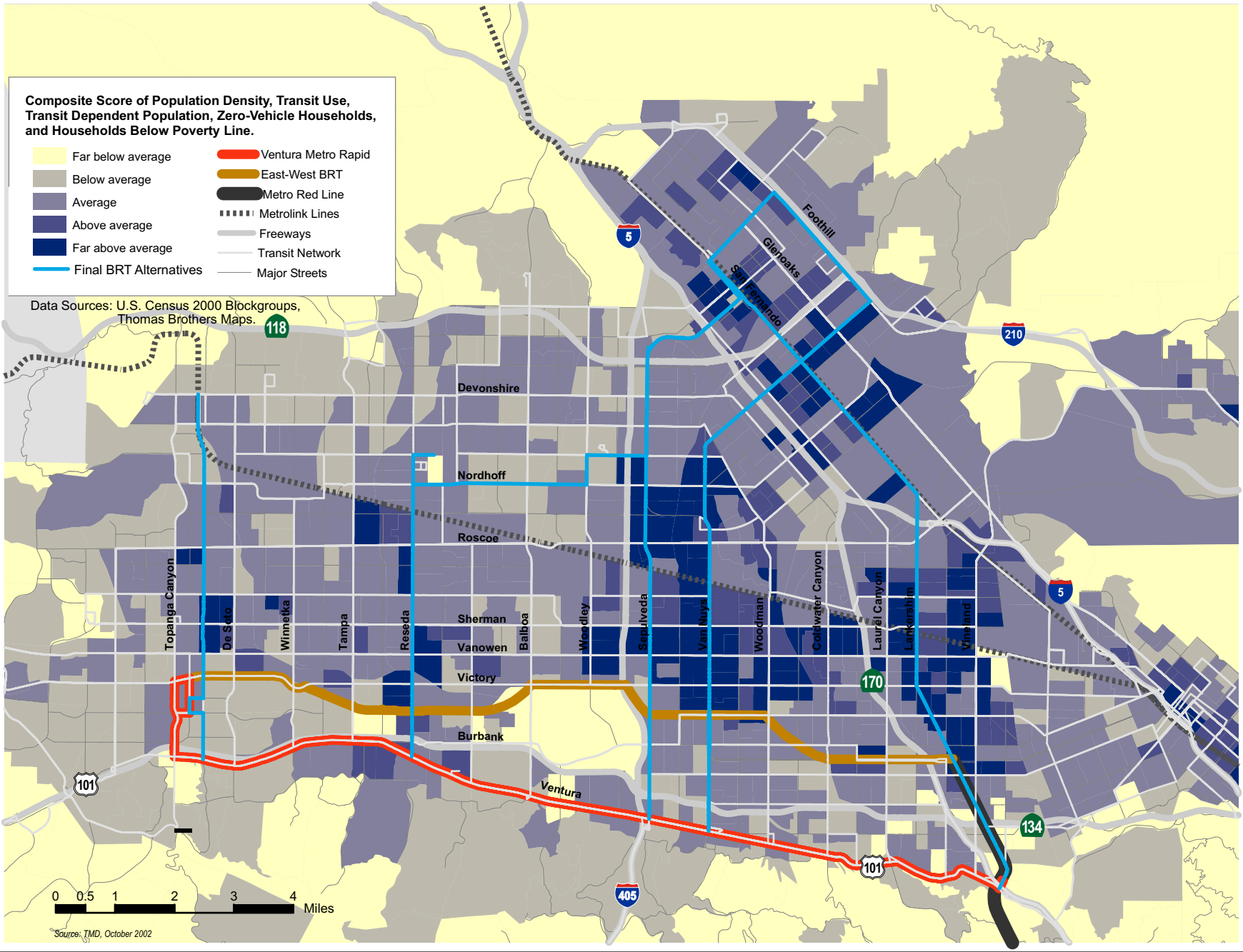
Other socioeconomic indicators that influence potential transit ridership include low-income households and those without access to a car. A composite statistic, combining these factors, as well as persons older than 65 and younger than 15, was derived and is included in the table as Transit Dependent Population. The Van Nuys Alternative has the highest percentage of transit dependent persons along its route (31.7%), followed closely by Sepulveda (30.4%) and Lankershim-San Fernando (29.6%).

Table 5-8 also contains data on the percentage of persons along each corridor who currently commute to work on transit. The Van Nuys Alternative again ranks highest, followed by Sepulveda and Lankershim – San Fernando. The average length of trip was also examined. Persons making trips along the Lankershim-San-Fernando make the longest trips, averaging 5.7 miles, which would be well-served by a Metro Rapid Bus type of service. Trips along the Canoga route tend to be shorter in length, only 3.2 miles in length on average.

A composite measure of transit dependency was developed by combining the following measures and plotting them on the GIS base map; population density, existing use of transit, transit dependent population, zero-vehicle households, and households below the poverty line. Figure 5-1 illustrates the Transit dependency Index data. The Van Nuys, Sepulveda and Lankershim-San Fernando Alternatives serve significant numbers of census tracts with above average transit dependency. The Reseda Alternative serves fewer census tracts with above average transit dependency and the Canoga Alternatives serves the fewest.

5.4 Local Consensus

A key component in the evaluation process for the San Fernando Valley North-South Study was implementing a comprehensive, inclusive and transparent public outreach and consensus-building effort to maximize input received from the general public and community stakeholders. Ensuring geographic coverage and reaching a broad spectrum of stakeholders was a priority in developing the outreach program. To this end, two series of three public Open Houses were held at critical decision points during the 7-month MIS phase of the Study, and over 40 stakeholder briefings were conducted. Additionally, the project team met with the offices of elected officials and interested agencies on a regular basis. In this way, the project team was able to hear from the public throughout the process and their input was incorporated to help narrow the alternatives. This outreach effort ensured that, by the end of the RSTIS phase, a level of consensus was achieved with significant support for multiple alternatives.


Composite Score of Population Density, Transit Use, Transit Dependent Population, Zero-Vehicle Households, and Households Below Poverty Line.
Far below average
Below average
Average
Above average
Far above average
Final BRT Alternatives
Ventura Metro Rapid
East-West BRT
Metro Red Line
Metrolink Lines
Freeways
Transit Network
Major Streets
Data Sources: U.S. Census 2000 Blockgroups, Thomas Brothers Maps.
Devonshire
Nordhoff
Roscoe
Sherman
Vanowen
Victory
Burbank
Ventura
Topanga Canyon
De Soto
Winnetka
Tampa
Reseda
Balboa
Woodley
Sepulveda
Van Nuys
Woodman
Coldwater Canyon
Laurel Canyon
Lankershim
Vineland
Foothill
Glenoaks
San Fernando
0 0.5 1 2 3 4 Miles
Source: TMD, October 2002
118
5
210
170
134
101
405

5.4.1 Results of Community Meetings

As noted, community outreach for the Study included both public Open House meetings and targeted stakeholder briefings, ensuring that feedback was received from a broad cross-section of Valley interests.

Community Open House Meetings

Two series of community Open Houses were held at locations designed to provide broad geographic coverage across the San Fernando Valley. Locations were selected for both series of workshops in the northeast, southeast and west Valley. The meetings were held in an Open House format which allows attendees to drop in at a venue in a more relaxed environment and to circulate at their own pace between stations; in this way, attendees can receive information and ask questions in a comfortable environment about topics that interest them.

The first series of three Open House meetings was held on September 9, 10 and 12 from 5:00 – 8:00 p.m. respectively in Northridge, the City of San Fernando and North Hollywood. Over 100 individuals attended these meetings that were designed to introduce the public to the Study as well as to receive their feedback on a range of 13 north-south bus corridor alternatives.

Attendees at this first series of Open Houses were positive about the North-South Study and were pleased to be involved in the decision-making process, though there was some residual interest in the East/West Study. In summary, attendees supported:

- regional connectivity between the San Fernando Valley and Downtown Los Angeles, the Westside, Sylmar/Pacoima and the Santa Clarita area;
- mode connectivity with the SFV Metro Rapid Transitway, Metro Rail, Metro bus service and Metrolink; and,
- developing several alternatives to create a Metro Rapid Bus network. It should be noted that the Van Nuys Boulevard Business Improvement District (BID) would not be supportive of any Van Nuys alternatives that would impact the landscaping improvements that have recently been completed.

The second series of three Open House meetings was held on December 10 - 12 from 5:00 – 8:00 p.m. respectively in Sherman Oaks, Woodland Hills and the City of San Fernando. Approximately 40 individuals attended these Open Houses where the five refined route alternatives as well as demographic information and urban design options were presented. The project alternatives presented were the product of community input for the first series of Open Houses as well as technical evaluation of the alternatives.

Several, but not all, of those attending the December Open Houses had attended the September meetings. Comments received recognized that current ridership information supports increased transit service in the Valley, and that the alternatives presented show potential for increased network connections with other transit service. On the whole, there was community support for the Study and to different degrees all of the alternatives. Public comments received at the December meetings show support for:

- transit improvements for more than one alignment;
- the Van Nuys alternative, due to ridership projections;

- the Lankershim option, because it links the northeast Valley with the North Hollywood Metro Red Line station;
- the Reseda alternative, because it provides cross-Valley coverage and links some important activity centers;
- the Sepulveda alternative as it would potentially alleviate congestion on the I-405; and,
- the Canoga option, because it would be constructed in existing right-of-way (though a number of attendees expressed opposition to this alternative).

A total of 52 public comments about the Study were received during the MIS phase. To encourage people to provide comments, feedback was accepted in a number of formats. A bilingual (English/Spanish) comment form was developed, which was converted to a digital format and was made available on two laptop computers. Comment was also accepted by postal mail, electronic mail, and by fax.

To ensure the broadest coverage of publicity for the community about the Open Houses, newspaper advertisements were placed in the Los Angeles Times-Valley Edition, the Daily News, and the San Fernando Sun for both series of meetings. Additionally, two bilingual project Fact Sheets/Project Updates, which included an invitation to the community meetings, was mailed out to the project database. The database used for the first mail-out was significantly augmented since the late summer Open Houses by adding a list of residents and property owners along those streets potentially impacted by peak parking prohibitions. Approximately 10,000 bilingual take-one announcements were placed on local bus routes, meeting information was posted on the project website at www.mta.net and the project information line was updated to announce the public meetings and website information.

Detailed reports of these community Open Houses are included in Appendix A.

Stakeholder Briefings

In addition to the community Open House meetings, over 40 additional briefings were held between July and December 2002 with Chambers of Commerce and business groups, community organizations, citizens' advisory groups, schools and education groups, the newly-constituted City of Los Angeles neighborhood councils as well as other Valley stakeholders. Follow-up meetings were held during this phase with several of these organizations. At these meetings, project staff would typically present a brief overview and history of the project, and provide information about the current status of the study. The attendees were then invited to provide their comments.

Briefing sessions were scheduled at Study milestones with the offices of the local elected officials. Three briefing sessions were held with elected officials' staff. Meetings were also arranged with the appropriate impacted local agencies and jurisdictions.

After each briefing, a meeting summary was developed and placed within a matrix to track comments and action items. This information was used to help guide the team as alternatives were evaluated.

One the whole, however, all stakeholders were pleased to be included in the earliest stages of project planning process and were supportive about proposed transit

improvements to the north-south corridors in the San Fernando Valley. Typical comments received by these stakeholders include:

- Support for improvements on multiple corridors.
- Majority of groups supportive of Van Nuys as first preference; some opposition to afternoon peak period usage between Burbank and Magnolia.
- Support for Lankershim and Reseda alternatives.
- Mixed support and opposition for the Canoga right-of-way option.
- Ensure cost efficiency.
- Avoid duplication with upcoming Bus Rapid Transit projects in the Valley.
- Consider linkages with the Burbank & Glendale, and the Santa Clarita Valley areas.
- Explore including Park/Ride lots in the Study.
- Improve amenities such as shelters and benches, as well as landscaping.
- Serve Olive View Medical Center and Sylmar areas.

5.5 Environmental Impacts

5.5.1 Noise

Noise is defined as unwanted sound, and it is known to cause several adverse effects to people. Based on the known effects of noise, criteria have been established to help protect the public health and safety, and prevent disruption of certain human activities. The criteria are based on such known impacts of noise on people as: hearing loss, speech interference, sleep interference, physiological responses, and annoyance.

Noise would result from the proposed project for each of the five alternatives being evaluated in this section. Noise impacts associated with this project would be either short-term (during construction) or long-term (during operation).

The proposed project would result in short-term increases in ambient noise levels at those areas where physical improvements would be required. As with most construction projects, construction could require the use of heavy diesel powered equipment, such as bulldozers, backhoes, loaders, demolition equipment, and concrete mixers. However, not all equipment would be in operation at the same time, but would be required at intermittent times based on the construction phase and construction requirements. Excessive noise levels would not be continuous. In addition, both light and heavy trucks would be required to deliver construction materials to the site, and haul demolition debris to off-site locations. These vehicles would utilize the existing roadway network.

Noise from the Metro Rapid Bus operations would affect the different land uses (neighborhoods) along each of the alternative routes to a different degree. Single-family residential uses are the most sensitive to noise impacts, high-density residential uses are also sensitive to noise impacts, commercial uses can be sensitive to noise impacts, and industrial uses are generally not sensitive to noise impacts.

5.5.1.1 Canoga Avenue Railroad Right-of-Way

This alternative would construct a Metro Rapid Bus route within the MTA-owned abandoned railroad right-of-way, which parallels Canoga Avenue in a dedicated transitway. The southern terminus would be the Warner Transit Center and the northern

terminus would be the Chatsworth Metrolink Station. This alternative would result in significant construction and operational noise impacts.

Construction within the railroad right-of-way would be between Variel Avenue/Victory Boulevard intersection and Canoga Avenue/Plummer Street intersection. The Metro Rapid Bus route would be on local streets between the Variel Avenue/Victory Boulevard intersection and the Warner Transit Center, and Canoga Avenue/Plummer Street intersection and the Chatsworth Metrolink Station. Construction in the railroad right-of-way between the Variel Avenue/Victory Boulevard intersection and Canoga Avenue/Roscoe Boulevard intersection would occur adjacent to industrial/commercial land uses, which reduces the potential for construction noise effects. North of the Canoga Avenue/Roscoe Boulevard intersection construction in the railroad right-of-way would occur adjacent to single-family residential homes and mobile homes until just south of Nordhoff Street. There is a high potential for construction noise impacts along this stretch of the route. No construction noise effects are expected for those portions of the route that occur on existing city streets.

Several right turn lanes would need to be constructed along Canoga Avenue to allow for the proper flow of traffic. Right turn lanes would be required at northbound (N/B) Sherman Way, N/B Saticoy Street, N/B Roscoe Boulevard, N/B Parthenia Street, and N/B Nordhoff Street. The right turn lanes would be approximately 200 feet long by 12 feet wide. The construction of these turn lanes would cause short-term noise impacts, but they are all within industrial areas and the noise impact would not be significant.

There is an alternative that would continue the bus route within the railroad right-of-way north of Plummer Street to Lassen Street. To accomplish this, a grade separation would have to be constructed over the Metrolink tracks just north of Plummer Street. This alternative also places the bus corridor immediately adjacent to a mobile home park. Noise impacts associated with the construction of the grade separation and the bus route within the railroad right-of-way adjacent to these mobile homes would be potentially significant.

Operational noise impacts could occur where the Metro Rapid buses pass close to single-family residential or mobile home units.

5.5.1.2 Reseda Boulevard

This alternative would operate a Metro Rapid Bus route within the existing street system. From the southern terminus at Ventura Boulevard this Metro Rapid Bus line proceeds northerly along Reseda Boulevard to California State University, Northridge (CSUN). From CSUN the Metro Rapid Bus route proceeds easterly along Nordhoff Street to Woodley Avenue. The route goes north on Woodley Avenue to Plummer Street where it again turns in an easterly direction and proceeds to Sepulveda Boulevard. Once on Sepulveda Boulevard it proceeds to the north to Brand Boulevard and Truman Street, from there it continues to the northern terminus at the Sylmar/San Fernando Metrolink Station.

Most of this route would occur within the existing street system. There are only minor construction efforts required to implement the Reseda Boulevard alternative. Pop-outs would be required for the stations at Victory Boulevard, Sherman Way, Roscoe Boulevard, and Nordhoff Street. Pop-outs consist of constructing a sidewalk extension

approximately 4 to 6 feet for a distance of approximately 80 feet. See Figure 4-21 for an example of a curb pop-out. Noise associated with the construction of the pop-outs would not be significant.

Multi-family residential uses are located along Reseda Boulevard between Ventura Boulevard and Nordhoff Street. Metro Rapid buses could potentially add to the noise environment within these residential neighborhoods. The Metro Rapid buses could also potentially affect noise levels at CSUN if they travel onto the campus. Single-family uses are located along the Brand Boulevard segment of the corridor and noise from the Metro Rapid buses could potentially affect this environment.

5.5.1.3 Sepulveda Boulevard

This alternative would operate a Metro Rapid Bus route within the existing street system. From the southern terminus at Ventura Boulevard this Metro Rapid Bus line proceeds northerly on Sepulveda Boulevard to Brand Boulevard and Truman Street, from there it continues to the northern terminus at the Sylmar/San Fernando Metrolink Station.

Most of this route would occur within the existing street system. There are several locations on the east side of Sepulveda Boulevard that would require widening in order to implement this alternative. Widening would be required for a distance of approximately 200 feet north and south of the intersection at Sepulveda Boulevard and Burbank Boulevard, and at Sepulveda Boulevard and Sherman Way. Widening would be required for a distance of approximately 270 feet north of Reymer Street under the Metrolink/Southern Pacific Railroad overpass. Construction noise associated with the street widening would be short-term and occur within commercial neighborhoods thereby resulting in less than significant impacts.

Multi-family residential uses are located along Sepulveda Boulevard between Ventura Boulevard and Brand Boulevard. Metro Rapid buses could potentially add to the noise environment within these residential neighborhoods. Single-family residential uses are located along the Brand Boulevard segment of the corridor and noise from the Metro Rapid buses could potentially affect this environment.

5.5.1.4 Van Nuys Boulevard

A Metro Rapid Bus is already scheduled to begin operation in June 2003 on Van Nuys Boulevard between Ventura Boulevard on the south and Foothill Boulevard on the north. This alternative would extend the corridor from its northern terminus at Foothill Boulevard toward the west to the Sylmar/San Fernando Metrolink Station.

Most of this route would occur within the existing street system. There are only minor construction efforts required to implement the Van Nuys Boulevard alternative. Pop-outs would be required for the stations at Victory Boulevard, Sherman Way, Nordhoff Street, Woodman Avenue, and Arleta Avenue. Pop-outs consist of constructing a sidewalk extension approximately 4 to 6 feet for a distance of approximately 80 feet. Noise associated with the construction of the pop-outs would not be significant.

Between Ventura Boulevard and Plummer Street land uses along Van Nuys Boulevard are almost entirely commercial and institutional. Between Plummer Street and Interstate 5 Van Nuys Boulevard has a significant amount of multi-family residential housing. There is also multi-family residential land uses on Van Nuys Boulevard past San

Fernando Road. Hubbard Street, which provides access to the Sylmar/San Fernando Metrolink Station, is lined with both multi-family and single-family land uses. Operational noise from the Metro Rapid buses could potentially affect this environment.

5.5.1.5 San Fernando Road – Lankershim Boulevard

This corridor would extend from the Sylmar/San Fernando Metrolink Station along San Fernando Road to Lankershim Boulevard where it proceeds south to the Universal City Metro Red Line Station.

The entire corridor would operate within the existing street system. No construction would be required to implement this alternative therefore, no construction noise impacts would occur. Operational noise from the Metro Rapid buses would not be significant because there are no residential uses that front this corridor.

5.5.2 Air Quality

The South Coast Air Basin (SCAB) encompasses a 6,600 square mile area that includes the counties of Los Angeles, San Bernardino, Riverside and Orange. Air quality planning and control within the SCAB is the responsibility of the South Coast Air Quality Management District (SCAQMD). Specifically, the SCAQMD is responsible for monitoring air quality, planning, implementing, and enforcing the programs designed to attain and maintain State and federal ambient air quality standards in the SCAB. State and federal ambient air quality standards have been established for the following criteria pollutants: ozone (O_3), carbon monoxide (CO), total suspended particles (PM_{10}), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (pB). Hydrocarbons (produced in automobile exhaust), O_3, and NO_2 react under strong sunlight to create air pollution known as "smog." The Los Angeles County portion of the SCAB has been designated as a non-attainment area for O_3, CO, and PM_{10}.

The San Fernando Valley is located within the SCAB, and smog is a problem within this area. The SCAQMD has two air monitoring stations within the San Fernando Valley, West San Fernando Valley (Reseda) and East San Fernando Valley (Burbank). During 2001 at these two-air monitoring stations O_3 and PM_{10} exceeded the State and/or federal ambient air quality standards.

Construction and site preparation activities associated with the project alternatives would result in criteria pollutants emissions. Construction activities would include demolition of existing structures, site clearance, excavation and grading, and construction of the structures and ancillary improvements. During these various activities pollutant emissions would result from the operation of construction equipment; travel to and from construction site by construction workers; and from earth moving and excavation, which results in fugitive dust emissions.

The Metro Rapid Bus fleet is powered by compressed natural gas (CNG). CNG is a clean-burning fuel. CNG vehicles generate fewer exhaust and greenhouse gas emissions than their gasoline- or diesel-powered counterparts. Operational emissions associated with the Metro Rapid CNG buses are reduced relative to conventional gasoline engines due to CNG's inherently "cleaner" chemical properties with an engine

that takes full advantage of these properties. Following are estimated reductions in emissions:[1]

- Reductions in carbon monoxide emissions of 90 to 97 percent, and reductions in carbon dioxide emissions of 25 percent.
- Reductions in nitrogen oxide emissions of 35 to 60 percent.
- Potential reductions in non-methane hydrocarbon emissions of 50 to 75 percent.
- Fewer toxic and carcinogenic pollutants and little to no particulate matter produced.
- No evaporative emissions in dedicated engines (such as those associated with gasoline or diesel).

Air emissions within the San Fernando Valley during the operational phase of each Metro Rapid Bus alternative would be significantly reduced over the No Project alternative due to the substantial number of automobile trips that would be taken off of the local street system. See table 5.3 for the number of trips converted from auto trips to transit trips.

Since the air quality within the San Fernando Valley would be improved during the operational phase of each Metro Rapid Bus alternative no further discussion is warranted. The following discussions are limited to the construction phase of each alternative.

5.5.2.1 Canoga Avenue Railroad Right-of-Way

Construction and site preparation activities associated with this alternative would result in criteria emissions being generated. Construction activities for the proposed project would include demolition of existing structures, site clearance, excavation and grading, and construction of the proposed structures and ancillary improvements along the railroad right-of-way. During these various activities, pollutant emissions would result from the operation of construction equipment; travel to and from construction site by construction workers; and from earth moving and excavation, which results in fugitive dust emissions. PM_{10} and nitrogen oxide (NOx) air emissions during grading could potentially be significant.

5.5.2.2 Reseda Boulevard

Most of this route would occur within the existing street system. There are only minor construction efforts required to implement the Reseda Boulevard alternative. Pop-outs would be required for the stations at Victory Boulevard, Sherman Way, Roscoe Boulevard, and Nordhoff Street. Pop-outs consist of constructing a sidewalk extension approximately 4 to 6 feet for a distance of approximately 80 feet. Air emissions associated with the construction of the pop-outs would not be significant.

5.5.2.3 Sepulveda Boulevard

Most of this route would occur within the existing street system. There are several locations on the east side of Sepulveda Boulevard that would require widening in order

[1] United States Environmental Protection Agency, Transportation and Air Quality Transportation and Regional Programs Division, EPA420-F-00-033, March 2002.

to implement this alternative. Widening would be required for a distance of approximately 200 feet north and south of the intersection at Sepulveda Boulevard and Burbank Boulevard, and at Sepulveda Boulevard and Sherman Way. Widening would be required for a distance of approximately 270 feet north of Reymer Street under the Metrolink/Southern Pacific Railroad overpass. Air emissions associated with the construction of the street widening would not be significant.

5.5.2.4 Van Nuys Boulevard

Most of this route would occur within the existing street system. There are only minor construction efforts required to implement the Van Nuys Boulevard alternative. Pop-outs would be required for the stations at Victory Boulevard, Sherman Way, Nordhoff Street, Woodman Avenue, and Arleta Avenue. Pop-outs consist of constructing a sidewalk extension approximately 4 to 6 feet for a distance of approximately 80 feet. Air emissions associated with the construction of the pop-outs would not be significant.

5.5.2.5 San Fernando Road – Lankershim Boulevard

The entire corridor would operate within the existing street system. No construction would be required to implement this alternative therefore, no construction air emission impacts would occur.

5.6 Community Impacts

5.6.1 Acquisitions and Displacements

Impacts to property owners and occupants would occur when a parcel of private property is acquired and results in the displacement of a residence or business. Impacts may also occur when a business is displaced from a property that is leased.

5.6.1.1 Canoga Avenue Railroad Right-of-Way

The MTA owns the railroad right-of-way within which this alternative would be constructed therefore no property acquisitions would be required for the transit corridor. A park and ride facility is proposed for the south side of Sherman Way that would front both sides of the railroad right-of-way. This would require the acquisition of a piece of property approximately 875 feet long by 90 feet wide on the west side of the railroad right-of-way, and a second property approximately 700 feet long by 120 feet wide on the east side of the railroad right-of-way. Both of these properties are currently used for industrial uses, which would require these businesses be relocated. There is sufficient industrial space available in the west San Fernando Valley to accommodate these relocations therefore the impact would be less than significant.

Several right turn lanes would need to be constructed along Canoga Avenue to allow for the proper flow of traffic. Right turn lanes would be constructed at northbound (N/B) Sherman Way, N/B Saticoy Street, N/B Roscoe Boulevard, N/B Parthenia Street, and N/B Nordhoff Street. The right turn lanes would be approximately 200 feet long by 12 feet wide. The construction of these turn lanes would not require the acquisition of any property beyond the right turn area. The acquisition impact would not be significant.

5.6.1.2 Reseda Boulevard

No property would have to be acquired to implement this transit corridor.

5.6.1.3 Sepulveda Boulevard

Most of this route would occur within the existing street system. There are several locations on the east side of Sepulveda Boulevard that would require widening in order to implement this alternative. Widening would be required for a distance of approximately 200 feet north and south of the intersection at Sepulveda Boulevard and Burbank Boulevard, and at Sepulveda Boulevard and Sherman Way. Widening would be required for a distance of approximately 270 feet north of Reymer Street under the Metrolink/Southern Pacific Railroad overpass.

The widening of Sepulveda Boulevard at Burbank Boulevard, and of Sepulveda Boulevard at Sherman Way would occur on the east side of the street on both the south and north corners. These widenings would require the acquisition of ten parcels, and the relocation of the commercial uses. The widening under the Metrolink/Southern Pacific Railroad overpass would not require the acquisition of any property beyond that necessary for the actual widening. The acquisition of the ten properties and the relocation of the commercial businesses would not result in a significant adverse impact.

5.6.1.4 Van Nuys Boulevard

No property would have to be acquired to implement this transit corridor.

5.6.1.5 San Fernando Road – Lankershim Boulevard

No property would have to be acquired to implement this transit corridor.

5.7 Traffic Impacts

The impacts of the project alternatives on traffic circulation could be significant if an existing travel lane were removed or existing turning movements were prohibited, causing a redistribution of traffic. None of the alternatives include features that would result in these types of impacts. All of the alternatives include LADOT's Transit Priority System (TPS) at signalized intersections, which provides the transit vehicles with priority treatment. This system has been in effect on Ventura Boulevard and Wilshire-Whittier Boulevard and has been evaluated in detail by LADOT. It has been demonstrated that the implementation of TPS does not negatively impact traffic flow or cause and significant traffic impacts.

Only the Canoga Railroad Right-of-Way Alternative could potentially result in traffic impacts requiring mitigation. The implementation of a north-south transitway parallel to Canoga Avenue results in new signalized crossings of each east-west street which intersects Canoga Avenue from the east. The Canoga Alternative will be designed to minimize the impacts of these new signalized crossings, similar to the design of the SFV Metro Rapid Transitway, but this will cause some additional delay to traffic on east-west streets or completing turns to/from Canoga Avenue across the transitway. These impacts should be evaluated, disclosed and minimized through mitigation measures in an environmental impact report.

Consideration should also be given to the impact of the curb extensions (bump-outs or pop-outs) proposed at many of the stations along the Reseda and Van Nuys Alternatives. The effect of the curb extensions will be to cause the transit vehicles to stop in the travel lane at the bus station, rather than pulling into the parking lane. This will be beneficial in terms of bus speeds, since the buses will not have to merge back into traffic, but it could delay some through traffic or make it more difficult for right turns onto the north-south streets when a bus is stopped in the bus station. The TPS system typically extends the green phase for through traffic so that the bus will be one of the last cars through the intersection.

5.8 Parking Impacts

5.8.1 On-Street Parking Impacts.

There are several ways in which North-South Transit Corridor Alternatives could impact on-street parking. Alternatives which permanently remove a significant number on-street parking spaces could be considered to have a significant parking impact, if there are not conveniently located off-street parking lots to serve all of the adjacent land uses. Alternatives which remove on-street parking during peak periods would not necessarily be considered to have a significant negative parking impact, if there is low demand for the use of those spaces or if there is other nearby parking available during peak periods. Alternatives which generate parking demands that are not accommodated by parking lots provided as a part of the project alternative could result in spillover parking into nearby commercial or residential neighborhoods, which could create a significant impact in those neighborhoods.

The Canoga Railroad Right-of-Way alternative does not result in the removal of any on-street parking spaces. It will have the least amount of impact on on-street parking.
The Reseda and Van Nuys Alternatives would permanently remove a small number of on-street parking spaces at the station locations where curb extensions/sidewalk widenings (curb pop-outs) are located. These are located at bus stop locations where parking is prohibited and the length of the pop-outs beyond the 50-foot minimum for the station area would be designed to minimize the loss of parking in areas where the parking is in high demand. Generally, only about two on-street spaces would be removed at each pop-out to provide an area of widened sidewalk with urban design amenities. This limited amount of permanent parking removal would not be considered to cause a significant negative parking impact.

The Sepulveda and Lankershim-San Fernando Alternatives each entail the prohibition of peak period parking on one or both sides of the street. The Sepulveda Alternative includes the prohibition of PM peak period parking on the east side of Sepulveda Boulevard, from Ventura Boulevard to Chatsworth Street in order to provide a dedicated northbound bus lane along the curb in the PM peak period. Most of the commercial land uses along Sepulveda Boulevard have off-street parking and there is generally parking available on the east-west streets that intersect Sepulveda Boulevard. The evaluation of the potential negative impact of this parking prohibition should be undertaken through a Mitigated Negative Declaration.

The Lankershim-San Fernando Alternative will result in the prohibition of on-street parking in the AM and PM peak periods to provide dedicated bus lanes along the curbs in both

directions between San Fernando Road and Cahuenga Boulevard. It is likely that the bus lanes would initially be operated southbound in the AM peak period and northbound in the PM peak period, corresponding to the peak commute direction. The AM peak period parking prohibition would likely not cause a significant parking impact because most of the commercial establishments along Lankershim Boulevard do not open until after the morning peak period. In the PM peak period, there is more reliance on on-street parking by commercial land uses. Some of the land uses along Lankershim Boulevard are located in older buildings with limited parking. If the PM peak period parking prohibition is implemented only on the east side of the street, on-street parking would still be available on the west side of the street and on intersecting east-west streets. This could reduce the impact of the peak period parking prohibition to a less than significant level, but this would likely need to be assessed in a Mitigated Negative Declaration. If the peak period parking prohibitions are implemented on both sides of the street in one or both peak periods, this would increase the parking impact to a potentially significant level. Further study would be required to determine if the impacts of the loss of on-street parking could be mitigated through a Mitigated Negative Declaration.

5.8.2 Park-and-Ride Analysis Warner Center Area

Park-and-Ride analysis was undertaken in the Warner Center area, where the western terminus of the SFV Metro Rapid Transitway and the southern terminus of the Canoga Railroad Right-of-Way Alternative will jointly be located in the Warner Center Transit Hub. No parking is currently planned at that location. The Warner Center area is a mixed land use area of office, commercial, light industrial and residential uses. The street network is a grid network of major arterials with the Ventura Freeway (US 101) on the southern boundary. There are several high traffic and parking generating land uses existing in the area, which place high parking demands on the existing surface parking lots, during the weekday business day.

Arterial access to the study area is good, however, the Ventura Freeway operates at a poor level of service during the AM and PM peaks, with congested conditions occurring well to the west of the Warner Center area in the AM peak and to the east in the PM peak. This congestion will encourage commuters to consider the transit alternative, especially if significant and reliable travel times are realized. The US 101 interchange locations near Warner Center include two full directional interchanges at Topanga Canyon Boulevard and DeSoto Avenue, and a partial, eastbound interchange at Canoga Avenue. Commuters from the immediate Warner Center area or from areas to the west could utilize a park-and-ride facility in the Warner Center area to travel on the Metro Rapid Bus System given this freeway accessibility.

The Warner Center Transit Hub will be located on Owensmouth, between Erwin and Oxnard Streets. It will serve as the terminus of both the North–South Canoga Railroad ROW and SFV Metro Rapid (East–Wes)t Transitways with buses exiting the Transitways at Variel Street and circulating on city streets to the Transit Hub. There is also the potential for some direct service from the North–South Canoga Railroad ROW Transitway directly onto the SFV Metro Rapid Transitway, thereby bypassing the Warner Center Transit Hub.

Several existing and potentially new locations for park-and-ride Lots have been identified. These range from existing surface parking lots, commercial uses, and in one

case, open space. Some of these locations currently have excess supply of parking during the daytime hours since they are more utilized during the evening hours, or were built for other purposes, which no longer exist, such as the Boeing Site.

Access Routes and Roadway Characteristics

The Warner Center area is characterized by office, commercial, residential and some light industrial land uses. Roadways are typically 5 or 7 lane cross section roadways, with restricted curb parking, left or two-way turn lanes and low pedestrian traffic.

A summary of the roadway characteristics and access conditions are given in Table 5.9 below.

Table 5.9 : Roadway Characteristics

Roadway Name	Direction	Roadway Type	Lanes, each direction	Interchange With US 101	Curb parking	Pedestrian activity
US 101	E - W	Freeway	4	N/A	No	None
Ventura Blvd	E - W	Arterial	3	Adjacent to 101	Yes	Moderate
Burbank	E - W	Arterial	3	No	No	Low
Oxnard	E - W	Arterial	3	No	No	Low
Erwin (partial)	E - W	Arterial	2	No	No	Low
Victory	E - W	Arterial	3	No	No	Low
Vanowen	E – W	Arterial	3	No	No	Low
Shoup	N – S	Arterial	2	No	No	Low
Owensmouth	N – S	Arterial	2	No	No	Moderate
Topanga Canyon	N – S	Arterial	2	Yes	No	Low
Canoga	N – S	Arterial	3	No	No	Low
Desoto	N – S	Arterial	3	Yes	No	Low

Existing Parking Supply

The existing parking supply utilizes off street surface lots, parking structures and a limited on-street supply, mainly on some of the smaller streets at the southern boundary, near the Ventura Freeway and Ventura Boulevard. A vast majority of the streets in the Warner Center area have no curb parking, thereby placing greater reliance on surface off-street parking facilities.

Off-street parking is controlled use parking, either by posted signs, or via controlled access, such as at the Blue Cross Facility or Kaiser Hospital. Major off-street lots exist in Topanga Plaza, Promenade Mall, and the old Boeing site.

Estimated Park-and- Ride Demand

Commuters traveling eastbound from western Los Angeles County and Ventura County on the Ventura Freeway could find the Warner Center station as a favorable travel alternative, as the freeway queues and reduced travel times start just west of Warner Center.

In order to estimate the number of vehicle trips that could be converted to transit trips if park-and-ride facilities are provided in the Warner Center area, the travel demand forecasts for the East–West Transitway and North–South Canoga Transitway developed utilizing the MTA travel demand model were reviewed. This model for transit demand is being run for the following scenarios:

- Unconstrained AM Peak (unlimited parking available)
- Constrained AM Peak (limited parking available)

The methodology for estimating the parking demand and site requirements, for purposes of this study is as follows:

1. Estimate AM Boardings of all passengers at Warner Center Transit Center
2. Estimate the modal split of passengers by mode of arrival:
   - Walking & Bicycle
   - Other transit transfers
   - Private Automobile, Single Occupant Vehicle (SOV)
   - Private Automobile, Carpool (HOV)
3. Determine number of parking spaces required, AM Peak
4. Determine Area of surface lot
5. Estimate cost of construction, if new.

The MTA model provides output for the number of spaces of parking demand at stations where parking is assumed to be provided. Information from this and other express transitway studies show that approximately 10 to 15 percent of the trip origins will be by private automobile driven to and parked at the transit stations.

The Park-and-Ride Vehicle Parking Demand numbers from the MTA model are provided in Table 5-10 below. The Warner Center Transit Center serves the East–West Transitway, the Ventura Metro Rapid Bus and numerous other transit routes. The Sherman Way Park-and-Ride lot serves both the North–South Transitway and local bus service on Sherman Way. The Sherman Way Park-and-Ride parking demand numbers are given for informational purposes. The MTA travel demand model was run with an initial parking capacity of 500 spaces for these two park-and-ride locations. Some of the demand could shift from one lot to the other, if one should become full, but as illustrated in Table 5-10, neither lot was projected to have a demand in excess of 500 spaces. The total demand forecast was 742 spaces, which would require an area of 259,700 square feet in size, almost six acres, to accommodate the parking in a surface lot.

Table 5-10 : Park & Ride Vehicle Parking Demand

Transit Center Location	AM Peak (6-9am) Demand	Mid Day Peak (9am-3pm) Demand	Total Parking Spaces Demand	Total surface Area required (350 ft2 / space)
Warner Center	285	129	414.	144,990.
Sherman Way	187	141	328.	114,800.
TOTAL	**472**	**270**	**742.**	**259,700.**

Potential Sites

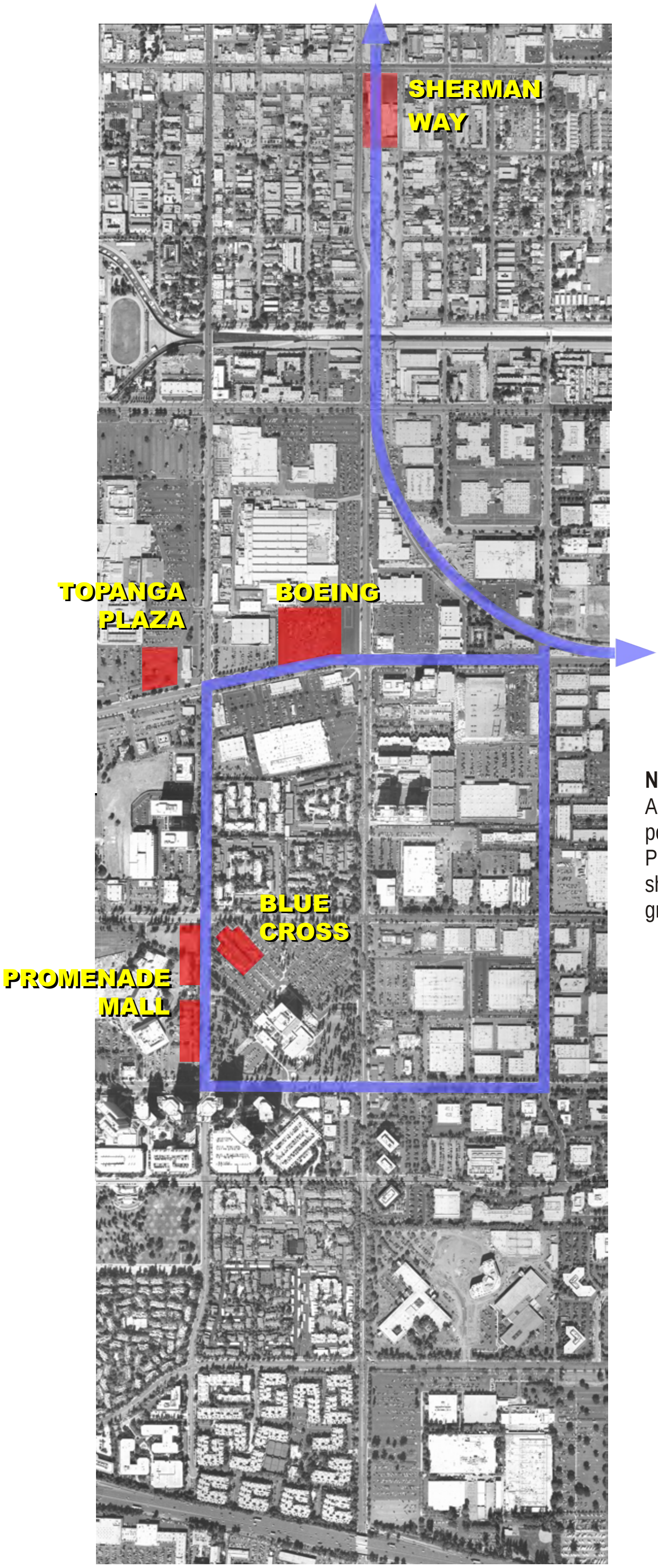
Six potential sites were identified near the Warner Center Transit Center that could serve as park-and-ride lots from which transit patrons could walk to the Metro Rapid Bus or which could be served directly by the Metro Rapid Bus if it deviated slightly form the planned on-street running portion of its route. Five of the six locations are shown on Figure 5-2.

The Promenade Mall site is directly adjacent to the Warner Center Transit Center and is somewhat underutilized during the day throughout most of the year, as it serves a shopping and movie theater complex, which have peak parking demands on nights and weekends. A parking structure could be built on a portion of the existing parking lot or a lease could be negotiated with the mall owner to reserve some existing spaces for park-and-ride use in off-peak shopping times. Either approach would require a public-private partnership and likely on-going lease payments for the existing spaces or the air rights to construct parking above the existing lot.

The Blue Cross site is also directly adjacent to the Warner Center Transit Center. The existing surface parking lots serve employees and visitors to the office buildings. Since the parking demands for the office buildings coincide with the time periods for which park-and-ride demand at the transit station occurs, it is unlikely that existing spaces could be leased for park-and-ride parking. A parking structure could be built on the surface parking lot to serve as park-and-ride spaces for the transitway. This would require a public-private partnership and likely on-going lease payments for the parking facility.

The Sherman Way site is located on property owned by the MTA on the Canoga Railroad Right-of-Way. It is 1 ½ miles north of the Warner Center Transit Center, located at the Sherman Way station on the Canoga Transitway, but not served by the SFV Metro Rapid Transitway. There is room for close to 1,000 parking spaces on the MTA-owned right-of-way, south of Sherman Way and north of the Los Angeles River. If this site were to serve as a park-and-ride facility for the SFV Metro Rapid Transitway, prior to the construction of the North-South Canoga Transitway, the East-West Metro Rapid Buses would have to use surface streets to reach the park-and-ride lot. The Sherman Way park-and-ride lot could serve as the terminus of the SFV Metro Rapid Transitway with buses traveling west on Sherman Way to Owensmouth, then south on Owensmouth to the Warner Center Transit Center, then on Oxnard Street to Variel Avenue to reach the transitway. Alternatively, the SFV Metro Rapid Transitway could be extended to Sherman Way, with an additional station at the park-and-ride lot, and the buses could exit the transitway at Sherman Way, to travel on surface streets to the Warner Center Transit Center. This would lengthen the trip between North Hollywood and Warner Center, however. Once the North-South Canoga Transitway opens, the Sherman Way park-and-ride lot would be most effective, if some of the buses on the north-south segment of the transitway went directly east to North Hollywood, rather than to the Warner Center Transit Center, since it is unlikely that many riders would park at Sherman Way and take the bus to Warner Center.

The Topanga Plaza site is located ½ to 1 mile north of the Warner Center Transit Center, depending upon which part of the existing Topanga Plaza Mall parking lot were to be used for a park-and-ride lot. The Topanga Plaza site is similar to the Promenade Mall



NOTE:
An additional potential site at Pierce College is not shown on this graphic.

Figure 5-2:
Potential Park & Ride Lot Locations in Warner Center Area

site in that it could potentially be used as a park-and-ride facility in off-peak shopping times, or a parking structure could be built over the existing parking lot, but it would likely require an extension of the Metro Rapid Bus service from the Warner Center Transit Center to the lot, since it is beyond a reasonable walking distance.

The Pierce College site would be located at the southeast corner of the De Soto Avenue/Victory Boulevard intersection on the Pierce College Campus. It has excellent access and is adjacent to the De Soto Station which can be served by both the North–South Canoga and SFV Metro Rapid Transitway lines if buses on the North-South route travel east to North Hollywood. It is located on the college campus, on current open space area.

The Boeing Site is located ½ mile north of the Warner Center Transit Center at the northeast corner of Owensmouth/Victory. It would probably be the easiest to lease due to the fact that it has the largest number of under-utilized parking spaces. It may be within walking distance of the Warner Center Transit Center, depending upon which part of the lot could be designated for park-and-ride use. Given that it is private site, it would likely have on-going lease costs.

Table 5-11 presents the six alternatives for a park-and-ride location and some characteristics of each alternative.

Table 5-11 : Identification of Potential Park & Ride Lots

Alternative Relative Ranking	Potential P&R Lot Identified	Type of Current Use	Ownership type	Distance to Warner Ctr Transit Hub (feet) *1	Access From US 101	Approximate Spaces Required/ Available	Impact on Transit Operation	Advantages Disadvantages	Order of Magnitude Cost 1
1	Promenade Mall	Surface Parking	Private	200	Fair	415 / > 500	None	A: Closest to Warner Center Transit Hub; Make use of underutilized spaces D: May not be available 12 months/year	Existing. / Lease or negotiate use of existing spaces
2	Blue Cross Office Center	Surface Parking	Private	200	Fair	415/ 0	None	A: Close to Warner Center Transit Hub D. Requires Structure	New $4,150,000
3	Sherman Way	Commercial	Private	100 *1	Fair	New Site 330 / 330	None	A: MTA owned, large lot D: Removed from E-W terminus	New $ 3,750.000
4	Pierce College	Open Space	Public	3,360	Good	New site 415 / 415	New Intermediate Stop Req'd	A: New Site, Build to Suit A: On both N-S & E-W D: Environmental mitigation would be greatest	New $ 3,750,000
5	Boeing Site	Surface Parking	Private	3,240	Fair	415 / > 500	Transit Re-Route Req'd New Intermediate Stop Req'd.	A: D: Negative environmental impacts D:	_Existing - Lease
6	Topanga Plaza	Surface Parking	Private	3,240	Fair	415 / > 500	Minimal	A: D: Removed from E-W terminus	Existing – Lease

Notation

***1 Assumptions: $7500/space surface lot; $10,000/space above ground structure.**

Discussion of Alternatives

Two parking demand areas were examined near the westerly terminus of the SFV Metro Rapid Transitway, the Warner Center area and the Sherman Way station area. The MTA traffic demand model has predicted Park & Ride Demand parking forecasts for both the AM Peak (6-9 AM) and the Mid Day Peak (9 am-3pm) totaling 742 spaces in the two areas.

The transfer of existing private surface lot space, to a park-and-ride space will result in the loss of this space during the workday from 7 a.m. to 6 p.m. Some of the locations identified currently have excess capacity and this should not present a problem. Areas that are located near larger commercial shopping areas would present a problem during specific holiday shopping periods, when parking demand is above average for extended periods. This could mean that the Topanga Plaza or Promenade Mall sites would not be available for park-and-ride use during the holiday season, unless the park-and-ride spaces were included in a parking structure on those sites. The expense of the structure, however would not take advantage of the fact that the existing parking is available on weekdays throughout most of the year.

Leasing spaces on the Boeing site could provide a short-term park-and-ride solution, but that site is likely to be redeveloped or intensified in use at some point in the future. Providing park-and-ride spaces at the Blue Cross site would require the construction of a parking structure, since the existing surface parking is used by the office building. The free park-and-ride spaces would need to be separately accessed and managed from the office parking.

The Pierce College site is desirable from an accessibility standpoint and its proximity to the station at De Soto which could be served by both the East-West and North-South Transitways. It may be difficult to negotiate lease or purchase of open space on the campus, however. The De Soto station was originally planned to be located at Mason Street to share parking on the campus as park-and-ride for the transitway, but the logistics could not be worked out.

The Sherman Way site would be the simplest location on which to implement a park-and-ride lot because it is owned by the MTA and is already partially paved for parking. It is the furthest removed from the Warner Center Transit Center and would require that the Metro Rapid Buses continue beyond Warner Center to reach the park-and-ride lot. There is sufficient room to provide enough spaces to satisfy the park-and-ride demand forecast for both the Warner Center Transit Center and the Sherman Way station.

Additional park-and-ride spaces could be identified on a special needs basis, for special events or other needs, which could be additional leased spaces. To be successful it would be desirable to have these spaces adjacent to the permanent spaces so that they could be easily located.

Another aspect of dealing with the location of any park-and-ride facility would be the impact of the relatively short peak period of traffic flow that would be created inbound during the AM Peak and somewhat less outbound during the PM Peak.

Recommendation

It is recommended that two park-and-ride locations be considered for detailed feasibility study, cost estimates for improvements, and leasing negotiations and go through the environmental process. Those sites would be the Promenade Mall site for Warner Center and the Sherman Way site for the North-South Transitway. If negotiations could be successfully completed to designate some of the under-utilized spaces at the Promenade Mall for park-and-ride use in non-peak shopping seasons, these would be the most cost-effective spaces, since they would not affect the operations of the SFV Metro Rapid Transitway. The attractiveness of this alternative is that it makes more effective use of an existing resource and the park-and-ride users make natural patrons of the Mall.

As a secondary option, the Sherman Way park-and-ride lot is desirable because a parking facility there can be provided more cost-effectively than at any other location. MTA owns the land and the parking would be surface parking, not structured. The park-and-ride lot could be phased in over time, as well. An initial lot and transitway station could be provided for the SFV Metro Rapid Transitway and Metro Rapid Buses traveling up Owensmouth from the Warner Center Transit Hub. The SFV Metro Rapid Transitway could be extended to that point as the first step in implementation of the Canoga Railroad Right-of-Way alternative. Metro Rapid Buses could travel north in mixed flow to the Chatsworth Metrolink Station until such time as the remainder of the Canoga Transitway is built.

5.8.3 Park-and-Ride Demand Sylmar/San Fernando Metrolink Station

The Sylmar/San Fernando Metrolink Station is the terminus for several of the Metro Rapid Bus corridors. The station has a surface parking lot with 350 parking spaces. The modeling results for the 2025 scenarios including the Reseda and Sepulveda Alternatives, which extend Metro Rapid service to the Metrolink station, in addition to the Lankershim-San Fernando route, result in a projected parking demand of about 780 spaces. Much of this increased demand is generated by additional Metrolink riders in 2025, but a portion will be Metro Rapid bus riders. A parking structure could be developed on the existing surface parking lot. If 450 structured spaces were provided, increasing the supply to 800 spaces, the cost for the additional park-and-ride spaces would be about $4.5 million (based on $10,000 per space in a parking structure).

5.9 Cost Effectiveness

5.9.1 Initial Set of Criteria

A set of evaluation criteria has been identified to assess the candidate corridors for the San Fernando Valley North-South Transit Corridor. The criteria set out by the Intermodal Surface Transportation Equity Act (ISTEA), the Transportation Equity Act for the 21st Century (TEA – 21) and the Federal Transit Administration (FTA) through the Section 5309 New Starts program were used as a starting point for the second round evaluation process in the Study; the FTA criteria are designed for fixed-guideway transit projects, but have been applied recently to successful BRT projects.

In the case of the San Fernando Valley corridors, we have applied the FTA criteria to the network of transit enhancements proposed in this project, interpreting them in a

manner that would make any future subsequent analysis consistent with federal funding principles.

There are likely to be funding constraints on the project and its future implementation is likely to take place incrementally. Against this background, this level of analysis has focused on the minimal base scenario set of capital and operating costs. The full build out of enhanced capital costs is also included for comparison. For the minimal base set of capital costs, an additional conservative assumption of 80% of the forecast ridership levels was applied to each alternatives included in the minimal base scenario.

Several specific measures/indices are identified within each grouping to assist in comparing the proposed network alternatives.

In addition to the five core corridor alternatives, extensions were planned for three of the corridor alternatives:

1. San Fernando Road – Lankershim Boulevard Corridor Alternative with extension to Olive View Hospital
2. Van Nuys Boulevard Corridor Alternative extended to/terminating at Sylmar Metrolink Station rather than Foothill Boulevard
3. Sepulveda Boulevard Corridor Alternative with extension to Mission College

These three corridor alternatives with extensions operate at a poorer level of efficiency than the core corridors, due to a higher density of ridership within the core corridor segments. As an option, these extensions were chosen to provide additional service to generators found near the terminus for each of the three alternatives.

5.9.2 Cost Effectiveness and Operating Efficiencies

The cost of transportation investments falls into two primary categories – capital costs and operating and maintenance (O&M) costs. Capital costs are costs for acquiring, developing, or installing capital assets. A capital asset is a tangible asset that has a useful life of greater than one year and that is intended for continuing use over time. Operating and maintenance costs are the costs associated with the day-to-day costs of operating the transit system including labor, vehicle maintenance, fuel, administration, etc.

Several measures for cost-effectiveness have been developed as part of ISTEA/FTA evaluation process. Specific measures/indices have been selected for this evaluation process based upon their appropriateness in estimating the cost-effectiveness for network of transit alternatives. These are:

- Total Weekday/Annual Transit Trips
- Capital Cost (Total & Annualized)
- Capital Cost per Mile
- Annual Operating and Maintenance Costs
- Operating Cost per Passenger Mile
- Incremental Cost per New Transit Trip

Where appropriate, the measures were assessed for both the Base corridor alternatives (minimal cost to initiate service in the corridor) and the full build –out of the alternative.

5.9.2.1 Total Weekday/ Transit Trips

This measure serves as one of the base data sets required for determining the cost-effectiveness of a proposed transit enhancement. The growth in transit ridership[2] resulting from a proposed transit alternative is an essential measurement used to determine if the proposed transit service enhancement will attract a sufficient amount of new transit riders. Identifying the total number of transit riders in the corridor assists in determining the cost effectiveness of the entire transit network. Ridership forecasts were presented earlier in section 5-2 based on modeling conducted with the MTA Travel Forecasting Model. It should be noted that Modeling was conducted for the full Build-out of each alternative. In order to estimate the cost effectiveness of the base alternatives it was assumed that the base elements of the alternatives would obtain 80% of the ridership of the Build-out of the alternative.

The Van Nuys Boulevard Corridor Alternative is expected to generate the highest total weekday/new transit trips. With a total new forecasted ridership of 22,740 riders per day, the Van Nuys Boulevard Corridor Alternative is ranked the most favorable/highest in this category. The Van Nuys Alternative is forecasted to generate 6% more new daily transit trips than the second highest alternative (Sepulveda Boulevard Corridor Alternative) and over 70% higher than the ridership of the lowest ranked corridor alternative (Canoga Railroad ROW).

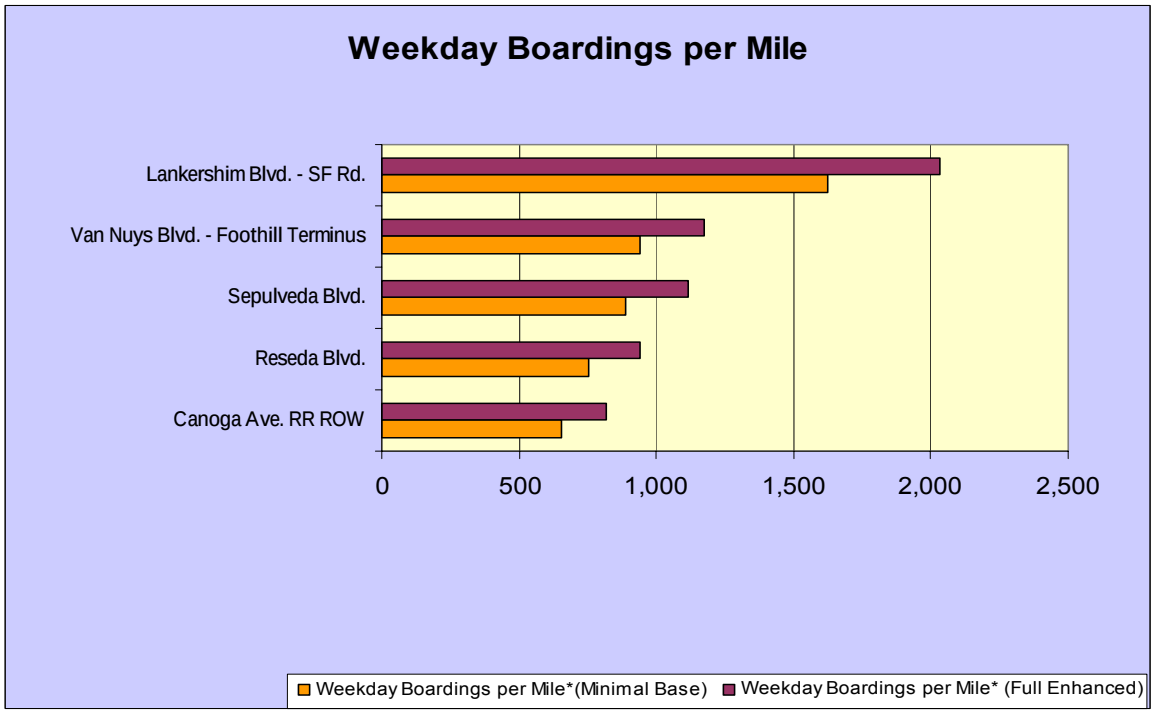
Weekday Boardings per Mile

To further illustrate accrued transit benefits, this measure serves as an indicator of boarding density per route mile. Table 5.12 and the bar chart below illustrate the weekday boardings per mile for the five candidate corridor alternatives.

Table 5.12 – Weekday Boardings per Mile

CRITERIA/GOALS	Canoga Ave. RR Row	Reseda Blvd.	Sepulveda Blvd.	Van Nuys Blvd. - Foothill Terminus	Lankershim Blvd. - SF Rd.
Minimal Base Weekday Boardings per Mile*	653	751	890	939	1,625
Total Build-Out Weekday Boardings per Mile*	816	939	1,113	1,173	2,031

[2] This growth is expressed as "Incremental Transit Trips". Sometimes "Incremental Boardings" is used as a proxy for this measure.



The Lankershim Boulevard – San Fernando Road Corridor Alternative is projected to generate the highest weekday boardings per mile within this category. Forecasted at 1,625 weekday boardings per mile, the Lankershim – San Fernando Alternative is ranked the most favorable and is forecasted to generate more than double the boardings per mile than that of the lowest ranked corridor alternative (Canoga Avenue RR ROW Alternative)

5.9.2.2 Capital Cost (Total & Annualized)

Capital costs can vary dramatically based upon the set of transit enhancements proposed for implementation. The universe of capital costs includes:

- Right-of-way
- Right-of-way preparation
- Structures
- Pavement, parking lots, and grade crossings
- Stations
- Signage
- Electrical changing reader boards

Although considered capital components, both the cost of buses and maintenance facilities were omitted as part of the analysis, as it was determined that the MTA may find other funding sources for these or may convert buses to Metro Rapids. Consequently, the costs are provided, but not included in the cost-effectiveness calculations.

Annualized capital costs were prepared with all costs expressed in 2002 dollars and estimated at a planning level of detail consistent with the transit network alternatives

proposed for this project. Basic unit-rate (order-of-magnitude) costs are provided for each transit component. Costs will be estimated using per-foot or per-mile average costs (standardized rates). The objective is to provide a general basis for the evaluation of the various proposed alternatives. Capital costs were also annualized based upon the expected useful life cycle of each transit alternative (Table 5.13). Annualization calculations are provided in the appendix.

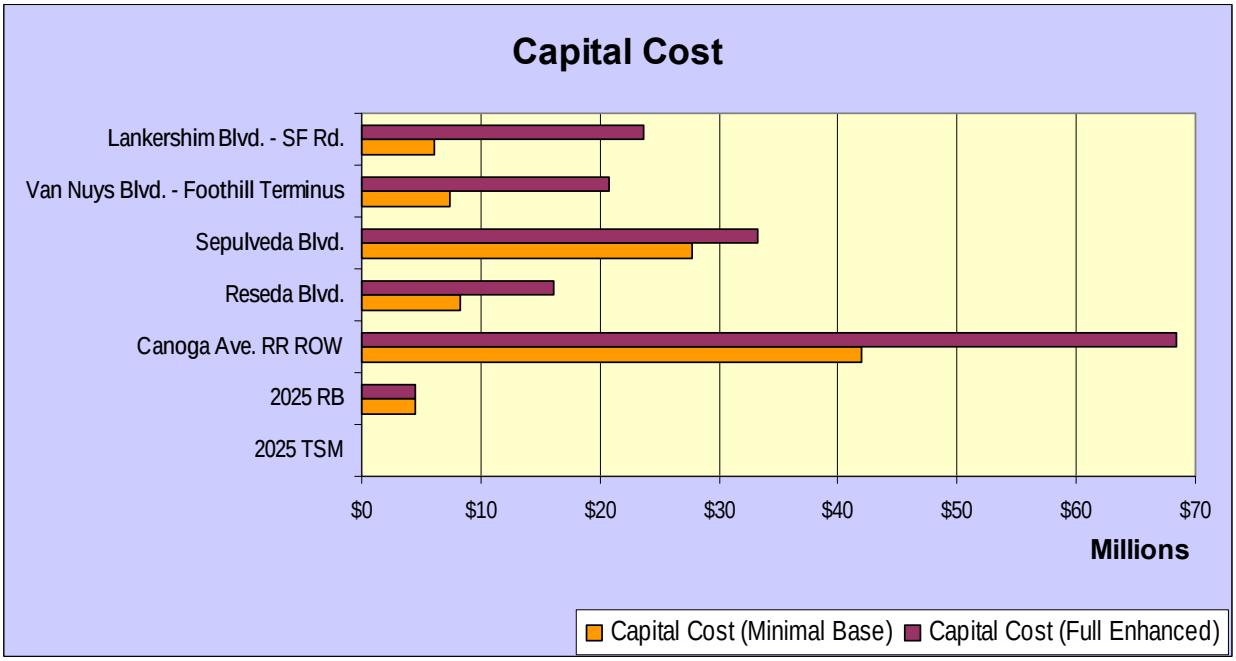
Table 5.13 – Project Element Life Cycle Assumptions

Project Element	Units	Useful Life (Years)	*Annualization Factor
Right-of-way	N/A	100	0.070
Right-of-way preparation (major grading, etc.)	N/A	100	0.070
Structures	Number	30	0.081
Pavement, parking lots, grade crossings	N/A	20	0.094
Stations	Number	15	0.110

**Annualization factors are equivalent annual payments at a specific discount rate, r, over the useful life of the investment, n. In keeping with OMB practice, the discount rate is assumed to be 7%. The formula to calculate the annualization factor is:* $A = r(1+r)^n/(1+r)^n - 1$

Source: Reporting Instructions for the Section 5309 New Starts Criteria, FTA, July 2001.

The bar chart below illustrates the comparison of total capital costs for each of the five candidate corridor alternatives, for both the minimal base and fully enhanced base scenarios.



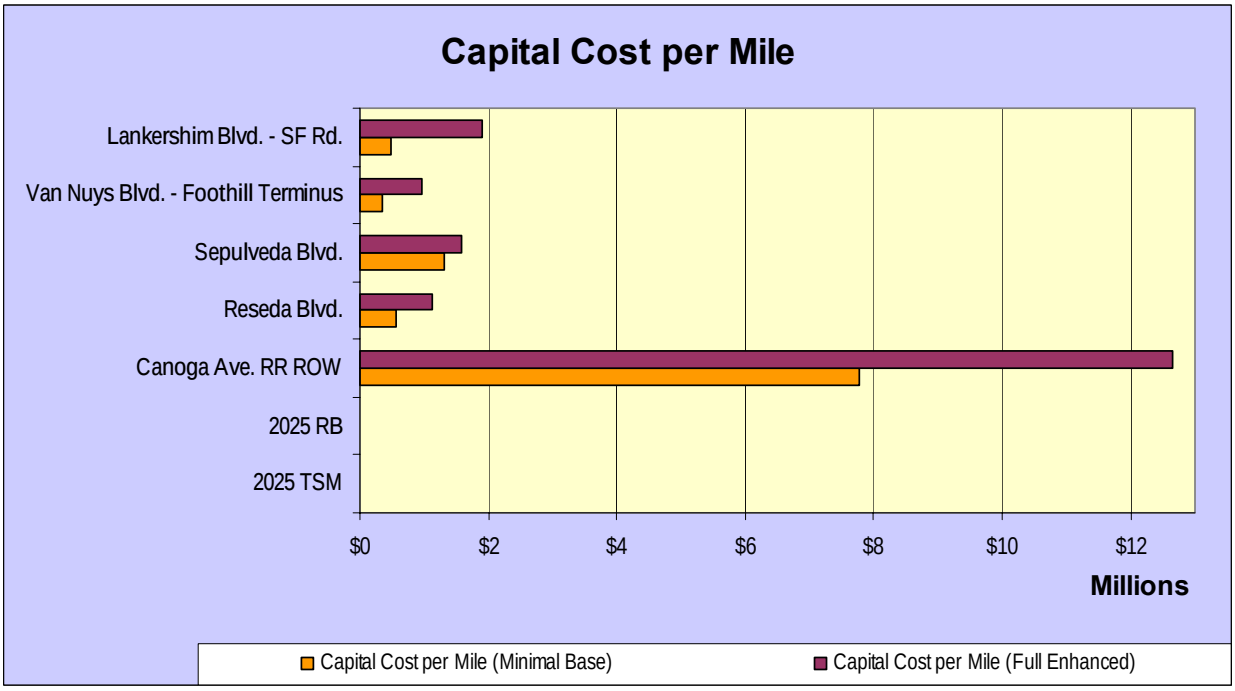
Within this category, the 2025 Rapid Bus Alternative ranked the most favorable with the lowest total capital cost figure of approximately $4,510,000. The Canoga Avenue Railroad Right-of-Way Corridor Alternative is the most costly alternative and least favorable to construct, with a total capital cost of $41,950,000, which is over 9 times

more than the least costly alternative (2025 Rapid Bus Alternative) and is over 50% more than the second most costly alternative (Sepulveda Boulevard Corridor Alternative). It should be noted that the Canoga Avenue Railroad Right-of-Way Alternative has proportionately higher capital costs because this alternative requires substantial costs associated with right-of-way, including building a new off-street transitway, whereas the other remaining alternatives run on existing roadways.

5.9.2.2.1 Capital Cost per Mile

Expressed in constant 2002 dollars, this is another cost-effectiveness index, which examines the overall transit system's efficiency by accessing total capital cost per mile.

Of the corridor alternatives, the Van Nuys Boulevard Corridor Alternative has the lowest projected total capital cost per mile, at $345,327 respectively. The Van Nuys Alternative has a capital cost per mile that is 4% of the total capital costs for the alternative with the highest total capital cost per mile (Canoga Avenue RR ROW Alternative). The bar chart below illustrates the comparative capital cost per mile for the proposed alternatives. A detailed summary of capital costs per mile is in the appendix.

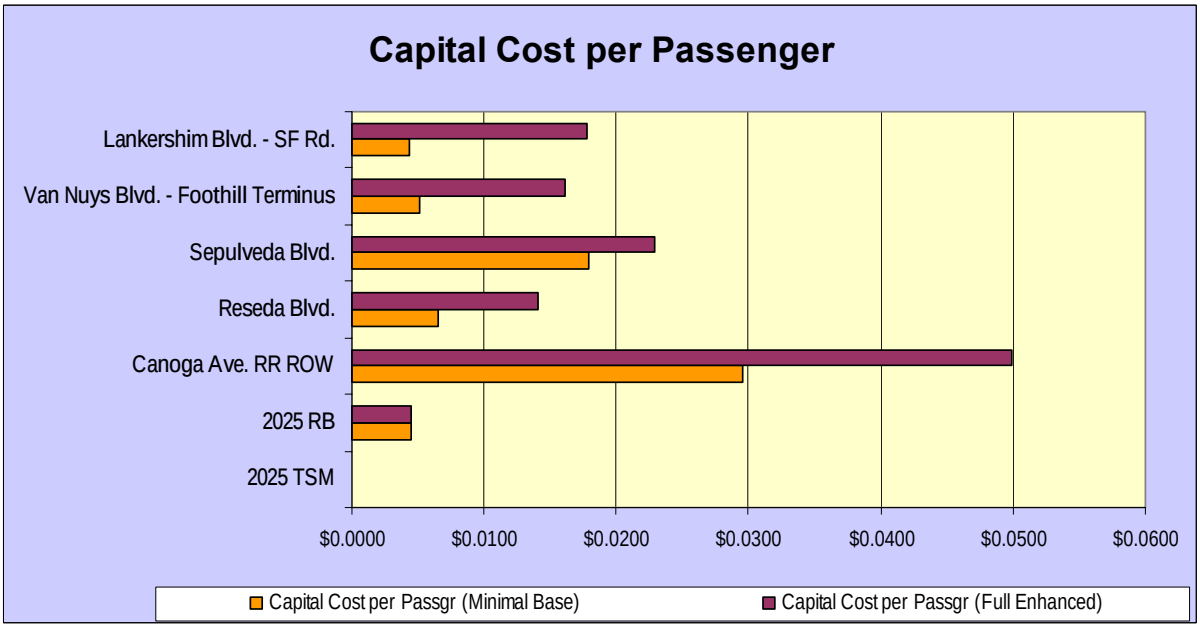


5.9.2.2.2 Capital Cost per Passenger

Expressed in constant 2002 dollars, this is another cost-effectiveness index, which examines the overall transit system's efficiency by accessing total capital cost per passenger.

Of the corridor alternatives, the Lankershim Boulevard – San Fernando Road Corridor Alternative has the lowest projected total capital cost per passenger, at $0.00437 per

passenger respectively. The Lankershim – San Fernando Alternative has a capital cost per passenger that is 15% of the total capital cost per passenger for the alternative with the highest total capital cost per passenger (Canoga Avenue RR ROW Alternative). The bar chart below illustrates the comparative capital cost per passenger for the proposed alternatives. A detailed summary of capital costs per passenger is in the appendix.



5.7.2.3 Annual Operating and Maintenance Costs

Operating and maintenance (O & M) costs were estimated at a planning level of detail, based on existing average costs per revenue service hour and per revenue service mile, as most recently reported by the affected agencies.

Of the corridor alternatives, the 2025 Rapid Bus Alternative has the lowest projected O & M costs, at $190,029,580 respectively. The 2025 Rapid Bus Alternative has an O & M cost that is 11% lower than the most costly corridor alternative (Sepulveda Boulevard Corridor Alternative). Table 5.14 summarizes the O & M costs below.

Table 5.14 – Annual O & M Costs

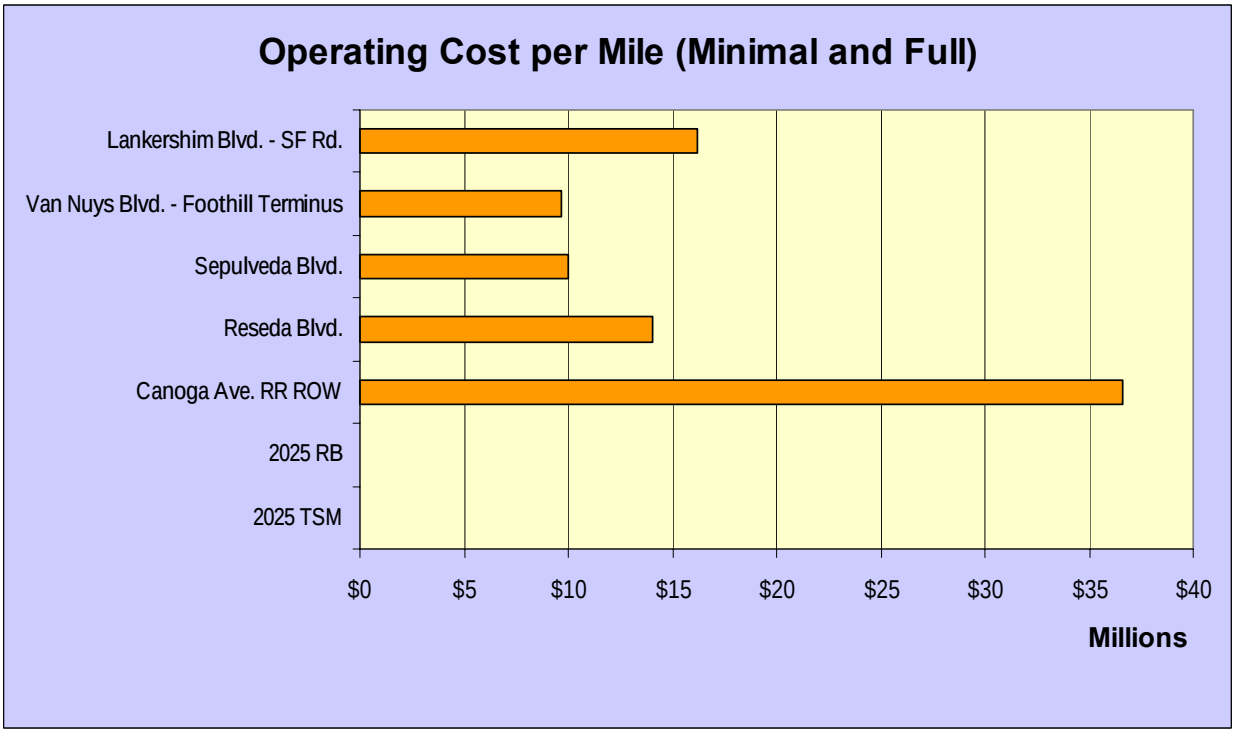
Corridor Alternatives	Annual Vehicle Hours	Increase In Annual Vehicle Hours Over Baseline	Annual O&M Cost of Alternatives ($million)
Base 2025	11,031,231	2,592,339	$ 181.46
2025 TSM	11,222,693	2,783,801	$ 194.87
2025 RB	11,153,600	2,714,708	$ 190.03
Canoga RR ROW	11,263,995	2,825,103	$ 197.76
Reseda Blvd.	11,357,558	2,918,666	$ 204.31
Sepulveda Blvd.	11,456,995	3,018,103	$ 211.27
Van Nuys Blvd.	11,405,491	2,966,599	$ 207.66
Lankershim Blvd. - San Fernando Rd.	11,325,949	2,887,057	$ 202.09

5.9.2.3.1 Operating Cost per Mile

Expressed in constant 2002 dollars, this is another cost-effectiveness index, which examines the overall transit system's efficiency by accessing the change in system-wide operating cost per mile.

Of the corridor alternatives, the 2025 Van Nuys Boulevard Corridor Alternative has the lowest projected O & M cost per mile, at $9,703,829 respectively. The Van Nuys Alternative has an O & M cost per mile that is nearly ¼ of the most costly corridor alternative (Canoga Avenue RR ROW Alternative).

The bar chart below illustrates the comparative operating cost per mile for the proposed corridor alternatives. A detailed summary of O & M costs is in the appendix.



5.9.2.3.2 Operating Cost per Passenger

Expressed in constant 2002 dollars, this is another cost-effectiveness index, which examines the overall transit system's efficiency by accessing the change in system-wide operating cost per passenger.

Of the corridor alternatives, the 2025 Rapid Bus Alternative has the lowest projected O & M cost per passenger, at approximately $1.70 respectively. The 2025 Rapid Bus Alternative has an O & M cost per passenger that is 7% lower than the most costly corridor alternative (Sepulveda alternative).

Incremental Cost per New Transit Trip

This measure illustrates the cost effectiveness of the new transit services by comparing the full cost of the transit network (Capital and O & M) to the new riders attracted to use transit. The incremental cost per new transit trip will be calculated at a planning level of detail using the capital and O & M costs as well as projected new transit riders.

The FTA's cost effectiveness criterion is measured by the incremental cost per incremental passenger in the forecast year. This measure is based on the annualized total capital investment and annual operating and maintenance (O&M) costs, divided by the change in annual transit system ridership, expressed as the following equation:

Cost Effectiveness Index = (Δ$CAP + Δ$O&M)/Δ Annual Linked Trips

Where the Δ's represent changes in costs and linked trips resulting from the alternatives compared to the no-build baseline, and

$CAP = Total capital costs, annualized over the life of the project;
$O&M = Annualized operating and maintenance costs; and
Annual Trips = Annual transit ridership, measured in "linked" trips.

Table 5.15 below summarizes the incremental cost per new transit trip.

Table 5.15 – Incremental Cost Per New Transit Trip

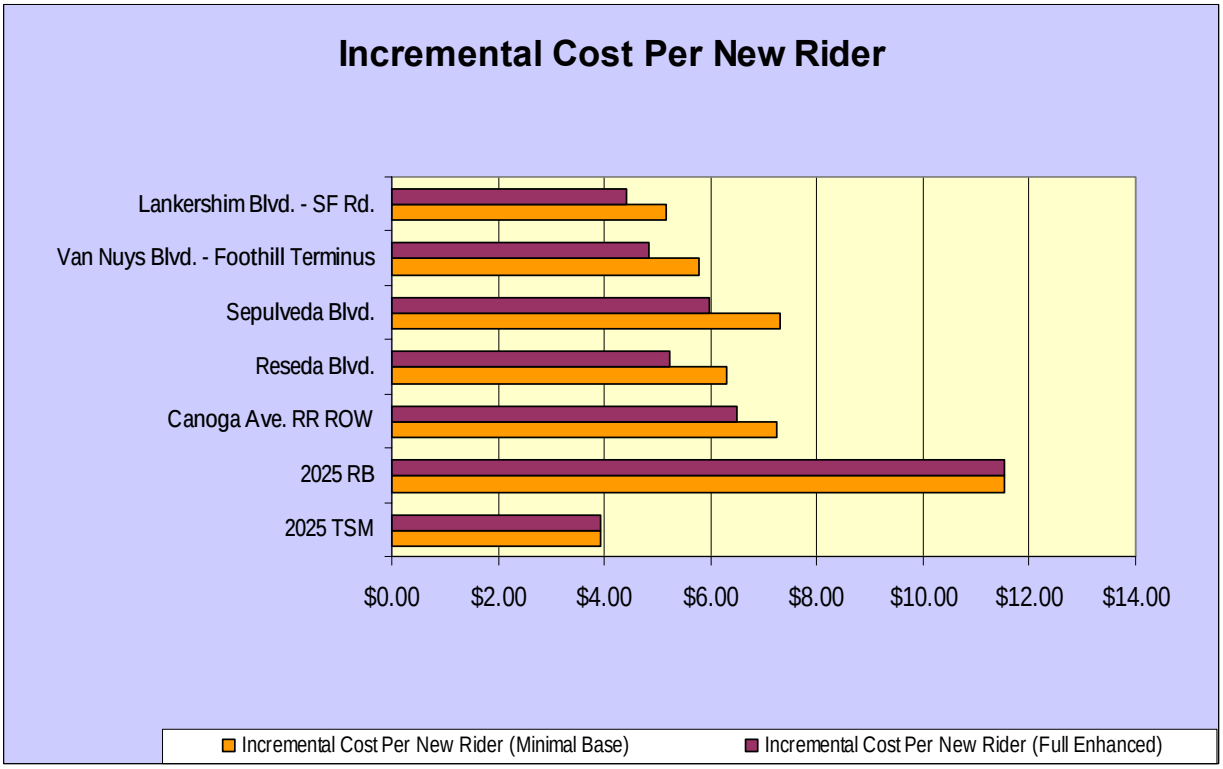
	Over Base 2025 Alternative	
Corridor Alternatives	**Minimal Base Scenario**	**Fully Enhanced Base Scenario**
2025 TSM	$4.91	$3.93
2025 RB	$14.40	$11.52
Canoga RR ROW	$7.25	$6.50
Reseda	$6.31	$5.24
Sepulveda	$7.32	$5.96
Van Nuys-Foothill Terminus	$5.78	$4.84
Lankershim-San Fernando	$5.16	$4.43

5.9.3 Cost Effectiveness Rankings

Cost effectiveness was analyzed by estimating the selected measures/indices in the table below for the array of corridor alternatives.

Using the available data (incremental ridership for both the direct north-south corridor services and the east-west feeders), the incremental cost per new rider was calculated.

The bar chart below provides comparisons for the incremental cost per new rider for all of the proposed corridor alternatives.



The broad conclusion to this process was that, for the minimal base capital cost scenario:

- Lankershim and Van Nuys appear at the top of the corridors list
- Reseda and Sepulveda corridors are grouped in the middle of the corridors list
- Canoga comes last

For the fully enhanced base scenario, the rankings are broadly similar, except that Sepulveda is almost on a par with Canoga. The TSM alternative, as would be expected, given the absence of any major capital costs, scores best on this indicator. Farebox recovery, a function of O&M as opposed to capital costs, shows no major variation across the alternatives.

These results reflect arrange of factors. Most notably that:

- The prior implementation of Rapid Bus improvements on Lankershim and Van Nuys helps lift their cost effectiveness
- Lankershim, Van Nuys, Sepulveda and Reseda have good boardings per mile densities
- Reseda and Sepulveda show good results ahead of Canoga, reflecting their better ridership performance in relation to investment requirements than the latter corridor

- The Canoga alternative has large capital investment requirements to deliver the ridership and service shown

The cost-effectiveness analysis bears out the overall conclusions of the study, especially in relation to:

- Building on the success of the Metro Rapid Bus implementation program in the east Valley
- Offering Valley-wide mobility benefits by implementing elements of all corridors in an incremental fashion
- Recognizing the specific nature of the Canoga Right of Way, which may not offer strong cost effective transit for the immediate corridor, but has good long term potential for east-west and north-south movements in the west Valley.

The following chapter draws together the evaluation results within a conclusive set of recommendations.

6.0 FINDINGS AND RECOMMENDATIONS

6.1 Implementation Plan

This RSTIS has evaluated five north-south corridor alternatives, plus the Rapid Bus and TSM Alternatives. Typically, a RSTIS is conducted to evaluate alternative projects in a single corridor, often alternative modes. In most such RSTISs, a Locally Preferred Alternative (LPA) is selected from amongst the alternatives and it is typically one of the stand-alone alternatives. In the San Fernando Valley North-South Transit Corridor Study, the alternatives are not mutually exclusive. In fact, the implementation of several of the alternatives would create a network of improved north-south transit services in the Valley, complementary of the multiple existing and planned east-west corridors. Also, with uncertainties regarding funding availability for new transit corridors, given the state and federal funding shortfalls, it may be preferable to implement the most cost-effective components of one or more alternatives, rather than the full implementation of one corridor alternative. For these reasons, this chapter of the RSTIS includes an implementation plan that prioritizes the phased implementation of the most effective north-south transit improvements.

6.2 Ranking of Alternatives

The evaluation of the alternatives in Chapter 5 resulted in the following ranking of the alternatives, in terms of how they would be prioritized in terms of cost-effectiveness, if implemented as stand-alone alternatives:

1. TSM
2. Lankershim-San Fernando
3. Van Nuys
4. Reseda
5. Sepulveda
6. Canoga RR ROW
7. Rapid Bus Alternative

The TSM Alternative ranks highly because it is low in capital cost and provides additional service on existing routes where there is latent demand.

The Lankershim-San Fernando Alternative enhances service in one of the highest ridership north-south corridors on the planned Lankershim Metro Rapid Bus by improving travel time with dedicated bus lanes on Lankershim and provides a high-capacity connection between the northeast Valley and the Metro Red Line. It is cost-effective because the costs of the Metro Rapid Bus have already been funded.

The Van Nuys Alternative similarly enhances service in the highest north-south transit ridership corridor in the Valley by improving travel time on the planned Van Nuys Metro Rapid Bus and enhancing stations along the route. It is cost-effective because, like the Lankershim corridor, the costs of the Metro Rapid Bus service are funded under a different program.

The Reseda Corridor Alternative performs well by providing a new high-capacity north-south transit service in the West Valley, where no Metro Rapid service is planned, and by connecting the northeast and western portions of the Valley via CSUN, a connection

which does not now exist. It provides the greatest increase in the Mobility Index. The Reseda Alternative performs better than the Rapid Bus Alternative, which also included a Metro Rapid Bus on Reseda Boulevard, because it also includes improvements to other feeder services. It is essentially equivalent to the combination of the TSM and the Rapid Bus Alternatives.

The Sepulveda Alternative serves a high-density corridor with many transit dependent residents. In order to fully implement the alternative, right-of-way will be required, so it has a longer lead time for implementation. It could be implemented in a phased fashion, however, initially as a Metro Rapid Bus, with the dedicated bus lane implemented in subsequent phases. Even the northbound PM peak period bus lanes could be implemented in phases, with the lane implemented first in all segments where it can be implemented without roadway widening, and then subsequently through the Burbank Boulevard and Sherman Way intersections when the right-of-way to widen those intersections is obtained.

The Canoga Railroad Right-of-Way has the lowest total new transit ridership amongst the corridor alternatives and is the most costly of the alternatives. It does, however, complete the SFV Metro Rapid Transitway and provide a vital missing link between the Ventura Metrolink line and the Warner Center area. It will require the longest lead time to implement because of the environmental clearance and design phases.

The Rapid Bus Alternative attracted the smallest number of new transit riders, partly because it did not have the additional feeder services which were assumed as part of the corridor alternatives. With the additional feeder services, the Rapid Bus Alternative would perform more closely to the Reseda Alternative.

6.3 Levels of Environmental Clearance

The type of environmental clearance required of any transportation improvement project is determined by the level of impact associated with the project and the funding sources to be used to finance the project. If only state and local funds are involved, the California Environmental Quality Act (CEQA) governs the type of document. If federal funds are to be used, the National Environment Protection Act (NEPA) regulations apply in addition to CEQA. The federal NEPA and state CEQA guidelines parallel one another in the types of documents that must be produced, based on the level of impact, summarized briefly as follows:

1. Categorical Exemption/Categorical Exclusion
   Both federal and state regulations allow for an exemption from environmental reports for specific categories of projects, including those which are operational improvements or maintenance-related. This includes projects such as transit service improvements, roadway resurfacing, or traffic signal equipment upgrades.

2. Mitigated Negative Declaration/Finding of No Significant Impact
   A Negative Declaration can be filed under CEQA if there are no significant impacts associated with a project and a Mitgated Negative Declaration is prepared if there are some impacts, but they can all be mitigated to a below a level of significance. The federal Finding of No

Significant Impact (FONSI) is prepared when a project has no regionally significant impacts.

3. Environmental Impact Report/Environmental Impact Statement
An Environmental Impact Report (EIR) and/or an Environmental Impact Statement (EIS) is required when a project results in significant impacts that may not be fully mitigated.

As the level of impact associated with a project increases and the type of environmental document expands in complexity, the amount of time required to complete the process lengthens from months to a year or more.

Table 6-1 was developed to stratify the elements of the project alternatives by the type of environmental documentation likely to be required to clear them for implementation, in order to assist in assessing the lead time for implementation of each component of the alternatives.

Table 6-1. Type of Environmental Documentation Required

Alternative	Elements	Categorical Exemption	Neg Dec/FONSI	EIR/EIS
TSM	Enhanced Transit Service (reduced headways)	✔ □		
Rapid Bus	Metro Rapid Bus Service	✔ □		
	Improved Transit Stations	✔ □		
	Transit Signal Priority	✔ □		
Canoga	Off-street transitway			✔ □
	Park-and-Ride Lot(s)		✔ □	
Reseda	Metro Rapid Bus Service	✔ □		
	Improved Transit Stations	✔ □		
	Transit Signal Priority	✔ □		
	Curb Extensions at Stations		✔ □	
	Station Accessibility Enhancements	✔ □		
Sepulveda	Metro Rapid Bus	✔ □		
	Improved Transit Stations	✔ □		
	Transit Signal Priority	✔ □		
	Dedicated Northbound Bus Lane			✔ □
	Truman/Brand Intersection Improvements		✔ □	
	Station Accessibility Enhancements	✔ □		
Van Nuys	Curb Extensions at Stations		✔ □	
	Station Accessibility Enhancements	✔ □		
	New Signal/Peak Period Bus Lane Addison-		✔ □	
	Curb Reconstruction at Metrolink Station	✔ □		
	Parthenia/Van Nuys Intersection Redesign	✔ □		
	Woodman Median Removal Sidewalk Widening	✔ □		
	Flood Control Channel Bridge Widening		✔ □	
Lankershim-San Fernando	Peak Period Bus Lanes Within Existing Street		✔ □	
	Peak Period Bus Lanes With Street Widening			✔ □
	Metro Red Line Station Additional Portal	✔ □	✔ □	
	Station Accessibility Enhancements	✔ □		

The Table illustrates that many of the elements of the project alternatives can be implemented without the need for EIR/EISs or Mitigated Neg Dec/FONSIs. Many of the elements are operational in nature and therefore eligible for Categorical Exemptions.

The Canoga Railroad Right-of-Way Alternative, because it entails construction of a new roadway (transitway) and has at-grade crossings of existing arterial streets, will require an EIR/EIS.

The implementation of the dedicated northbound bus lane in the Sepulveda Alternative will likely require an EIR because of the need to purchase right-of-way and displace existing land uses. It is not likely to require an EIS, however, because these would not be regionally significant impacts.

The widening of Lankershim Boulevard for the wider bus lanes, south of Magnolia Boulevard, would likely require an EIR because of construction impacts, impacts on the pedestrian environment and potentially public controversy.

The prohibition of curb parking for the dedicated peak period bus lanes is expected to require a Mitigated Neg Dec to document that the loss of peak period parking would not significantly impact residents or businesses. Peak period parking restrictions are common throughout the City of Los Angeles and have not required EIRs in the past.

6.4 Potential Funding Availability

This section presents the results of the financial analysis component of the San Fernando Valley North-South Transit Corridor Study. The purpose of the financial analysis is to assist the MTA, general public, and local officials to: 1) evaluate the financial feasibility of the alternative transit plans for the corridor(s) leading to the selection of the locally preferred investment strategy; and 2) to prepare a financial plan for the San Fernando Valley North-South Transit Corridor Project.

The major objectives of the financial analysis are:

(1) Outline the assumptions used to determine financial capability; and

(2) Determine the range of annual cash flow requirements for the region to construct and operate each of the proposed San Fernando Valley North-South alternatives. Cash flow is the amount of funds required each year to operate the region's transit system and meet its capital funding requirement for asset replacement and new construction.

To meet its objectives, the financial analysis includes identification of operating and capital sources and uses of funds, estimation of annual cash flow requirements, and identification of potential new funding sources associated with implementing each of the alternatives.

6.4.1 Regional Assumptions

Financial capability was examined for each San Fernando Valley North-South alternative under the assumption that the priorities in the MTA's Long Range Transportation Plan are maintained. The Long Range Transportation Plan (LRTP) is the MTA's long range strategic planning document. The Los Angeles County Metropolitan Transportation Board of Directors on April 26, 2001 adopted this new Long Range

Transportation Plan. This Long Range Transportation Plan (LRTP) is the first update since 1995, and looks ahead at transportation needs over the next twenty-five years, from 2000 through 2025. The LRTP directs public expenditures of $106 billion for a balanced transportation program with a strong emphasis on public transit to meet growth in travel.

Within the context of the LRTP three goals concerning mobility, air quality and access are established. These goals are intended to ensure that the MTA:

- Pursues activities and make investments that improve traffic flow, relieve congestion, and enable residents, workers, and visitors to travel quickly throughout Los Angeles County. The LRTP allows for activities and making investments that support and enhance our region's economy by enabling the safe and efficient movement of goods to and from our international seaports and airports;
- Maintains actions that improve air quality by reducing mobile source emissions, increasing the number and percentage of people using public transit or carpooling by enhancing the efficiency of the transportation system; and
- Gains access for all to the many economic, educational, social, medical, cultural, recreational, and governmental opportunities and resources in Los Angeles County.

Beyond the goals of the LRTP some of the major projects are:

- Completion of the Eastside and Pasadena light rail projects;
- Alameda Corridor and Alameda Corridor East industrial rail and enhanced goods movement improvements for highways and rail systems;
- SFV Metro Rapid Transitway for the San Fernando Valley;
- A new project from downtown to West Los Angeles combined with other fixed guideway projects through the year 2025;
- Expansion of the successful Metro Rapid Bus program as a prominent near and long term feature;
- Growing fleet of articulated buses that move quickly throughout the streets and highways of Los Angeles County; and
- Expanding the countywide bus fleet by over 1,100 buses, a 33% increase by the year 2025.

6.4.2 Financial Capability With Existing Funding Sources

Transportation funding in Los Angeles County is a diverse and complex blend of federal, state, and local funding sources matched against an ambitious transportation program of highway, bus and rail components. All funding estimates for the financial analysis are based on the assumptions made by MTA in its Long Range Plan.

Governor Gray Davis and the State Legislature earmarked $100 million dollars in Transportation Congestion Relief program (TCRP) funds to build a north-south busway

corridor in the San Fernando Valley that must connect the Metro Rapid Bus on Ventura Boulevard with the San Fernando Valley SFV Metro Rapid Transitway to be completed in 2005. However, due to a $34 billion deficit in the State budget, TCRP funding has been moved to the State Transportation Improvement Program (STIP). The MTA still expects to receive funding to accomplish the original objective of the San Fernando Valley North-South Transit Project, but the timeframe in which this additional funding may become available is uncertain.

At the February, 2003 MTA Board Meeting, the Board adopted working priorities and priority-setting criteria to establish the procedure for allocating funds to projects as funds become available. The Funding Priorities for 15 regional transit system projects were identified, with the San Fernando Valley North South Transit Corridor included as a phased project. The first phase of the Project was identified as priority number 10 with a project cost of $20 million. The subsequent phase(s) of the Project was included as priority number 14, with a cost of $80 million.

6.4.3 Assumptions In The Long Range Transportation Plan

Numerous assumptions which reflect future trends in funding and costs over the analysis period are included in the Long Range Transportation Plan (LRTP). Existing MTA policy, as well as federal and state policies and laws, guided the development of the assumptions. Listed below are the major assumptions applied to the San Fernando Valley North-South Corridor financial analysis.

Inflation. A 2.61% average annual inflation rate, based on the September 2002 UCLA Anderson School of Business Forecast Report for Los Angeles County, was applied to projected revenues and operating costs. It was assumed that inflation would average 2.65% over the first decade and 2.57% during the second and third decades of the LRTP. An annual average inflation rate of 2.09% was applied to estimate transit capital cost items. The rate is based on the relationship of the Construction Cost Index (CCI) to the Consumer Price Index (CPI), in which the CCI is calculated to be approximately 80% of the CPI.

Fare Revenues. Fares were assumed to increase every two years by the rate of inflation, beginning in FY 2004. For the San Fernando Valley North-South alternatives, fare revenue is estimated to range from $3 million to $5.4 million annually based on the assumptions made in the LRTP. This assumes a favorable rise with inflation.

Sales Tax Funds. Propositions A and C are local sales tax measures which contribute over 44.9% of funding for the LRTP. Local sales tax revenues of $44.9 billion over the next twenty years are estimated. Sales tax revenues are partly used to fund debt service on bonds for rail and highway construction projects.

Capital Costs. Capital costs for the San Fernando Valley North-South alternatives are based on estimates made specifically for this study using normally acceptable planning practices. *Capital costs were presented on Table .* These costs, expressed in FY 2002 dollars, and are assumed to adjust with inflation.

Operating & Maintenance Costs. Operating and maintenance (O&M) costs are based on results from the 10-year forecast of OMB. O&M cost estimates for each of the San

Fernando Valley North-South alternatives were presented on Table 4.5-3. These costs, expressed in FY 2002 dollars, and are assumed to adjust with inflation.

Debt Financing. For the Long Range Transportation Plan it is assumed that senior lien bonds will be issued as needed to meet requirements for major capital projects, constrained by MTA debt service coverage ratio limitations and adopted policy. Debt service on bonds are assumed to be paid with Proposition A and Proposition C revenues. Debt financing is necessary for the completion of many construction projects.

6.5 Recommended Implementation Plan

Due to uncertainties with regard to the availability of funds to implement one or more of the project alternatives, the implementation plan recommended as the Locally Preferred Alternative is a multi-phased implementation strategy that identifies how the elements of the alternatives should be implemented over time, as funds become available. Four phases are identified, but these are not necessarily of equal duration. They are meant to illustrate how the elements of the alternatives would be phased in over time as funding becomes available. Figure 6-1 summarizes how the elements could be phased over time. Figure 6-2 illustrates the completed North-South Transit Corridor project following full implementation.

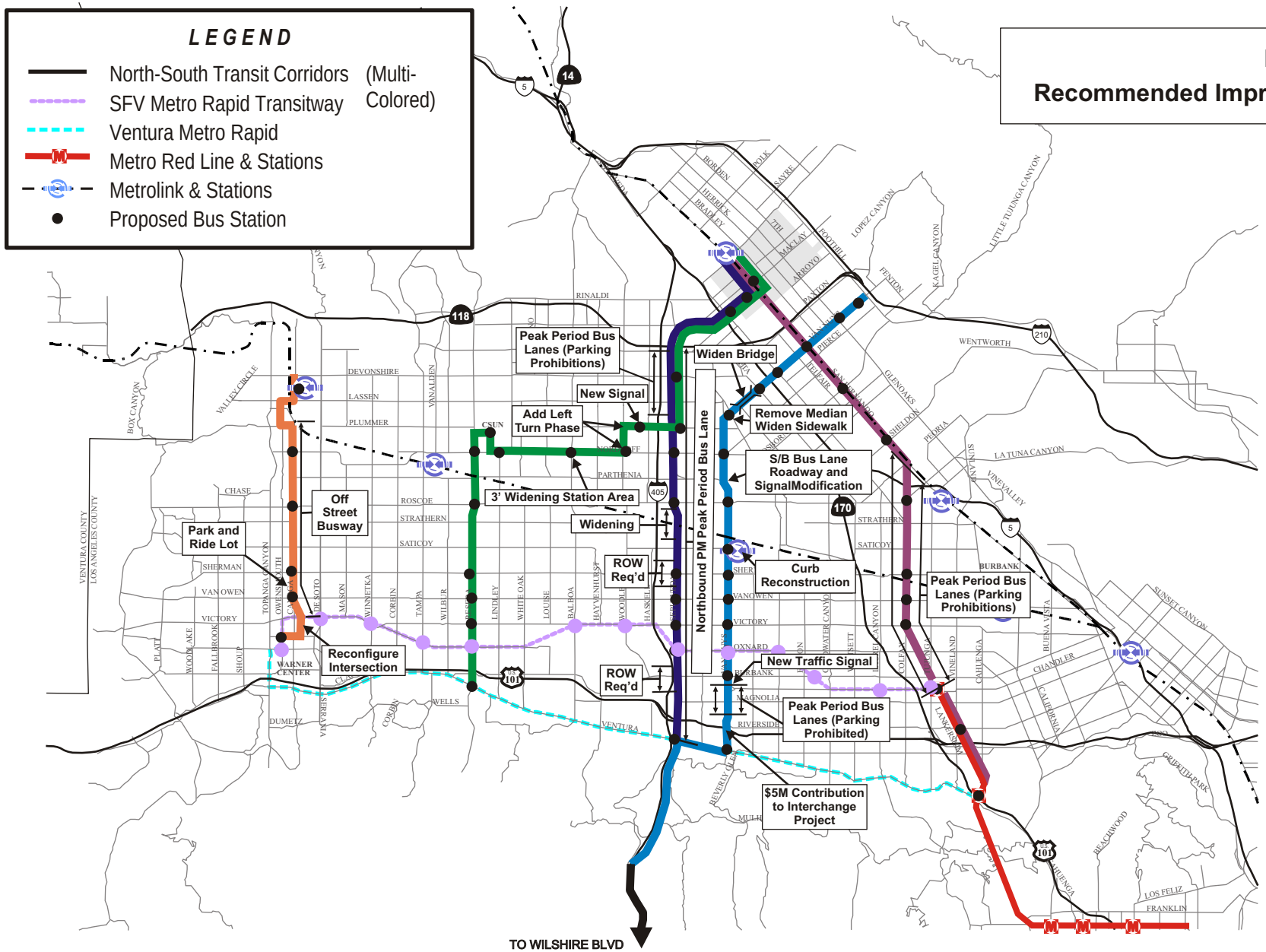
Figure 6-1 Phasing Plan for Elements of the Alternatives

Alternative	Elements	Phase One	Phase Two	Phase Three	Phase Four
TSM	Enhanced Transit Service (reduced headways)	Feeder Services			
Rapid Bus	Metro Rapid Bus Service	NOT RECOMMENDED			
	Improved Transit Stations				
	Transit Signal Priority				
Canoga	Off-street transitway				
	Park-and-Ride Lot(s)				
Reseda	Metro Rapid Bus Service				
	Improved Transit Stations				
	Transit Signal Priority				
	Curb Extensions at Stations				
	Station Accessibility Enhancements				
Sepulveda	Metro Rapid Bus				
	Improved Transit Stations				
	Transit Signal Priority				
	Dedicated Northbound Bus Lane (partial)				
	Dedicated Northbound Bus Lane (full)				
	Truman/Brand Intersection Improvements				
	Station Accessibility Enhancements				
Van Nuys	Curb Extensions at Stations				
	Station Accessibility Enhancements				
	New Signal/Peak Period Bus Lane Addison-Chandler				
	101 Freeway Interchange Improvement				
	Curb Reconstruction at Metrolink Station				
	Parthenia/Van Nuys Intersection Redesign				
	Woodman Median Removal Sidewalk Widening				
	Flood Control Channel Bridge Widening				
Lankershim-San Fernando	Peak Period Bus Lanes Within Existing Street				
	Peak Period Bus Lanes With Street Widening	NOT RECOMMENDED			
	Station Accessibility Enhancements				
	Metro Red Line Station Additional Portal				
Multiple	Additional Parking Sylmar/SF Metrolink				
Construction Cost per Phase		$11.20	$17.97	$43.34	$74.50

6.5.1 Phase One

Phase One improvements are those elements of the highly ranked alternatives that can be implemented with limited funds and streamlined environmental clearance. They

Figure 6-2
Recommended Improvements



Source: Meyer, Mohaddes Associates, Inc. An Iteris Company

include the Reseda Boulevard base alternative and Metro Rapid Bus service on Sepulveda Boulevard as the first projects in the phased implementation of the North-South Transit Corridor. This will entail the initiation of Metro Rapid Bus service on both the Reseda and Sepulveda Corridors between Ventura Boulevard and the Sylmar/San Fernando Metrolink Station. The dedicated lane on Sepulveda Boulevard is deferred to a subsequent phase to allow for environmental analysis and right-of-way purchase. The capital cost for this project is estimated as $11.20 million. This project represents an expansion of the approved five-year implementation plan for Metro Rapid Bus service by adding Reseda and Sepulveda routes to the planned Van Nuys Boulevard and Lankershim-San Fernando routes as illustrated in Figure 6-3. TSM-type improvements would also be implemented as feeder service improvements to complement each additional north-south corridor improvement. Depending upon the availability of vehicles, some funds may also have to be allocated to this phase for the purchase of new transit coaches.

Phase One of the implementation plan may also include the preparation of the environmental documents for some of the projects included in the subsequent phases of the plan. This includes Negative Declarations for the peak period curb lane elements of alternatives and an EIR/EIS for the Canoga Alternative, as well as potentially for the Sepulveda northbound peak period lane. It is not likely that the magnitude of funding required to implement the Canoga Alternative would be available prior to 2009, so the EIR/EIS is likely to be deferred until Phase Two so that it will not be out of date when the project is ready for implementation. The EIR/EIS document could potentially require 12-18 months to complete and the design effort another 12-18 months, so the EIR/EIS should be initiated approximately three years in advance of when the funding is expected to be available.

6.5.2 Phase Two

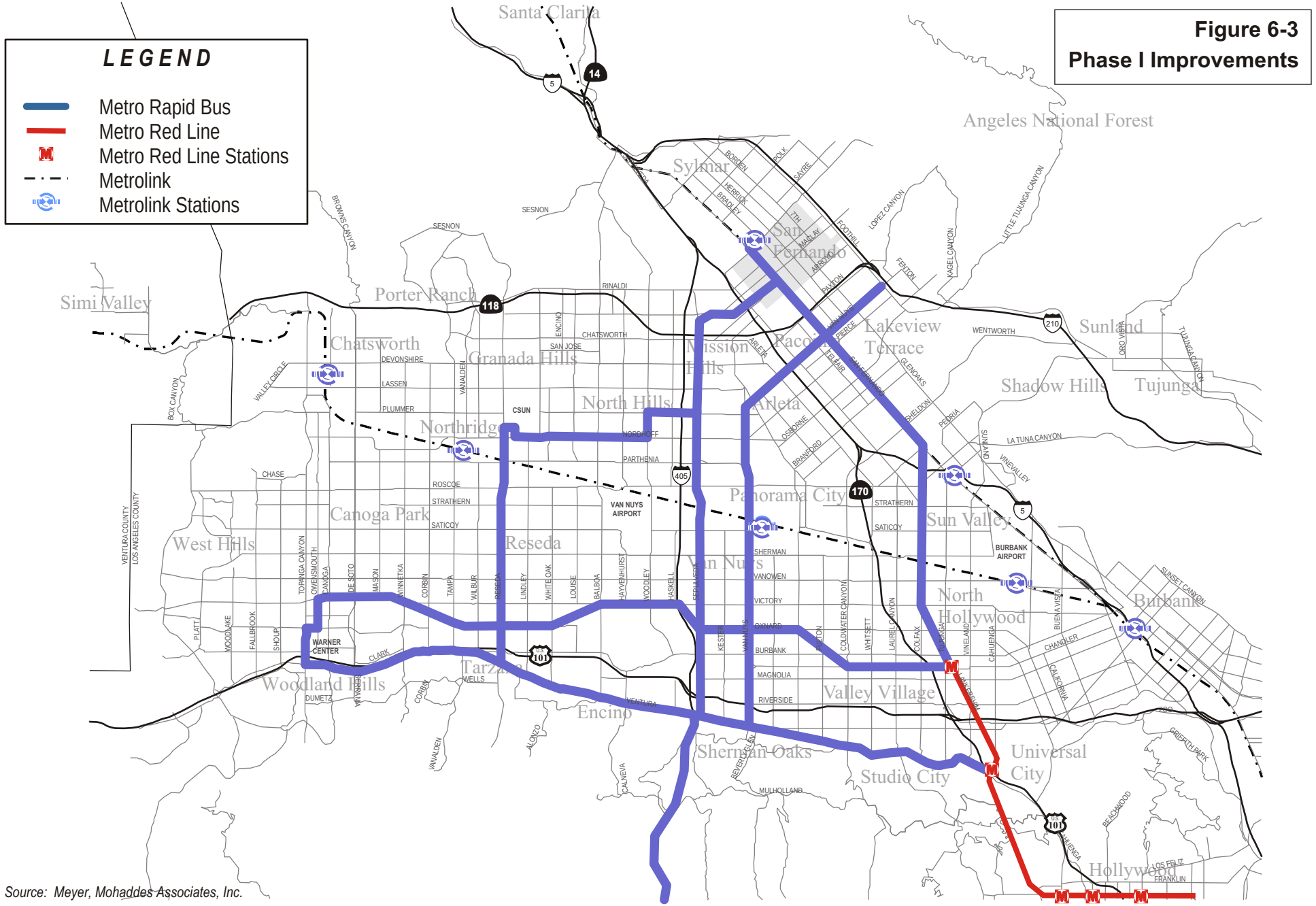
Phase Two improvements include elements of alternatives that will enhance ridership on existing and planned Metro Rapid Bus routes and which can be implemented with streamlined environmental clearance. The high-capacity transit system in the Valley with Phase Two improvements is illustrated in Figure 6-4.

The base improvements on the Van Nuys and San Fernando-Lankershim Alternatives are recommended as the second project to be implemented. These include physical improvements that will improve bus speeds along these two Metro Rapid Bus Corridors, but that will not require right-of-way or create significant impacts.

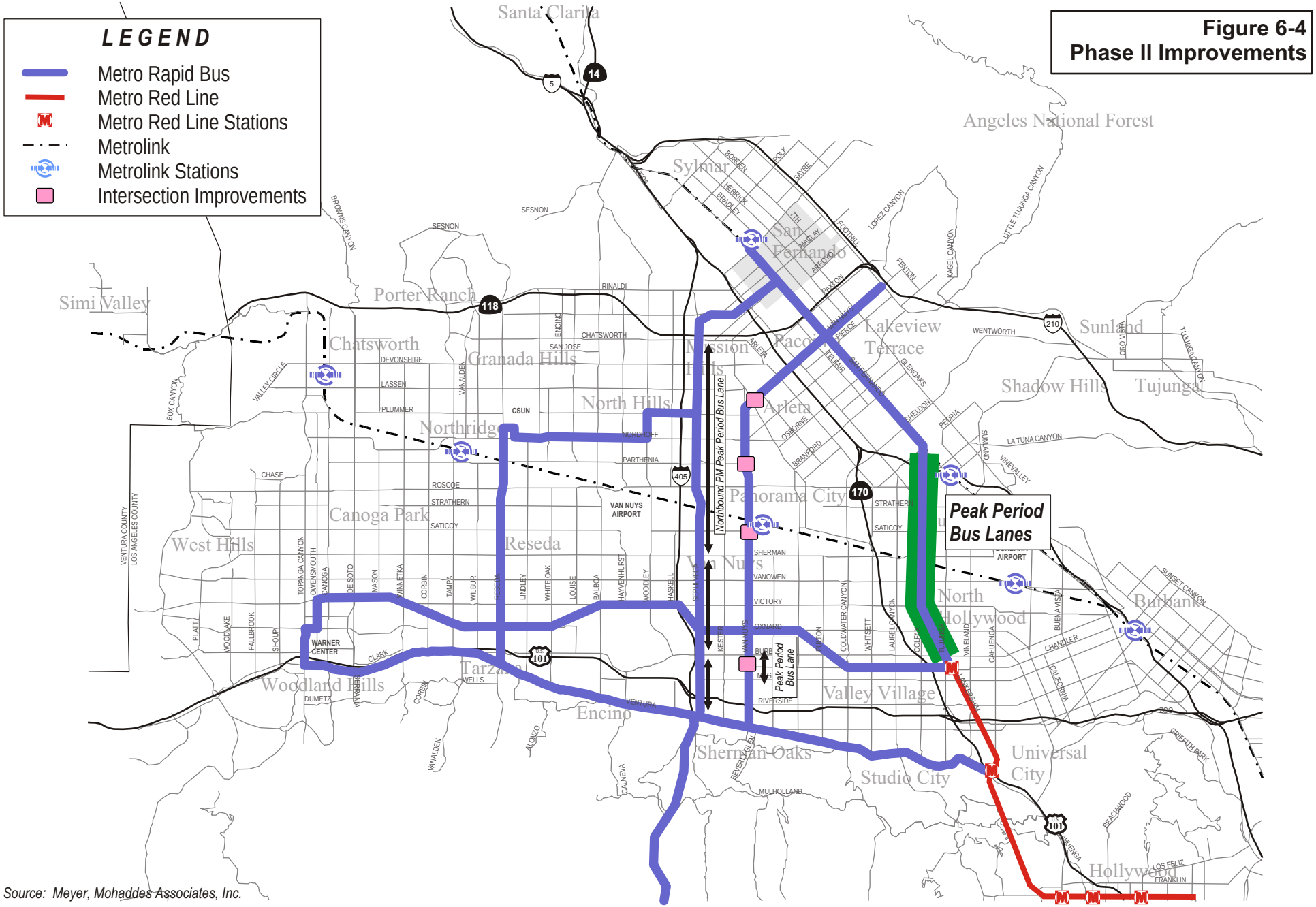
The peak period bus lanes on Lankershim Boulevard, north of Chandler Boulevard would be implemented. The intersection improvements and segment of peak period bus lane on Van Nuys Boulevard would be funded. The peak period northbound bus lane would be implemented along the east curb of Sepulveda except in the vicinity of Burbank Boulevard and Sherman Way, where the buses would operate in mixed flow.

These improvements will cost $13.47 million. Depending upon the availability of vehicles, some funds may also have to be allocated to this phase for the purchase of new transit coaches.

Figure 6-3
Phase I Improvements



Source: Meyer, Mohaddes Associates, Inc.


LEGEND
Metro Rapid Bus
Metro Red Line
Metro Red Line Stations
Metrolink
Metrolink Stations
Intersection Improvements
Figure 6-4
Phase II Improvements
Northbound PM Peak Period Bus Lane
Peak Period Bus Lane
Peak Period Bus Lanes
Santa Clarita
Angeles National Forest
Sylmar
San Fernando
Simi Valley
Porter Ranch
Chatsworth
Granada Hills
Mission Hills
Pacoima
Lakeview Terrace
Sunland
Tujunga
Shadow Hills
North Hills
Arleta
Northridge
CSUN
Panorama City
Canoga Park
West Hills
Reseda
Van Nuys
North Hollywood
Burbank
Woodland Hills
Tarzana
Encino
Valley Village
Sherman Oaks
Studio City
Universal City
Hollywood
VAN NUYS AIRPORT
WARNER CENTER
Source: Meyer, Mohaddes Associates, Inc.

Phase Two could also include the addition of 450 park-and-ride spaces at the Sylmar-San Fernando Metrolink station. These would be provided by building a parking structure on the existing station parking lot at an estimated cost of $4.5 million, which would bring the cost of Phase Two improvements to $17.97 million

6.5.4 Phase Three

Phase Three improvements include the station accessibility enhancements that were included in each of the four alternatives implemented in previous phases. This would provide enhanced pedestrian amenities in the vicinity of stations on the Reseda, Sepulveda, Van Nuys and Lankershim-San Fernando Alternatives at a cost of $26.84 million.

This implementation phase could also include the $5 million contribution to the Van Nuys Boulevard/US 101 interchange project, if the City of Los Angeles has completed the design, environmental clearance and funding of the remainder of the project budget. It could also include the implementation of the additional Metro Red Line station portal on the west side of Lankershim Boulevard, if the $11.5 million funding is available and the SFV Metro Rapid Transitway is also completed by the time this phase is implemented.

The total construction cost for this phase of the project is $43.34 million.

6.5.5 Phase Four

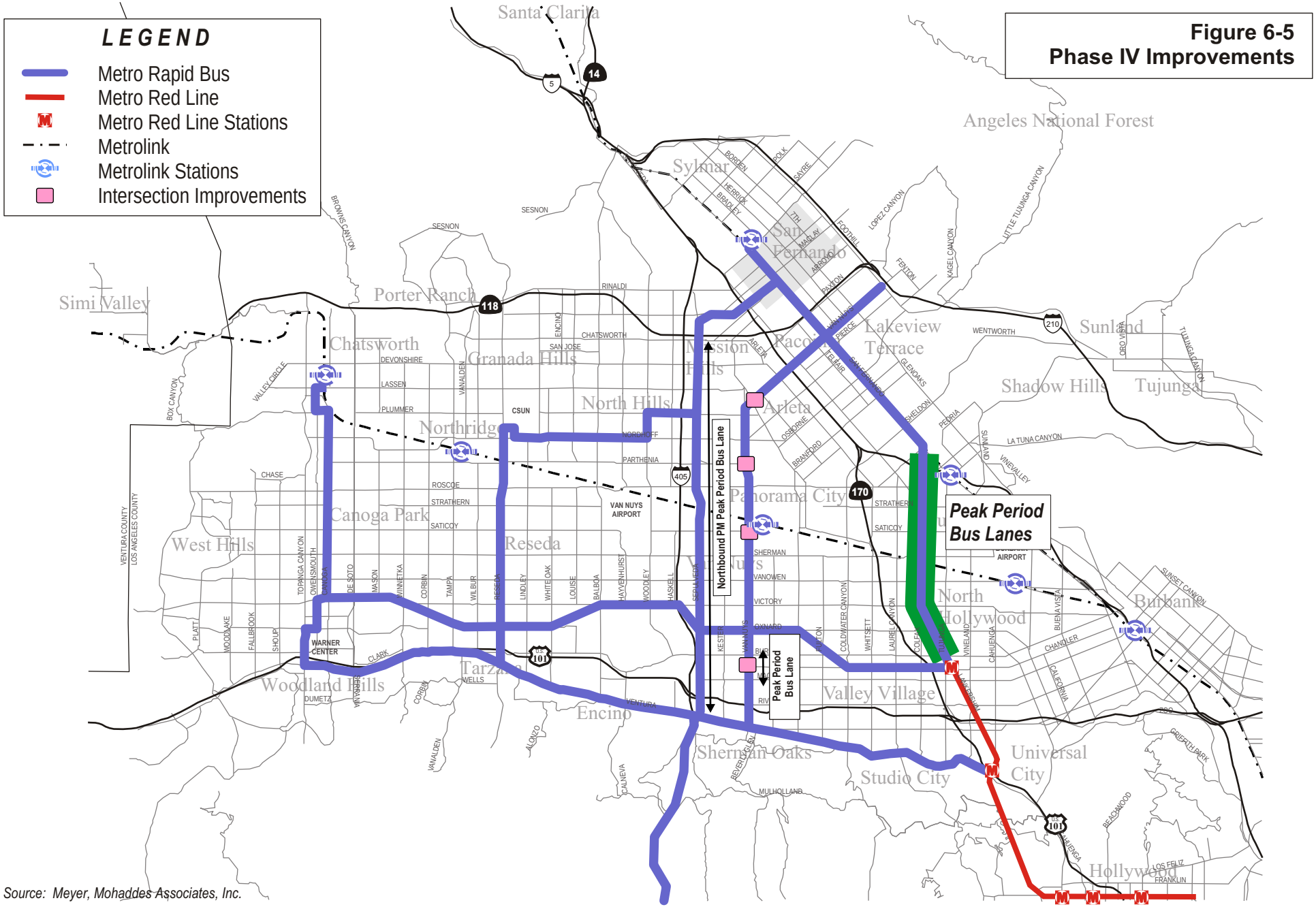
Phase Four of the implementation plan includes those elements of the alternatives that will require preparation of an EIR/EIS.

The Canoga Railroad Right-of-Way project will be constructed in this phase of the implementation plan. It will cost $42.88 - $53.21 million, depending upon the amount and location of park-and-ride facilities. Depending upon the availability of vehicles, some funds may also have to be allocated to this phase for the purchase of new transit coaches.

The completion of the Sepulveda Boulevard northbound peak period bus lane will also be included in this phase of the implementation plan at a cost of $21.29 million. Figure 6-5 illustrates the high-capacity transit network in the San Fernando Valley following completion of Phase Four of the project.

6.5.6 Elements Not Recommended

Two components of two alternatives are not recommended for implementation. These include the widening of Lankershim Boulevard, south of Magnolia Boulevard, and the grade separation of the Canoga Transitway over the Amtrak/Metrolink tracks. The widening of Lankershim would negatively impact the pedestrian environment and remove some recently installed streetscape improvements. The dedicated lane on Lankershim Boulevard is most important in the area north of the North Hollywood Metro Red Line Station. The Canoga Transitway can be implemented more cost-effectively



Source: Meyer, Mohaddes Associates, Inc.

with a termination at Plummer Street than with the $10.0 million grade separation over the railroad tracks, which would also negatively impact an adjacent mobile home park.

It is also recommended that the feeder service to the Sylmar-San Fernando Metrolink station and the Van Nuys Metro Rapid Bus be provided via a local shuttle system for the Sylmar area, rather than the extensions of the Metro Rapid Service to Olive View Medical Center, Los Angeles Mission College, or along Foothill Boulevard and Hubbard Street. The ridership on these segments of the lines analyzed would be better served by local transit and at this time does not justify the extension of Metro Rapid Bus service. The development patterns suggest that smaller vehicles with stops closer than one-mile spacing would better meet the needs of transit users to connect to the high-capacity transit services at the Sylmar-San Fernando Metrolink station.

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