

Crenshaw/LAX Transit Corridor Project

Final Environmental Impact Report/
Final Environmental Impact Statement



EXECUTIVE SUMMARY

August 2011

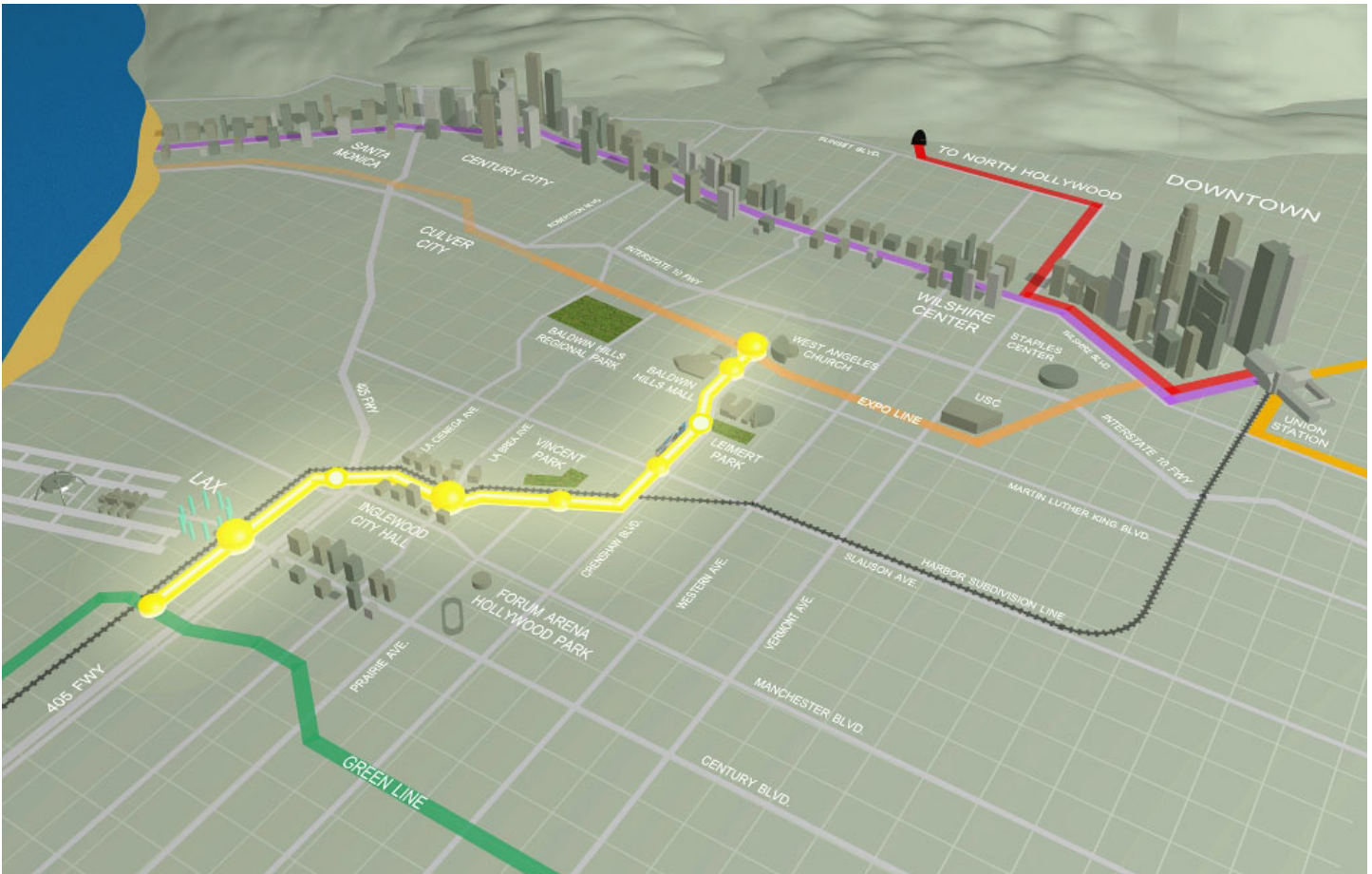
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U.S. Department of Transportation
Federal Transit Administration



Crenshaw/LAX Transit Corridor As Part of the Regional Transportation System.

ES.1 Introduction

The Crenshaw/LAX Transit Corridor, a heavily traveled north-south oriented urban corridor in Los Angeles County, California, is being considered for transit improvements by the Los Angeles County Metropolitan Transportation Authority (Metro) in cooperation with the Federal Transit Administration (FTA). The Federal Aviation Administration (FAA) is also a cooperating agency for the project with expertise in aviation matters due to the project’s proximity to LAX. These agencies have initiated an environmental review of proposed transit improvements in the

corridor and based on the comments received, the conceptual engineering activities, additional technical studies, and extensive community outreach program, the Metro Board of Directors adopted the Light Rail Transit (LRT) Alternative as the Locally Preferred Alternative (LPA). For purposes of the environmental review, Metro is serving as Lead Agency under the provisions of the California Environmental Quality Act (CEQA) and the FTA is Lead Agency as required by the National Environmental Policy Act (NEPA). The environmental review culminates in the preparation of this Final Environmental Impact Statement (FEIS) to satisfy Federal

requirements and a Final Environmental Impact Report (FEIR) to satisfy State requirements. This summary highlights the planning and review process and comparative evaluation of the LPA and design options for the Crenshaw/LAX Transit Corridor Project that will be considered for approval.

The National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) require an environmental review of the potential impacts resulting from the implementation of a proposed action or project prior to approval of that action or project.

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Intended Use of this Environmental Document

This document describes the existing conditions and environmental setting in the Crenshaw/LAX Transit Corridor. The environmental review process has provided the public with an opportunity to review and comment on the alternatives and the environmental analysis presented in the Draft Environmental Impact Statement (DEIS)/Draft Environmental Impact Report (DEIR). This FEIS/FEIR evaluates the Locally Preferred Alternative (LPA) against the existing conditions under CEQA and future conditions without the project under NEPA (No Build Alternative). Where appropriate, mitigation measures are identified to reduce potentially adverse environmental effects that may result from implementation of the proposed project.

The FEIS/FEIR does not make recommendations regarding the approval or denial of the Crenshaw/LAX Transit Corridor Project. This FEIS/FEIR is intended as a disclosure document, to inform public agency decision-makers and the public of the environmental effects of the LPA and design options that remain under consideration. Metro and the FTA shall consider the information included in this FEIS/FEIR, along with other information which may be presented to the agency, prior to the adoption of the project. Other agencies, such as the California Department of Transportation, and the Cities of Los Angeles, Inglewood, Hawthorne, and El Segundo, and the County of Los Angeles, have also been involved in reviewing the project and participate on the Technical Advisory Committee (TAC). On the Federal level, agencies include the Advisory Council on



View of the Crenshaw Boulevard looking north from the Hyde Park area.

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View of the Yellow Car Line 5, which operated in the medians Crenshaw Boulevard and Leimert Avenue in the 1950's, heading south on Leimert Avenue towards Crenshaw Boulevard.

Historic Preservation, Federal Aviation Administration, Federal Railroad Administration, the Occupational Safety and Health Administration, and the Environmental Protection Agency.

Location of the Crenshaw/LAX Transit Corridor

The Crenshaw /LAX Transit Corridor study area is generally a north-south corridor that extends approximately ten miles in length through much of Central Los Angeles. The study area includes approximately 33 square miles and portions of five jurisdictions: the Cities of Los Angeles, Inglewood, Hawthorne, El Segundo, and portions of unincorporated Los Angeles County. The study area is generally defined as the area extending north to Wilshire Boulevard and the Park Mile area of Los Angeles; east to Arlington Avenue; south to El Segundo Boulevard and the downtown Hawthorne area; and west to Sepulveda Boulevard, La Tijera Boulevard, and La Brea Avenue. Three major interstate highways traverse the study area, including the Santa Monica Freeway (I-10) and Glenn Anderson Freeway (I-105), running east-west and the

San Diego Freeway (I-405) which runs north-south. The Harbor Freeway (I-110) parallels the corridor, running north-south immediately to the east of the study area.

Project Elements Under Consideration and Analyzed in the FEIS/FEIR

LPA. Consideration of the project is based upon a Locally Preferred Alternative, which is described below.

Route. From a southern terminus at the Metro Green Line, the alignment would follow the Harbor Subdivision Railroad right-of-way, adjacent to Aviation Boulevard/Florence Avenue and continue northeast to Crenshaw Boulevard where it would travel north within the middle of the Crenshaw Boulevard right-of-way to the Exposition/Crenshaw Station, adjacent to the Metro Exposition Line currently under construction. The length of the route of the proposed project is 8.5 miles, and the length of the LRT service is 12 miles since the proposed service operates over both new infrastructure and existing infrastructure (the existing Metro Green Line).

Stations. Stations are located at: Aviation/Century (aerial), Florence/La Brea (at grade), Florence/West (at grade), Crenshaw/Slauson (at grade), Crenshaw/Martin Luther King Jr. (below grade), and Crenshaw/Exposition (below grade)

Grade Separations. Grade separations include the following:



The Crenshaw Corridor includes five jurisdictions and covers approximately 33 square miles.

- Adjacent to the LAX south runways (fully-covered below-grade trench, as approved by FAA as the ultimate build condition)
- Aerial across Century Boulevard
- Aerial across Manchester Avenue
- Aerial across La Cienega Boulevard/I-405
- Below grade across La Brea Avenue
- Below grade Between Victoria Avenue and 60th Street

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- Below grade between 48th Street and Exposition Boulevard

With regard to the separation adjacent to the LAX south runways, the FAA requires and Metro concurs that ultimately a 1,600 foot segment covering the rail trench alignment crossing through the central portion of the LAX runway protection zones (RPZ) will be built by Metro in order to meet FAA airport design standards. The RPZ's function is to enhance the protection of people and property on the ground. The FAA has agreed to the transit alignment, but with conditions that the transit corridor must be below grade and covered. The FAA has also agreed to allow a Partially-Covered LAX Trench Option as a temporary initial development option in order to meet Metro budgetary constraints.

The environmental analysis in this environmental document evaluated the potential for environmental impacts for the LPA fully covered below-grade trench and also the partially-covered LAX Trench Option, and determined no environmental impacts resulting from either of the designs. Although the Metro Board may initially select the Partially-Covered LAX Trench Option in the Project Definition, Metro has agreed to completely cover a 1,600 foot portion of the trench as required by FAA to meet airport design standards, when future Metro funding becomes available.

Park and Ride Facilities. Park-and-ride facilities would be located at the Florence/La Brea, Florence/West, and Crenshaw/Exposition Stations.

Maintenance Facility. A maintenance facility would be located at Arbor Vitae/Bellanca (Site #14) - This 17.6-acre site is located in the City of Los Angeles.

In addition to the LPA, the following two shorter segment variations, called Minimum Operable Segments (MOSs) and five design options to the LPA are also evaluated in the FEIS/FEIR:

MOSs. The following shorter segment variations of the LPA are evaluated:

- **MOS-King** - 8-mile segment extending from the Metro Green Line (as the southern terminus) in the south to the Crenshaw/King Station in the north.
- **MOS-Century** - 7.4-mile segment extending from the Aviation/Century Station in the south to the Crenshaw/Exposition Station in the north.

Design Options. The following design options are evaluated in addition to the LPA:

- Partially-Covered LAX Trench Option - an interim solution to the fully covered trench until additional Metro

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funding can fully cover the segment adjacent to the LAX south runways

- Optional Aviation/Manchester Station - additional aerial or at-grade station
- Cut-and-cover crossing at Centinela - replaces at grade configuration
- Optional Below Grade Crenshaw/Vernon Station - additional station in Leimert Park
- Alternate Southwest Portal at Crenshaw/King Station Option - replaces portal on southeast corner of the Crenshaw/Boulevard/Martin Luther King Jr. Boulevard intersection

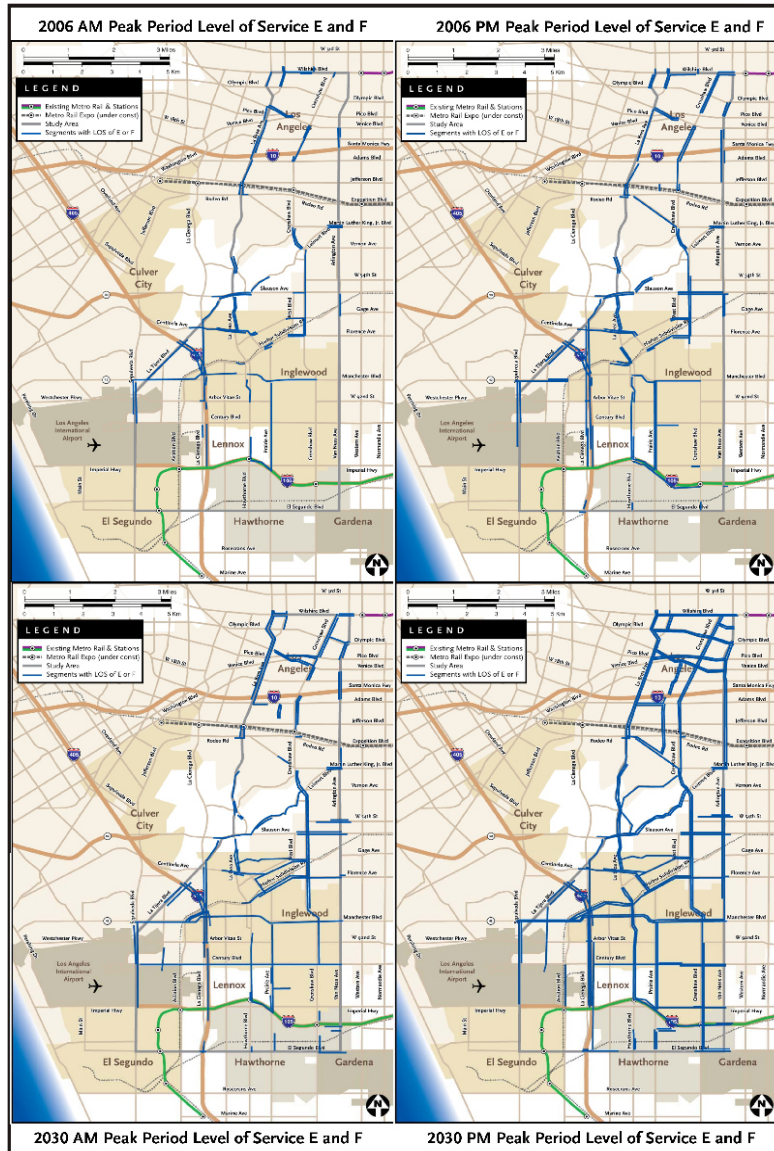
At the time of the publication of this FEIS/FEIR, the proposed project is based on the LPA and incorporates the Partially-Covered LAX Trench design option. Since several other design options and MOSs are analyzed, the Metro Board has the option to adopt a Project Definition that includes a combination of the revised LPA and any of the other elements (MOSs and design options). For example, the Metro Board has already directed that the Crenshaw/Vernon station option be continued as a design option for purposes of procuring construction bids. The Federal Record of Decision will be based upon the ultimately adopted Project Definition by the Metro Board.

Who is on the Metro Board? Metro is governed by a 13-member Board of Directors comprised of: five Los Angeles County Supervisors; the Mayor of Los Angeles; three Los Angeles mayor-appointed members; four city council members representing the other 87 cities in Los Angeles County; and the Governor of California appoints one non-voting member.

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The number of street segments in the corridor that will be overloaded and congested will double between today and the year 2030.

ES.2 Purpose and Need

Previous Planning Studies

In 1967, the Crenshaw/LAX Transit Corridor was initially included in the region's first modern rail system plan. Over the past 40 years, Metro and its predecessor agencies - the Southern California Rapid Transit District

(SCRTD) and the Los Angeles County Transportation Commission (LACTC) have undertaken numerous plans and studies that documented the lack of connectivity and mobility and the need for transportation improvements in the Crenshaw/LAX Transit Corridor. Studies concluded that transportation within and from the Crenshaw/LAX Transit Corridor was constrained, congested, and urgently

in need of system improvements.

Metro has completed three transportation studies of the Crenshaw/LAX Transit Corridor over the past 13 years alone. In 1994, the Crenshaw-Prairie Corridor Preliminary Planning Study clearly identified the need for high-capacity transit system improvements. These options were studied further in December 2000, with the Crenshaw-Prairie Corridor Route Refinement Study. This report identified the need for viable transportation alternatives for the Crenshaw/LAX Transit Corridor. In 2003, the Crenshaw-Prairie Corridor Major Investment Study (MIS) was completed to assist decision-makers in evaluating the most effective solution, or phasing of solutions, to the transportation challenges identified in the Crenshaw/LAX Transit Corridor while achieving local goals and objectives. The MIS provided the foundation for the inclusion of the Crenshaw/LAX Transit Corridor into the Metro Long Range Plan. A description of each of these three previous studies is presented in Section 1.0 Purpose and Need of the FEIS/FEIR.



View of Interstate 405 near Hughes Parkway. I-405 is the only north-south high capacity transportation facility within the corridor and it is congested for many hours of the day.

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Need for the Project

This section describes the need for the Crenshaw/LAX Transit Corridor. The following factors highlight the need for transit improvements such as the proposed project. Each of these factors is briefly explained and described in this section.

- Peak Period Congestion
- Limited Transportation Accessibility
- Poor Connections with Regional Transportation
- Limited Access to Services Outside of the Corridor
- The Corridor's Economic Future Is Dependent on Improved Accessibility
- High Transit Demand, Transit Dependency, and Transit Operation Challenges
- Benefit to the Environment and Improved Sustainability for Corridor Communities

Travel demand forecasts prepared by the Southern California Association of Governments (SCAG) and Metro over the past decade have identified the need for transit improvements throughout the Southern California Region, particularly in Los Angeles County, to meet the mandates of the federal Clean Air Act and address the increasing mobility needs of the region.

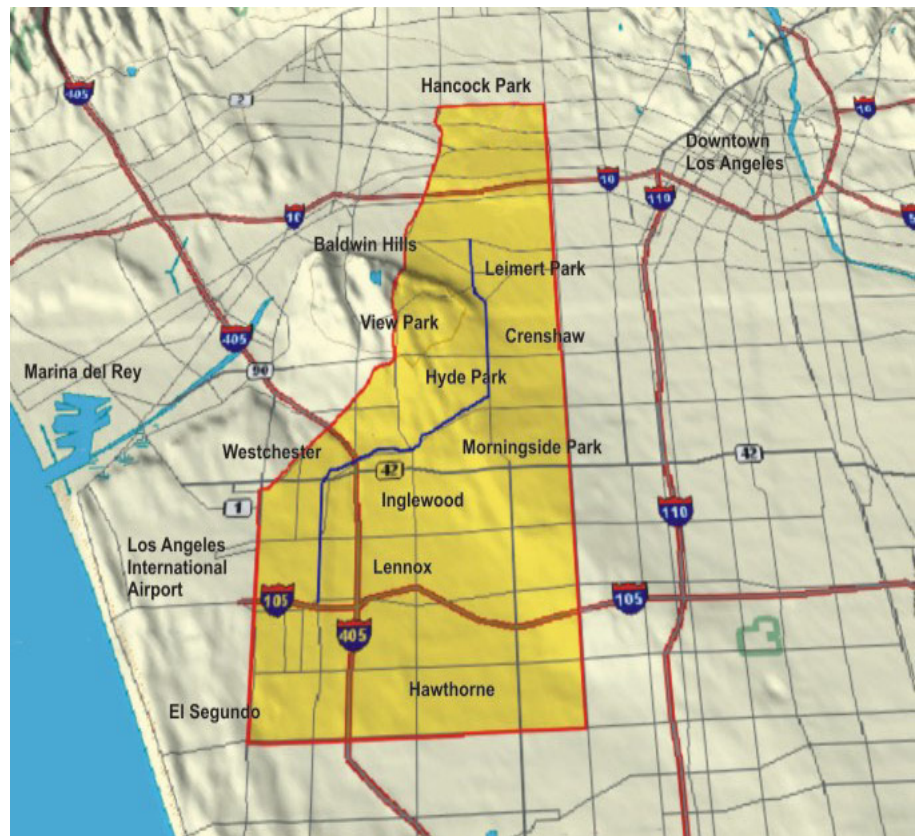
The population and employment densities of the study area are approximately four times that of Los Angeles County based on the Southern California Association of Governments (SCAG) 2006 and projected 2030 data.

The 2008 SCAG Regional Transportation Plan (RTP) determined that travel conditions in the Crenshaw/LAX Transit Corridor will worsen by 2030 and the area will not meet regional objectives for transportation mobility, accessibility, reliability, or safety without additional transportation improvements. Subsequent travel demand forecasting conducted for the current update of the Metro Long Range Transportation Plan has confirmed the continuing need for mobility improvements in the corridor. Existing Transportation facilities and services within the Crenshaw/LAX Transit Corridor include arterial streets, freeways, bus routes, and rail lines. The

topography and street grid of the corridor present unique challenges to existing transportation facilities and services. There are few north-south arterials in the corridor that cross the western portion of the Crenshaw/LAX Transit Corridor. As a result of this constrained network, pressure is placed on nearby north-south arterials such as La Cienega Boulevard and La Brea Avenue.

Peak Period Congestion

Los Angeles has the distinction of being the most congested urban area in the country, according to the most recent annual survey of traffic congestion levels



The Baldwin Hills are a significant topographic constraint in the Crenshaw Corridor. The feature limits the continuity of the transportation network in both north-south and east-west directions increasing the importance of efficient traffic flow along Crenshaw Boulevard.

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The Crenshaw Corridor is largely a residential community. Access to regional transportation linking to jobs, services and education is key. Pictured here is a morning rush hour view of Crenshaw Boulevard near the entrance to the I-10 which connects the corridor to Downtown and West Los Angeles.

conducted by the Texas Transportation Institute. Current freeway and surface arterial facilities cannot be sufficiently expanded to handle the forecasted travel demand. The number of roadway segments within the Crenshaw/LAX Transit Corridor that are congested, that is locations where traffic volumes consume more than 90 percent of the street capacity, is expected to more than double between 2006 and 2030 in both the AM peak travel period, 7:00 a.m. to 9:00 a.m. and the PM peak travel period, 3:00 p.m. to 7:00 p.m.

Local Roadways. By 2030, congestion is expected for Crenshaw Boulevard north of Manchester Boulevard to Wilshire Boulevard, the northern terminus of the



Existing Rapid Bus service along Crenshaw Boulevard (lines 710 and 740) has been well received.

study area. In addition, La Brea Avenue, Hawthorne Boulevard and Prairie Avenue, between Manchester Boulevard and the I-105 would continue to experience heavy traffic conditions and congestion during the morning peak period. The increased traffic congestion would result in lower peak period travel speeds along these corridors, generally below 30 miles-per-hour with speeds below 20 miles-per-hour along some sections of Crenshaw Boulevard.

Freeways. The I-10, I-105 and I-405 experience high levels of congestion, particularly during peak commute periods. The I-105 and I-405 also experience heavy traffic throughout the day as they provide regional access to West Los Angeles and Los Angeles International Airport (LAX). Based on the 2006 Caltrans traffic counts, the I-105 and I-405 carry an annual average daily traffic (AADT) volume of approximately 247,000 and 305,000 vehicles per day near LAX, respectively. The AADT for the I-10 within the study area is also high, at approximately 301,000 vehicles per day. The I-10 has peak period congestion levels rated at F3, meaning that the freeway operates at Level of Service (LOS) “F” conditions for more than three hours in each peak travel period (Caltrans, 1998). Between 2006 and 2030, peak period traffic volumes on the freeway segments within the corridor are expected to increase by 20 to 90 percent. Based on traffic forecasts for the AM peak period, traffic volumes on the I-10 near Crenshaw Boulevard are anticipated to increase by more than 50 percent, from approximately 31,000 vehicles to 48,000 vehicles. During

the same peak period, traffic volumes on the I-405 are forecasted to grow 40 to 50 percent, from approximately 30,000 vehicles to 43,000 vehicles. On the I-105, AM peak period traffic volumes are expected to increase by approximately 20 percent or more, with up to 90 percent increases in the westbound direction near LAX. This would result in AM peak period traffic volumes increasing from approximately 23,000 vehicles in 2006 to 30,000 vehicles in 2030.

Limited Accessibility

While the Crenshaw/LAX Transit Corridor is served by two east-west running interstates, the I-10 and I-105, the corridor is constrained by the lack of north-south mobility. Major sections of the arterial network in the corridor are at or near capacity, resulting in severe congestion and a bottlenecked corridor. The terrain of the corridor, generally characterized by a series of small hills, also precludes the provision of major east-west streets in the study area from Exposition Boulevard south to Manchester Boulevard, adding further limitations to north-south traffic flow. Implementation of an effective north-south transportation network within the Crenshaw/LAX Transit Corridor is vital to alleviate current and projected connectivity and mobility problems. Improving transportation in this corridor would affect corridor residents and businesses by providing essential linkages from residential areas to commercial, activity, employment, and institutional centers within and adjacent to the corridor.

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Poor Connections to Regional Transportation

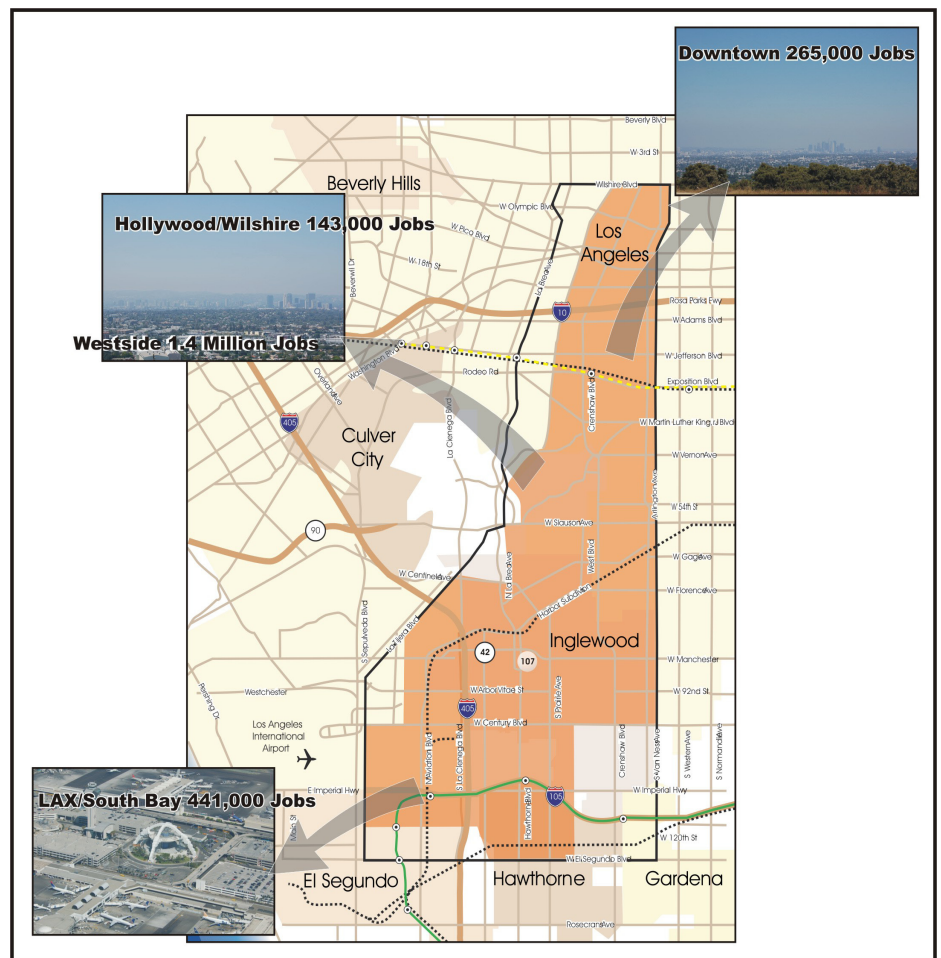
The corridor currently has poor connections to the regional transportation system, as there are no north-south high capacity transportation connections within the corridor. This lack limits mobility and transportation choices. Typically, the Crenshaw/LAX Transit Corridor residents must make several local bus and/or “Rapid Bus” transfers in order to access the existing regional transit system with an average travel time from 32 to 42 minutes. The corridor’s primary transit service, bus transit, is constrained by vehicular congestion and increased demand for service, resulting in a lack of effectiveness and passenger convenience.

By 2030, the Crenshaw/LAX Transit Corridor transit demand is projected to increase by approximately 55 percent. Without significant improvements and capacity enhancement, the corridor’s transit system will be substantially overburdened, and mobility to and from the corridor will be significantly constrained. There is an urgent need to improve transportation mobility and reliability in the corridor by improving both the level and quality of transit service. As population and employment continue to grow, the lack of regional transportation system connections will become more detrimental to future corridor travel and economic development.

Limited Access to Services Outside of the Corridor

One of the key components to socioeconomic mobility is access to jobs, services and education. The Crenshaw/LAX Transit Corridor is predominantly residential in character. While the corridor contains important regional destinations such as LAX, the Forum, and Hollywood Park as well as local destinations including the Baldwin Hills-Crenshaw Plaza, the AMC Magic Johnson 15 movie theatre complex, the

Nate Holden Performing Arts Center, the West Angeles Church of God in Christ, and other religious institutions, jobs, retail services and colleges are located outside of the corridor. With the implementation of transit improvements in the Crenshaw/LAX Transit Corridor, many of the transit-dependent residents would be able to easily access important destinations outside of the corridor, as well as take advantage of community civic centers located in the cities of Inglewood and Hawthorne, and a large number of shopping districts and centers located in



The vast majority of jobs are found outside of the Crenshaw/LAX Transit Corridor. Transit access to Downtown LA, Hollywood, Wilshire Corridor, Century City, South Bay and West Los Angeles is a critical element to the sustainability of communities within the Crenshaw/LAX Transit Corridor.

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Koreatown, the Crenshaw District, and downtown Inglewood.

Although the Crenshaw/LAX Transit Corridor contains several employment destinations, active retail centers, and stable residential neighborhoods, there are many more activity and employment centers located outside of the corridor toward downtown Los Angeles, the Westside and South Bay. Corridor travelers have limited options and accessibility. Future transportation improvements within the corridor will need to reflect a multi-modal strategy providing travelers with a more complete set of transportation alternatives.

The Corridor's Economic Future Is Dependent on Improved Accessibility

A majority of the Crenshaw/LAX Transit Corridor is encompassed by redevelopment areas within the Cities of Los Angeles, Inglewood, and Hawthorne. City redevelopment agencies function in attracting private investment into economically depressed communities, eliminating blight and abandoned or unsafe properties. There is a strong connection between redevelopment and revitalization of these areas and transportation system improvements. Increased accessibility, mobility, and links to transit provide opportunity for increased development densities. All or portions of 11 redevelopment plan areas are located within the corridor. A majority of the corridor's key activity and employment destinations are currently preparing expansion (e.g. Baldwin Hills/Crenshaw

Plaza), revitalization (e.g. , downtown Inglewood), or redevelopment plans (e.g., Hollywood Park). The success of these projects and the corridor's economic future are strongly dependent on improved local and regional accessibility.

High Transit Demand, Transit Dependency, and Transit Operation Challenges

The existing population and employment density in the Crenshaw/LAX Transit Corridor is extremely high and very transit supportive. The corridor population and employment densities are four times higher than Los Angeles County as a whole. The corridor has a high concentration of low-income, minority, transit-dependent residents. More than 49 percent of all corridor households are designated as low income. In addition, 16 percent of all households in the corridor do not have access to an automobile, compared to 8 percent in the County's urbanized area. Forecasts show a growing transit-dependent population, with a projected 55 percent increase in corridor residents that rely on, or will rely on the area's transit system.

As a result of the higher than average transit ridership in the corridor, many of the buses serving the corridor are at or over capacity, resulting in

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overcrowding, rider pass-bys and loading delays. These issues then contribute to uneven headways and related schedule problems. Overcrowding also reduces the life of buses and contributes to higher maintenance costs. Bus operating conditions are affected by traffic conditions under which the service operates, passenger loading time, and bus-stop spacing.

The corridor has substantial traffic congestion, high bus ridership and load factors, and closely spaced bus stops. Combined, these factors result in declining bus operating speeds, reducing competition with the private automobile. Currently, local bus service in the Crenshaw/LAX Transit Corridor operates at 10 to 13 miles-per-hour and the Metro Rapid buses operate at 13 to 15 miles-per-hour during AM and PM peak periods. Operating speeds are expected to decline further in the future as congestion increases.

Benefit to the Environment and Improved Sustainability for Corridor Communities

The corridor is contained within the South Coast Air Basin, which has the worst air quality in the nation. Mobile source emissions from vehicles are the single largest contributor to air quality problems in the basin. The Crenshaw/

What is an Alternatives Analysis? Transit projects typically proceed through the FTA's process, consisting of five formal steps: Alternatives Analysis Study, Environmental Impact Statement, Preliminary Engineering, Final Design, and Construction. The Alternatives Analysis Study is designed to examine all the potential transit options available and determine a locally preferred alternative.