APPDENDIX F
REGULATORY SETTING

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F. REGULATORY SETTING

F.1 Land Use and Development

Land use regulations are articulated in both regional and local plans. The Southern California Association of Governments (SCAG) defines regional planning principles for the corridor while local municipalities define land uses for specific areas of the corridor.

F.1.1 Regional

SCAG serves as the Metropolitan Planning Organization (MPO) for the region. The SCAG *Regional Transportation Plan* (RTP), updated in 2008, and the *Regional Comprehensive Plan and Guide* (RCPG), currently being updated, are tools used for identifying the transportation priorities of the Southern California region. The policies and goals of the RTP and RCPG focus on the need to coordinate land use and transportation decisions to manage travel demand within the region. RCPG and RTP policies that are applicable to the proposed alternatives include:

- Promote transportation demand management (TDM) programs along with transit and ridesharing facilities as a viable and desirable part of the overall mobility program while recognizing the particular needs of individual subregions.
- Support the coordination of land use and transportation decisions with land use and transportation capacity, taking into account the potential for demand management strategies to mitigate travel demand, if provided for, as part of the entire package.
- Include requirements for safe and convenient non-motorized transportation, including the development of bicycle and pedestrian-friendly environments near transit, within urban form, land use, and site-design policies.
- Encourage patterns of urban development and land use that reduce costs on infrastructure construction and make better use of existing facilities.
- Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.
- Support local plans to increase density of future development located at strategic points along regional commuter rail, transit systems, and activity centers.
- Support local jurisdictions' strategies to establish mixed-use clusters and other transit oriented developments around transit stations and along transit corridors.
- Encourage developments in and around activity centers, transportation corridors, underutilized systems, and areas needing recycling and redevelopment.

F.1.2 Local

The study area includes portions of five local jurisdictions: the cities of Los Angeles, Inglewood, Hawthorne, and El Segundo, as well as portions of unincorporated Los Angeles County.

City of Los Angeles General Pan, Citywide General Plan Framework

The *Citywide General Plan Framework* (*Framework*), an element of the *City of Los Angeles General Plan* adopted in December 1996, is intended to guide the City's long-range growth and development through the year 2010. The *Framework* establishes citywide planning policies regarding land use, housing development, transportation, and provision of infrastructure and public services. The *Framework*'s transportation policies seek to develop transit alignments and station locations that maximize transit service in activity centers. Together, the *Framework*'s land use and transportation policies encourage development in these "targeted growth areas" by allowing transit-oriented development and calling for streamlined transportation analysis and mitigation procedures. The purpose of these development modes is to allow the maintenance of existing land uses that are not located next to public transit to preserve existing neighborhoods.

Three broad themes run throughout the *Framework*: sustained mobility with greater accessibility, economic opportunity, and environmental quality. Major land use and transportation policies include:

- Expand neighborhood transportation services and programs to enhance neighborhood accessibility;
- Provide improved transportation services to support citywide economic development activities related to economic revitalization initiatives;
- Promote the development of transportation facilities and services that encourage transit ridership, including enhanced transit services, improved transit safety, and merchant incentives;
- Support development in regional centers, community centers, major economic activity centers, and along mixed-use boulevards as designated in the Community Plans;
- Encourage and seek the formation of public/private partnerships when developing centers and districts and provide appropriate transportation facilities and programs;
- Seek opportunities for joint development projects that integrate land use and transportation facilities;
- Promote the development of transit alignments and station locations that maximize transit service to activity centers and which permit the concentration of development around transit stations;
- Promote the provision of shuttles and other services that increase access to and within regional centers and major economic activity areas to encourage growth and to mitigate traffic impacts of that growth;
- Promote the enhancement of transit access to neighborhood districts, community and regional centers, and mixed-use boulevards;
- Enhance pedestrian circulation in neighborhood districts, community centers, appropriate locations in regional centers, and along mixed-use boulevards; and
- Promote direct pedestrian linkages between transit portals/platforms and adjacent commercial development through facilities orientation and design.

The *Framework's* land use policies designate the number and type of existing activity centers as focal points for future growth. Linking "centers" is a major objective of the transportation element of the *Framework*, also known as the Centers Concept. The categories of centers, in order of increasing size, include neighborhood districts, community centers, and regional centers. The *Framework* designates regional centers as hubs for bus and rail transit. The area adjacent to Crenshaw Boulevard and Martin Luther King Jr. Boulevard, collectively known as Leimert Park, and the Baldwin Hills-Crenshaw Plaza is designated as a Regional Center. Other activity centers located near or within the study area include: Park Mile, Wilshire Center, Mid Town Shopping Center, West Angeles Cathedral, the Forum, Hollywood Park, Hawthorne Plaza, and the Los Angeles International Airport (LAX).

The *Framework's* transportation policies seek to develop transit alignments and station locations that maximize transit service in activity centers. Together, the *Framework's* land use and transportation policies encourage development in targeted growth areas by allowing more intense development than in non-targeted areas and calling for streamlined traffic analysis and mitigation procedures.

The Framework establishes the Crenshaw Transit Corridor as a priority corridor set to commence high-capacity transit service and develop programs to foster transit ridership along its corridor post-2010.

City of Los Angeles Land Use/Transportation Policy

The City of Los Angeles Land Use/Transportation Policy, adopted in November 1993, is a joint effort of the Los Angeles County Metropolitan Transportation Authority (Metro) and the City of Los Angeles to coordinate land use and transportation investment decisions. The Policy seeks to establish transit centers and station areas as focal points for the future growth of Los Angeles. The Policy fosters the development of higher-density, mixed-use projects within 0.25 mile of rail and major bus facilities. Mixed-use projects generally include a combination of commercial, residential, civic and employment-generating uses. The policy recognizes a variety of station area types ranging from a neighborhood center to a major urban center. Levels of development would be consistent with these station area types to protect lower-density neighborhoods from encroachment. A secondary area extending to 0.5 mile from rail and major bus facilities serves as an area of transition while protecting and preserving surrounding low-density neighborhoods from encroachment of incompatible uses. This policy recognizes that not all stations are planned for intense growth.

The Land Use/Transportation Policy is a long-term strategy for integrating land use, housing, transportation and environmental policies into the development of a city form that complements and maximizes the utilization of the region's transit system. Objectives of the Land Use/Transportation Policy include:

- Focus future growth of the City around transit stations;
- Increase land use intensity in transit station areas, where appropriate;

- Create a pedestrian oriented environment in the context of an enhanced urban environment;
- Accommodate mixed-use (commercial/residential) development;

City of Los Angeles General Plan's Transportation Element

The *Transportation Element* of the *City of Los Angeles General Plan,* adopted in September 1999*,* establishes the following policies applicable to the proposed alternatives:

- *Policy 2.12b(2)*: Establish the following priority corridors for high-capacity transit service post-2010 and develop programs to foster transit ridership along these corridors: Crenshaw/Prairie Corridor (Wilshire to Hawthorne Boulevard/ Green Line station/ possible connecting line to LAX).
- *Policy 2.13c*: Establish the following priority corridors for Alternative Rail Technology (ART) or busways utilizing publicly-owned railway right-of-way: Harbor Subdivision (Slauson Blue Line station to Aviation Green Line station).
- *Policy P16h*: Actively support ART and/or busways utilizing publicly-owned railroad right-of-way to extend transit service along the priority corridors described in Policy 2.13c of this Element.

Residential/Accessory Services (RAS) Zones and Density Bonus Ordinance

Chapter 1, Article 2, Sections 12.10.5 and 12.11.5 of the *City of Los Angeles Municipal Cod*e describe RAS3 and RAS4 Residential/Accessory Services (RAS) Zones, respectively. The purpose of RAS zones is to provide a mechanism to increase housing opportunities, enhance neighborhoods, and revitalize older commercial corridors. The RAS3 and RAS4 zones are intended as tools to accommodate projected population growth in mixed-use and residential projects that is compatible with existing residential neighborhoods along existing transportation corridors. The Density Bonus Ordinance was adopted by the City of Los Angeles and became effect on April 15, 2008 to comply with density requirements prescribed by Senate Bill 1818. Under the ordinance, density bonuses are provided for residential development projects that are located near transit stops leading to the increased development potential of transit corridors.

Many transportation corridors in the study area are compatible with the RAS and Density Bonus ordinance requirements and would enhance the residential component of these corridors by supporting walking, bicycling and transit use, as well as potentially reducing the need to drive to services provided within the community. Based on existing land use conditions within the study area, opportunities for the use of this ordinance at station areas exist in the City of Los Angeles. These opportunities would be explored under station area planning efforts conducted during the Preliminary Engineering Design phase of the proposed alternatives.

City of Los Angeles General Plan's Land Use Element

For land use planning purposes, the City of Los Angeles is divided into 35 Community Planning Areas. For each of these areas, a community plan has been adopted to establish land use designations, policies, objectives, and implementation programs. These plans

are considered to be part of the *Land Use Element* of the *Los Angeles General Plan* and are means through which citywide land use policies are applied to specific development proposals. The individual plans relevant to the proposed project are discussed in greater detail in the following sections.

The study area contains the Wilshire and West Adams-Baldwin Hills-Leimert Community Plan Areas within the City of Los Angeles. In addition, the study area also contains small portions of the LAX and Westchester Playa Del Rey Community Plan Areas. These Community Plan Areas contain numerous land use and transportation policies that are mixed-use and transit supportive.

The Community Plans within the study area discuss goals and objectives for developing strong and competitive commercial sectors. Development would include a mixture of land uses, promote economic vitality, and serve the needs of the community through well-designed, safe, and accessible areas, while preserving historic and cultural character. The Community Plans indicate that new development should be focused in existing commercial areas.

Each of the community plans discuss goals, objectives, and policies for developing a public transit system that improves mobility with convenient alternatives to automobile travel, fostering of transportation demand strategies, the development of non- motorized transportation options, and the coordination of activities with other jurisdictions.

Wilshire Community Plan

The *Wilshire Community Plan* adheres to the City of Los Angeles' Land Use/Transportation Policy and includes the following policies:

- Develop coordinated intermodal public transit plans to implement linkages to future public transit services;
- Encourage higher density residential uses near major public transportation centers (e.g., rail transit stations); and
- Develop additional public transit services, which improve mobility with efficient, reliable, safe, and convenient alternatives to automobile travel.

West Adams-Baldwin Hills-Leimert Community Plan

The *West Adams-Baldwin Hills-Leimert Community Plan* adheres to the City of Los Angeles' Land Use/Transportation Policy, which provides the framework that guides future development adjacent to transit stations. This plan includes a map, which identifies transit-oriented districts and incorporates policies in coordination with Metro. This Community Plan includes the following policies:

- Designating land for higher residential densities within transit oriented districts and pedestrian oriented areas;
- Encourage the development potential along the Crenshaw Transit Corridor where the alignment and station platform sites may be utilized to support joint-development projects; and

- Allow for redevelopment within transit oriented districts for higher densities of development should one of the proposed alternatives for the Crenshaw Transit Corridor become operational.

Westchester Playa Del Rey Community Plan

The *Westchester Playa Del Rey Community Plan* adheres to the City of Los Angeles' Land Use/Transportation Policy and includes the following policies:

- Locate higher residential densities near commercial centers, public facilities, bus routes and other transit services;
- Encourage multiple-family residential and mixed-use development in commercial zones, pedestrian oriented areas, and near transit corridors;
- Encourage the expansion, wherever feasible, of programs aimed at enhancing the mobility of senior citizens, disabled people, students, and low-income transit-dependent populations;
- Develop coordinated intermodal public transportation plans to implement linkages to future public transit services; and
- Promote the development of transportation facilities and services that encourage higher transit ridership, increased vehicle occupancy, and improved pedestrian and bicycle access.

Los Angeles International Airport Master Plan, LAX Plan

The *LAX Master Plan*, approved in 2004, modernizes the runway and taxiway system, redevelops the terminal area, improves access to the airport, and enhances passenger safety, security, and convenience. The plan is designed to balance the public's desire for no expansion and less impacts to surrounding neighborhoods with the airport's need to modernize and focus more on ground access, safety and security. Completion of the improvements within the *LAX Master Plan* would allow LAX to accommodate 78.9 million annual passengers by 2015.

The *LAX Plan*, adopted in 2004, establishes a land use policy framework that is the implementation mechanism for the *LAX Master Plan*. The *LAX Plan* promotes the orderly and flexible modernization of LAX. The Circulation and Access section of the *LAX Plan* includes the following policies:

- Connect airport facilities to, and to the extent feasible improve the safety, operation, and mobility of, the regional ground transportation network;
- Provide facilities that encourage transit ridership;
- Develop a connection point between the airport and the Metro Green Line Aviation/LAX Station and other mass transportation facilities, as well as provide facilities for the regional bus system; and

Two major elements of the *LAX Master Plan* includes two landside interfaces (where the ground transportation network connects to the airport terminal), a ground transportation center, located at the northwest corner of Century Boulevard and Aviation Boulevard and

an intermodal transportation center, located north of the Metro Green Line Aviation/LAX Station. In addition, the *LAX Master Plan* contains an automated people mover (APM), which would transport people from the landside interfaces into the central terminal of the airport.

Specific Plans

Two community areas have specific plans associated with them:

Crenshaw Corridor Specific Plan

The *Crenshaw Corridor Specific Plan* was adopted in 2004 by the City of Los Angeles Planning Commission and encompasses the area along Crenshaw Boulevard from the Interstate 10 (I-10) Freeway in the north to Florence Avenue in the south. The specific plan was established to ensure that land uses and development improve the functional and aesthetic quality of the corridor while enhancing and complimenting the surrounding community. This would allow the Crenshaw Corridor to function as a vibrant commercial area while providing opportunities for guided development by regulating use, building height and scale, landscaping, parking, type and placement of signs, and site design.

Park Mile Specific Plan

The *Park Mile Specific Plan* was adopted in 1980 and amended in 1987 by the City of Los Angeles Planning Commission. The Park Mile area is located along Wilshire Boulevard bound by Wilton Place to the east, Highland Avenue to the west, 6th Street to the north, and 8th Street to the south. The *Park Mile Specific Plan* was adopted to preserve the low-density, single-family residential nature of the area and promote a park-like setting.

LAX Specific Plan Amendment Study

In February 2006, Los Angeles World Airport (LAWA) initiated a Specific Plan Amendment Study to reassess five of the Master Plan projects, which are determined to be "Yellow Light Projects" from litigation. LAWA is in the process of identifying solutions to the problems these Yellow Light Projects were designed to address while planning for the same future operations as the LAX Master Plan (78.9 million annual passengers). The Specific Plan Amendment Study Process will evaluate and develop options for the following projects:

- Reconfiguring the North Airfield runways, including a center taxiway
- Constructing a Ground Transportation Center to increase curb-front used for passenger drop-off and pick-up and eliminate private vehicle traffic in the main terminal area
- Constructing an Automated People Mover system to transport airport users between the Central Terminal Area and the Ground Transportation Center
- Demolishing Terminals 1, 2 and 3 to accommodate the southward reconfiguration of the North Airfield
- Improving the airport's roadways associated with the Ground Transportation Center and Automated People Mover system

City of Los Angeles Redevelopment Program

The Community Redevelopment Agency of the City of Los Angeles (CRA/LA) has numerous redevelopment projects throughout the City of Los Angeles, three of which are in the study area.

Mid-City Corridors Redevelopment Project

The Mid-City Corridors Redevelopment Program project area extends along Crenshaw Boulevard from Venice Boulevard in the north to Martin Luther King Jr. Boulevard in the Mid-Corridor Subarea. One of the objectives of the Mid-City Corridors Redevelopment program is to support and encourage a circulation system, which will improve quality of life through pedestrian, automobile, parking, and mass transit system improvements. The *Crenshaw Corridor Vision and Implementation Study* is a specific project within this program that incorporates land use recommendations, transit-oriented development, urban design guidelines, streetscape concepts, and implementation actions that promote economic development, quality jobs, and revitalization of the area along Crenshaw Boulevard from the I-10 south to Martin Luther King Jr. Boulevard. The City Council adopted the Plan on February 4, 2009, allowing the use of one million dollars towards public improvements in the vision plan area.

Crenshaw and Crenshaw-Slauson Redevelopment Projects

These redevelopment projects, established by the CRA/LA, are located along Crenshaw Boulevard south of Coliseum Street to 80th Street and have similar objectives as the previously described Mid-City Corridors Redevelopment Program. The Crenshaw Redevelopment Project has a plan for a private developer to improve the buildings and infrastructure at the Baldwin Hills Crenshaw Plaza, which also seeks to add commercial area to the project. Other land use plans under these redevelopment projects include the Santa Barbara Plaza at Marlton Square, the District Square development at the southeast corner of Crenshaw Boulevard and Rodeo Road, as well as other mixed-use developments and provisions for affordable senior housing.

Los Angeles County General Plan

The *Los Angeles County General Plan* provides guidelines for unincorporated areas of Los Angeles County that are located within the study area. Jurisdiction of this plan also applies to Lennox, located in the southern portion of the study area. This plan contains goals, objectives, and policies relative to the development of the unincorporated areas of Los Angeles County and the integration of transit into this framework. These policies include:

- Promote compact, walkable, and well-designed mixed-use development in and adjacent to employment and transit centers and commercial corridors to provide convenient access to jobs, shopping, and services;
- Promote ordinances that initiate transit oriented development along bus and rail transit corridors;
- Promote improved inter-jurisdictional coordination of land use and transportation policy matters between the county, cities, adjacent counties, special districts, and regional and subregional agencies;

- Support the development of affordable housing near employment opportunities and/or within a reasonable distance of public mass transit;
- Support designs for local, regional, and high speed rail services that are reasonably accessible to residents; and
- Support the coordination of the Los Angeles County Metropolitan Transportation Authority (LACMTA) municipal, county and other transit services to facilitate efficient and increased use of public transit countywide.

City of Inglewood General Plan

The *City of Inglewood General Plan* contains similar goals, objectives, and policies with regard to transit development as those previously described. The City of Inglewood is divided into four planning areas, and the study area is located primarily between the North Inglewood and West Inglewood Planning Areas. Currently, the City of Inglewood is in the process of updating its general plan, which will further define the City's transit-oriented policies. A background technical report has been published as part of this update. The *City of Inglewood General Plan* has seven guiding principles:

- Foster a safe, clean, and attractive community and a healthy environment;
- Enhance open space and recreational opportunities in the community;
- Preserve and strengthen residential land uses;
- Provide a vibrant economy that is strong and well-balanced;
- Promote and leverage the use of technology;
- Enhance our transportation (mobility) systems; and
- Promote high quality, sustainable public services.

City of El Segundo General Plan

The City of El Segundo adopted its first general plan in 1975 with a plan update completed in 1992. The *City of El Segundo General Plan* contains both land use and circulation elements which address issues relevant to the proposed alternatives. At the time of the last update, the City of El Segundo incorporated transit policies into its circulation system, aware that the Metro Green Line would be implemented two years following the update. The *City of El Segundo General Plan* contains policies that relate to transit, land use, and the integration of the two. The following policies apply:

- Ensure that transit planning is considered and integrated into all related elements of city planning;
- Encourage development projects that effectively integrate major transportation facilities with land use planning and the surrounding environment;
- Provide areas where development has the flexibility to mix uses, in an effort to provide synergistic relationships which have the potential to maximize economic benefit, reduce traffic impacts, and encourage pedestrian environments; and

- Promote mixed-use development near transit nodes and encourage modes of transportation that do not require an automobile.

City of Hawthorne General Plan

The *City of Hawthorne General Plan* was adopted in 1989 and contains land use and circulation elements that contain policies relevant to the proposed alternatives. The *Land Use Element* of the *City of Hawthorne General Plan* identifies freeway related commercial/mixed-use potential and commercial corridor revitalization as the major issues to address. The *Circulation Element* of the *City of Hawthorne General Plan* identifies traffic circulation, alternative transportation modes, and parking as the fundamental issues of concern. The policies encourage expansion of the light rail transit (LRT) system and consideration of staggered work hours for local businesses.

F.1.3 CEQA Thresholds

According to California Environmental Quality Act (CEQA), land use impacts would be considered significant if the Crenshaw/LAX Transit Corridor Project have the potential to result in:

I. Physical division of an established community;

II. Inconsistency with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project; or,

III. Incompatibility with adjacent and surrounding land uses caused by degradation or disturbances that diminish the quality of a particular land use.

F.2 Displacement and Relocation of Existing Uses

F.2.1 Federal

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), mandates that certain relocation services and payments be made available to eligible residents, businesses, and nonprofit organizations displaced as a direct result of projects undertaken by a federal agency or with federal financial assistance. The Uniform Act provides for uniform and equitable treatment for persons displaced from their homes and businesses and establishes uniform and equitable land acquisition policies.

Where acquisition and relocation are unavoidable, owners of private property have federal constitutional guarantees that their property would not be taken or damaged for public use unless they first receive just compensation. Just compensation is measured by the "fair market value" of the property taken, where "fair market value" is considered to be the:

> "highest price on the date of valuation that would be agreed to by a seller, being willing to sell, but under no particular or urgent necessity for so doing, nor obliged to sell; and a buyer, being ready, willing and able to buy, but under no particular necessity for so doing, each dealing with the other with the full knowledge of all the uses and purposes for which the property is

reasonably adaptable and available." (Code of Civil Procedure Section 1263.320a)

F.2.2 State

The provisions of the California Relocation Act (California Act) apply if a public entity undertakes a project for which federal funds are not present. In this case, the public entity must provide relocation assistance and benefits. The California Act, which is consistent with the intent and guidelines of the Uniform Act, seeks to:

(1) Ensure the consistent and fair treatment of owners and occupants of real property,

(2) Encourage and expedite acquisition by agreement to avoid litigation and relieve congestion in the courts, and

(3) Promote confidence in the public land acquisitions.

As stated above under federal regulations, owners of private property have similar state constitutional guarantees regarding property takes, damages, and just compensation.

F.2.3 CEQA Thresholds

According to CEQA, displacement and relocation impacts would be considered significant if the Crenshaw/LAX Transit Corridor Project would:

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

F.3 Community and Neighborhood Impacts

F.3.1 Federal

Federal-Aid Highway Act of 1970

The Federal-Aid Highway Act of 1970 specifies that decisions made regarding federally funded highway projects be in the "best overall public interest," considering adverse economic, social, and environmental effects such as:

- Air quality, noise and water pollution
- Destruction or disruption of man-made resources
- Aesthetic values, community cohesion, and the availability of public facilities and services
- Adverse employment effects and tax and property value losses
- Injurious displacement of people, businesses, and farms
- Disruption of desirable community and regional growth

National Environmental Policy Act of 1969

National Environmental Policy Act of 1969, as amended (NEPA) was enacted as a result of Congress recognizing the impact of human activity on the natural environment. Specifically, the impacts of population growth, high-density development trends, expansion of industrial uses, resource exploitation, and new technological advances were emphasized. The objective of NEPA was to create mechanisms to restore and maintain environmental quality for the overall welfare of the public. NEPA declares that the federal government, in cooperation with state governments, local governments, and other concerned public and private organizations, would use all practicable means and measures to create and maintain conditions under which man and nature could exist in productive harmony, as well as fulfill the social, economic, and other requirements of present and future generations of Americans.

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was enacted in 2005 and amended in June of 2008. This Act provides guaranteed funding for highways, highway safety, and public transportation totaling $286.4 billion. SAFETEA-LU builds previous surface transportation bills by supplying the funds and refining the programmatic framework for investments needed to maintain and expand vital transportation infrastructure. SAFETEA-LU addresses issues such as, improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, protecting the environment, and stakeholder and community outreach.

Title VI of the Civil Rights Act of 1964

This title declared "it to be the policy of the United States that discrimination on the ground of race, color, or national origin shall not occur in connection with programs and activities receiving federal financial assistance and authorizes and directs the appropriate Federal departments and agencies to take action to carry out this policy."

F.3.2 State

California Environmental Quality Act

Adopted in 1970, the purposes of the CEQA are to: (1) inform decision-makers and the public of the potential, significant environmental effects of a proposed project, (2) identify the ways in which environmental damage can be avoided or reduced, (3) prevent significant, avoidable damage to the environment by requiring changes to a project through the use of alternatives or mitigation measures, when the governmental agency finds the changes to be feasible, and (4) disclose to the public the reasons why a governmental agency approved a project in the manner the agency chose if significant environmental effects were involved.

Under CEQA, the focus of the environmental analysis is on the physical changes resulting from a project. Social or economic effects of a project are not treated as significant effects on the environment. However, environmental analysis "may trace the chain of cause and effect from a proposed decision on a project through anticipated

economic or social changes resulting from the project to physical changes caused, in turn, by the economic or social changes."

F.3.3 Local

The study area includes portions of five local jurisdictions, including the Cities of Los Angeles, Inglewood, Hawthorne, and El Segundo, as well as unincorporated County of Los Angeles. After a review of planning and other government documents, it was found that four of these jurisdictions possessed policies that were applicable to community and neighborhood issues within the study area. Applicable policies and programs adopted by the Cities of Los Angeles, Inglewood, and El Segundo are presented below.

City of Los Angeles General Plan Framework

The *Framework*, adopted in December 1996, is intended to guide the City's long-range growth and development through 2010. The *Framework* establishes citywide planning policies regarding economic development, housing, land use, urban form, neighborhood design, transportation, infrastructure, and public services. The Economic Development Element of the *Framework* presents goals, policies, and objectives related to job creation and retention, business retention, and provision of financial incentives to attract development to the City. Policies stated within the Economic Development Element, which are applicable to the proposed project include:

- Policy 7.2.3 - Encourage new commercial development in proximity to rail and bus transit corridors and stations;
- Policy 7.6.1 - Encourage the inclusion of community-serving uses (e.g., post offices, senior community centers, daycare providers, personal services) at the community and regional centers, in transit stations, and along the mixed-use corridors;
- Policy 7.9.2 - Concentrate future residential development along mixed-use corridors, transit corridors, and other development nodes identified in the General Plan Framework Element, to optimize the impact of the City's capital expenditures on infrastructure improvements;
- Policy 7.10.3 - Determine appropriate level of service for, but not limited to, educational facilities, hospitals, job training and referral centers, and transportation opportunities in the "communities of need."

City of Los Angeles Department of City Planning – Business Improvement Districts

The City of Los Angeles has designated 42 Business Improvement Districts (BIDs) located throughout the city. BIDs are used as tools by cities and states to revitalize downtowns and other urban areas. BIDs are districts or areas within central cities, as defined by applicable state and local legislation, in which the private sector delivers services for urban revitalization beyond what the government is able to provide. The properties and/or businesses within a BID pay a special tax or assessment to cover the cost of providing facilities or services for which the BID has a particular need.

City of Los Angeles - Neighborhood Councils

The City of Los Angeles Department of Neighborhood Empowerment (DONE) and the Board of Neighborhood Commissioners oversees and regulates the operations of Neighborhood Councils (NCs) within the City of Los Angeles. The approximately 120 NCs are organized into seven larger NC Areas including the Central, South, East, West Harbor, South Valley, and North Valley NC Areas. NCs include groups of community members who are certified by the Board of Neighborhood Commissioners. They elect NC leaders, determine agendas, and set geographic boundaries. The goal of NCs is to become relatively independent from government in order to influence citywide and local decision-making. The *Citywide System of Neighborhood Councils Plan* (*Plan*) was approved by the Los Angeles City Council in 2001. The *Plan* establishes a flexible framework through which people in neighborhoods may be empowered to create NCs to serve their community's needs. The *Plan* also sets minimum standards to ensure that NCs represent all stakeholders in the community, conduct fair and open meetings, and are financially accountable.

Los Angeles County General Plan

The existing Los Angeles County General Plan was adopted in 1980. A comprehensive update of the General Plan, as well as a General Plan Environmental Impact Report (EIR) is expected to be complete in late 2008. The 2007 Draft Preliminary General Plan documents are utilized in this discussion along with the existing General Plan, which was adopted in 1980. Applicable policies within the Economic Development Element include:

- **Policy ED 4** - Fund transportation infrastructure and multi-modal systems that make economic activities more efficient and energy conscious;
- **Policy ED 4.3** - Direct development away from the urban fringe and along existing transportation corridors in accordance with the SCAG's Compass Blueprint 2% Strategy, which would change land uses on two percent of the SCAG region land in order to improve measures of mobility, livability, prosperity, and sustainability for local neighborhoods and their residents;
- **Policy ED 4.4** - Encourage development around existing and planned transportation hubs; and
- **Policy ED 5.2** - Direct resources to areas targeted as blighted or identified as economically depressed.

City of Inglewood General Plan Update Technical Background Report

The City of Inglewood General Plan Technical Background Report (TBR) was completed in August 2006 and includes a comprehensive database that describes the City's existing conditions for physical, social, economic, and environmental resources. The TBR is the foundation document from which subsequent planning policies and programs will be formulated. In addition, the TBR will serve as the "Environmental Setting" section for each technical environmental issue analyzed in the Environmental Impact Report which will be completed as a component of the preparation of the General Plan.

Recommendations were presented in the TBR regarding issues that should be addressed in the City's General Plan Update. The issues included that would be applicable to the proposed alternatives include:

- **Circulation** - As a result of traffic growth in the area and the physical limitations found along several major roadway facilities, some neighborhoods are experiencing problems with "cut-through" traffic, or vehicles utilizing less congested neighborhood streets to bypass areas of congestion on more heavily traveled facilities. This situation degrades the surrounding neighborhoods in terms of quality of life and creates possible dangerous conditions.

City of El Segundo General Plan – Land Use Element

El Segundo's Land Use Element has the broadest scope of all the General Plan elements. It is intended to portray the future direction of the City, the way the community would like to see it. The California General Plan Glossary defines the land use element as follows:

- **Policy LU1-2.3** - Coordinate public improvements and beautification efforts with service groups, citizen groups, and organizations that are interested in upgrading the community.
- **Policy LU1-5.1** - Encourage active and continuous citizen participation in all phases of the planning program and activities.

F.3.4 CEQA Thresholds

According to CEQA, community and neighborhood impacts would be considered significant if the Crenshaw/LAX Transit Corridor Project have the potential to result in:

- Physical division of an established community (Also Land Use and Development)

F.4 Visual Quality

F.4.1 Federal

There are several federal regulations that govern the assessment and consideration of visual quality and aesthetic character. These regulations consider the protection and enhancement of existing resources and aesthetic character, as well as the incorporation of design considerations in the development and construction of projects. The following federal regulatory policies apply to the evaluation of visual effects for the proposed project.

NEPA (42 *United States Code* (USC) Section 4231) puts regulatory responsibility on the federal government to "use all practicable means" to "assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings."

The Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (UMTA), now the Federal Transit Administration (FTA), established Environmental Impact and Related Procedures (23 *Code of Federal Regulations* [CFR] 771) for the evaluation of urban mass transit projects and the compliance of these projects with 23 USC 109(h) and 303, as well as other federal statutes.

The FTA Circular 9400.1A, Design and Art in Transit Projects, encourages the use of design and artistic considerations in transit projects. The FTA recognizes that specific types of transit projects require an assessment of visual effects. The circular provides guidance on opportunities for incorporating art and design into transit projects.

The SAFETEA-LU, Sections 6002-6009, places additional emphasis on environmental considerations such as mitigation, enhancement activities, context sensitive solutions, and Section 4(f). It also advances the idea of coordinating public and agency involvement and promoting the use of visualization techniques to improve stakeholder understanding of the proposed alternatives.

The USDOT Act, Section 4(f), which has been part of the federal transportation law since 1966, applies to agencies within the USDOT and is generally referred to as 49 USC 303. Section 4(f) focuses on the preservation of public parks and recreation lands, wildlife and waterfowl refuges, and historic sites, and includes the preservation of their aesthetic integrity.

Section 106 of the Historic Preservation Act of 1966 furthers the preservation of historic resources, including resources that any Indian Tribe or Native Hawaiian Organization has attached religious and cultural significance to or with.

F.4.2 State and Regional

The CEQA requires an evaluation of scenic resources in the consideration of effects to the quality of the environment. The evaluation considers site-specific history, context, and area sensitivity.

F.4.3 Local

Policies contained in local jurisdictional planning documents that apply to the visual effects of a mass transit system are included in Table F-1. These planning documents focus primarily on the maintenance of visual diversity, definition of urban form and character, protection and management of scenic, historic, and cultural resources, enhancement of existing visual character and quality, and control over development. Table F-1 provides a general summary of the applicable policy documents, including a general focus of the guidelines and policies specific to each.

F.4.4 CEQA Thresholds

According to CEQA, the Crenshaw/LAX Transit Corridor Project would result in a significant impact to visual resources if it would:

- Adversely affect a scenic resource;
- Substantially damage a scenic resource, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- Create a new source of light or glare which would adversely affect day or nighttime views in the area.

Table F-1. Local Policy Documents

Document	General Policies
City of Los Angeles	
General Plan	Historic Preservation Overlay Zones (HPOZ) Scenic Resource Preservation Scenic Highways Designation Street Tree Preservation
General Plan Framework Element	Strategy for maintaining visual diversity and defining urban form and community character
West Adams-Baldwin Hills-Leimert Specific Plan	Cultural and historic preservation Maximum height requirements for development
Crenshaw Corridor Specific Plan	Design guidelines and standards for development
LaFayette Square HPOZ	Preservation and restoration of historic and cultural properties and neighborhoods
Urban Forestry Division of the City of Los Angeles (UFD)	Care and preservation of trees and landscaping within the public street right-of-way
Community Redevelopment Agency of the City of Los Angeles (CRA/LA)	Identification and management of priority development projects to attract investment into economically depressed communities, reduce blight and unsafe housing conditions and eliminate slums
Inglewood	
General Plan	Design guidelines and standards for development
Hawthorne	
Municipal Code	Design guidelines and standards for development

Source: Parsons Brinckerhoff, 2008.

F.5 Air Quality

F.5.1 Pollutants and Effects

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), particulate matter ten microns or less in diameter (PM_{10}), and lead (Pb). These pollutants are discussed below.

F.5.1.1 Carbon Monoxide

CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the study area, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follow the spatial and temporal

distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February.[1] The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

F.5.1.2 Ozone

O_3 is a colorless gas that is formed in the atmosphere when reactive organic gases (ROGs), which include volatile organic compounds (VOCs), and nitrogen oxides (NO_X) react in the presence of ultraviolet sunlight. O_3 is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of ROGs, NO_X, and the components of O_3, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O_3 formation. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. The greatest source of smog-producing gases is the automobile. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

F.5.1.3 Nitrogen Dioxide

NO_2, like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase of bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 parts per million.

F.5.1.4 Sulfur Dioxide

SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries. Generally, the highest levels of SO_2 are found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 can also yellow plant leaves and erode iron and steel.

[1] Inversion is an atmospheric condition in which a layer of warm air traps cooler air near the surface of the earth, preventing the normal rising of surface air.

F.5.1.5 Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent different sizes of particulate matter. Fine particulate matter, or $PM_{2.5}$ (particulate matter 2.5 microns or 2.5×10^{-6} millimeters or less in diameter), is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOCs. Inhalable particulate matter, or PM_{10} (particulate matter 10 microns or 10×10^{-6} millimeters or less in diameter), is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and burning of brush or waste; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body. These substances can transport absorbed gases such as chlorides or ammonium into the lungs and cause injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

F.5.1.6 Lead

Pb in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline, battery manufacturing, paint, ink, ceramics, ammunition, and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Low-level lead exposures during infancy and childhood are of particular concern. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth.

F.5.1.7 Toxic Air Contaminants

A substance is considered toxic if it has the potential to cause adverse health effects in humans. A toxic substance released into the air is considered a toxic air contaminant (TAC). TACs are identified by state and federal agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act, Assembly Bill 1807 (AB 1807). This two-step process of risk identification and risk management was designed to protect residents from the health effects of toxic substances in the air.

The South Coast Air Quality Management District (SCAQMD) has a long and successful history of reducing air toxics and criteria emissions in South Coast Air Basin (SCAB). SCAQMD has an extensive control program including traditional and innovative rules and policies. These policies can be viewed in SCAQMD's *Air Toxics Control Plan for the Next Ten Years* (March 2000).

To date, the most comprehensive study on air toxics in SCAB is the *Multiple Air Toxics Exposure Study* (MATES-III), conducted by the SCAQMD. The monitoring program measured more than 30 air pollutants, including both gases and particulates. The monitoring study was accompanied by a computer modeling study in which SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-III found that the average cancer risk in the region from carcinogenic air pollutants ranges from about 870 in a million persons to 1,400 in a million persons, with an average regional risk of about 1,200 in a million.

F.5.1.8 Greenhouse Gases

Greenhouse gas (GHG) emissions refer to a group of emissions that are generally believed to affect global climate conditions. Simply put, the greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. GHGs, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), keep the average surface temperature of the Earth close to 60 degrees Fahrenheit (°F). Without the greenhouse effect, the Earth would be a frozen globe with an average surface temperature of about 5°F.

In addition to CO_2, CH_4, and N_2O, GHGs include hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and water vapor. Of all the GHGs, CO_2 is the most abundant pollutant that contributes to climate change through fossil fuel combustion. CO_2 comprised 81 percent of the total GHG emissions in California in 2002 and non-fossil fuel CO_2 comprised 2.3 percent. The other GHGs are less abundant but have higher global warming potential than CO_2. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. The CO_2e of CH_4 and N_2O represented 6.4 and 6.8 percent, respectively, of the 2002 California GHG emissions. Other high global warming potential gases represented 3.5 percent of these emissions. In addition, there are a number of man-made pollutants, such as CO, NO_X, non-methane VOC, and SO_2, that have indirect effects on terrestrial or solar radiation absorption by influencing the formation or destruction of other climate change emissions.

F.5.2 Federal

The Federal Clean Air Act and Amendments (CAAA) regulate air quality in the United States. At the federal level, the CAAA is administered by the U.S. Environmental Protection Agency (USEPA).

U.S. Environmental Protection Agency

USEPA is responsible for enforcing the federal CAAA. USEPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS). NAAQS are required under the 1977 Clean Air Act and subsequent amendments. USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside State waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by California Air Resources Board (CARB).

State Implementation Plans

Federal clean air laws require areas with unhealthy levels of ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and inhalable particulate matter, to develop plans known as State Implementation Plans (SIPs) which describe how they would attain NAAQS. The amendments to the federal Clean Air Act set new deadlines for attainment based on the severity of the pollution problem and launched a comprehensive planning process for attaining the NAAQS.

SIPs are not single documents; rather, they are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. Many of California's SIPs rely on the same core set of control strategies including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies, such as the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. CARB forwards SIP revisions to USEPA for approval and publication in the Federal Register. The CFR Title 40, Chapter 1, Part 52, Subpart F, Section 52.220 lists all of the items that are included in the California SIP. Many additional California submittals are pending USEPA approval.

F.5.3 State

In addition to being subject to the requirements of the CAAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). In California, the CCAA is administered by the CARB at the state level and by the air quality management districts at the regional and local levels.

California Air Resources Board

CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for meeting the State requirements of the federal CAAA,

administering the CCAA, and establishing the California Ambient Air Quality Standards (CAAQS). The CCAA, as amended in 1992, requires all air districts in California to endeavor to achieve and maintain the CAAQS. CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. CARB regulates mobile air pollution sources, such as motor vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications, which became effective in March 1996. CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality management functions at the regional and county levels.

South Coast Air Quality Management District

SCAQMD monitors air quality within the study area. SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of Orange County; the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties; and the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin. The 1977 Lewis Air Quality Management Act created SCAQMD to coordinate air quality planning efforts throughout Southern California. This Act merged four county air pollution control agencies into one regional district to better address the issue of improving air quality in Southern California. Under the Act, renamed the Lewis-Presley Air Quality Management Act in 1988, SCAQMD is the agency principally responsible for comprehensive air pollution control in SCAB. SCAB is a subregion of the SCAQMD and covers an area of 6,745 square miles. SCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. SCAB is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east; and the San Diego County line to the south.

Specifically, SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards within the district. Programs that were developed include air quality rules and regulations that regulate stationary source, area source, point source and certain mobile source emissions. SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

Air Quality Management Plan

All areas designated as nonattainment under the CCAA are required to prepare plans showing how the area would meet the state air quality standards by its attainment dates. The Air Quality Management Plan (AQMP) is the region's plan for improving air quality in the region. It addresses CAAA and CCAA requirements and demonstrates attainment with state and federal ambient air quality standards. The AQMP is prepared by SCAQMD and the SCAG. The AQMP provides policies and control measures that reduce emissions to attain both state and federal ambient air quality standards by their applicable deadlines. Environmental review of individual projects within the SCAB must analyze whether the proposed project's daily construction and operational emissions

would exceed thresholds established by SCAQMD. The environmental review must also analyze whether individual projects would increase the number or severity of existing air quality violations.

The 2007 AQMP was adopted by SCAQMD on June 1, 2007. The 2007 AQMP proposes attainment demonstration of the federal $PM_{2.5}$ standards through a more focused control of SO_X, directly emitted $PM_{2.5}$, and NO_X supplemented with VOCs by 2015. The eight-hour ozone control strategy builds upon the $PM_{2.5}$ strategy, augmented with additional NO_X and VOC reductions to meet the standard by 2024. The 2007 AQMP also addresses several federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2007 AQMP is consistent with and builds upon the approaches taken in the 2003 AQMP.

Global Climate Change

Global climate change refers to historical variance in Earth's meteorological conditions, which are measured by wind patterns, storms, precipitation, and temperature. There is general scientific agreement that the Earth's average surface temperature has increased by 0.3 to 0.6 degrees Celsius over the past century. The reasons behind the increase in temperature are not well understood and are the subject of intense research activity. Many scientific studies have been completed to determine the extent that GHG emissions from human sources (e.g., fossil fuel combustion) affect the Earth's climate. The interrelationships between atmospheric composition, chemistry, and climate change are very complex. For example, historical records indicate a natural variability in surface temperature. Historical records also indicate that atmospheric concentrations of a number of GHG have increased significantly since the beginning of the industrial revolution. As such, significant attention is being given to anthropogenic (human) GHG emissions.

Many chemical compounds found in the Earth's atmosphere act as GHGs. These gases allow sunlight to enter the atmosphere freely. When sunlight strikes the Earth's surface, some of it is reflected back towards space as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy sent from the sun to the Earth's surface should be approximately equal to the amount of energy radiated from Earth back into space, leaving the temperature of the Earth's surface roughly constant. Some GHGs are emitted naturally (water vapor, CO_2, CH_4, and NO_2), while others are exclusively human-made (e.g., gases used for aerosols). According to the California Energy Commission (CEC), emissions from fossil fuel consumption represent approximately 81 percent of GHG emissions and transportation creates 41 percent of GHG emissions in California.

The State of California has traditionally been a pioneer in efforts to reduce air pollution, dating back to 1963 when the California New Motor Vehicle Pollution Control Board adopted the nation's first motor vehicle emission standards. Likewise, California has a history of actions undertaken in response to the threat posed by climate change. AB 1493, signed by California's governor in July 2002, requires passenger vehicles and light duty trucks to achieve maximum feasible reduction of GHG emissions by model year

2009. AB 1493 was enacted based on recognition that passenger cars are significant contributors to the State's GHG emissions.

Following the passage of AB 1493, the issue was turned over to CARB to determine the reduction targets, based on the CARB's analysis of available and near-term technology and cost. After evaluating the options, the CARB established limits that will result in approximately a 22-percent reduction in GHG emissions from new vehicles by 2012, and approximately a 30-percent reduction by 2016. The CAAA reserves the control of emissions from motor vehicles for the federal government—with the exception of California, due to its early activity and special conditions (i.e., high density of motor vehicles, topography conducive to pollution formation in heavily populated basins—e.g., Los Angeles and the San Joaquin Valley), and any states that opt for the California regulations. For California to implement a modification such as that represented in AB 1493, it must, per the language of the Federal Clean Air Act, request a waiver (Sec. 209 (b)1). The USEPA has not ruled on California's request for a waiver, thereby possibly delaying the CARB's proposed implementation schedule.

On September 27, 2006, AB 32, the California Global Warming Solutions Act of 2006, was enacted by the State of California. The legislature stated that "global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." AB 32 caps California's GHG emissions at 1990 levels by 2020. AB 32 defines GHG emissions as all of the following gases: CO_2, CH_4, NO_2, hydrofluorocarbons, perfluorocarbons and sulfur hexaflouride. This bill represents the first enforceable statewide program in the United States to cap all GHG emissions from major industries and include penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB 32 lays out a program to inventory and reduce GHG emissions in California and from power generation facilities located outside the State that serve California residents and businesses.

AB 32 charges the CARB with the responsibility to monitor and regulate the sources of GHG emissions in order to reduce those emissions. On June 1, 2007, CARB adopted three discrete early action measures to reduce GHG emission. These measures involved complying with a low carbon fuel standard, reducing refrigerant loss from motor vehicle air conditioning maintenance, and increasing methane capture from landfills. On October 25, 2007, the CARB tripled the set of previously approved early action measures. The newly approved measures include Smartway truck efficiency (i.e., reducing aerodynamic drag), port electrification, reducing perfluorocarbons from the semiconductor industry, reducing propellants in consumer products, promoting proper tire inflation in vehicles, and reducing sulfur hexaflouride emission from the non-electricity sector. AB 32 also required CARB to define the 1990 baseline emissions for California and adopt that baseline as the 2020 statewide emissions cap. The CARB has determined that the total statewide aggregated greenhouse gas 1990 emissions level and 2020 emissions limit is 427 million metric tons of carbon dioxide equivalent.

The CARB is also tasked with establishing a set of rules by January 1, 2011, for reducing GHG emissions to achieve the emissions cap by 2020. These rules must take effect no later than 2012. In designing emission reduction measures, the CARB must aim to

minimize costs, maximize benefits, improve and modernize California's energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the State's efforts to improve air quality.

California Senate Bill (SB) 375 provides a means for achieving AB 32 goals from cars and light trucks. The bill aligns three critical policy areas of importance to local government: (1) regional long-range transportation plans and investments; (2) regional allocation of the obligation for cities and counties to zone for housing; and (3) a process to achieve greenhouse gas emissions reductions targets for the transportation sector. The new law establishes a process for CARB to develop the GHG emissions reductions targets for each region (as opposed to individual local governments or households). SB 375 relies upon regional planning processes already underway in the 17 MPOs in the state to accomplish its objectives. Most notably, the measure requires the MPO to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan, which sets forth a vision for growth for the region taking into account the transportation, housing, environmental, and economic needs of the region. The SCS is the blueprint by which the region will meet its GHG emissions reductions target if there is a feasible way to do so. Additionally, SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions.

California Senate Bill 97, passed in August 2007, is designed to work in conjunction with CEQA and AB 32. CEQA requires the State Office of Planning and Research (OPR) to prepare and develop proposed guidelines for the implementation of CEQA by public agencies. SB 97 requires OPR, by July 1, 2009, to prepare, develop, and transmit to the State Resources Agency guidelines for the feasible mitigation of GHG emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency would be required to certify and adopt the guidelines by January 1, 2010 and OPR would be required to periodically update the guidelines to incorporate new information or criteria established by the CARB pursuant to the California Global Warming Solutions Act of 2006. SB 97 would apply retroactively to any environmental impact report, negative declaration, mitigated negative declaration, or other document under CEQA that has not been certified or adopted by the CEQA lead agency. In addition, SB 97 exempts transportation projects funded under the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or projects funded under the Disaster Preparedness and Flood Prevention Bond Act of 2006.

The OPR CEQA guidelines will provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents. In the interim, OPR has published informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents. According to the OPR, lead agencies should determine whether GHGs may be generated by a proposed project, and if so, quantify or estimate the GHG emissions by type and source. The lead agency must assess whether those emissions are individually or cumulatively significant. When assessing whether a project's effects on climate change are "cumulatively considerable" even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects. Finally, if the lead agency determines that the GHG emissions from the

proposed project are potentially significant, it must investigate and implement ways to avoid, reduce, or otherwise mitigate the impacts of those emissions.

The SCAQMD has convened a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that will provide input to the SCAQMD staff on developing GHG CEQA significance thresholds. The working group is currently discussing multiple methodologies for determining project significance. These methodologies include categorical exemptions, consistency with regional GHG budgets in approved plans, a numerical threshold, performance standards, and emissions offsets.

In addition to the state regulations, the City of Los Angeles has issued guidance promoting green building to reduce GHG emissions. The goal of the Green LA Action Plan (Plan) is to reduce greenhouse gas emissions 35 percent below 1990 levels by 2030. The Plan identifies objectives and actions designed to make the City a leader in confronting global climate change. The measures would reduce emissions directly from municipal facilities and operations, and create a framework to address citywide GHG emissions. The Plan lists various focus areas in which to implement GHG reduction strategies. Focus areas listed in the Plan include energy, water, transportation, land use, waste, port, airport, and ensuring that changes to the local climate are incorporated into planning and building decisions. The Plan discusses the City's goals for each focus area as follows:

Energy

- Increase the generation of renewable energy;
- Encourage the use of mass transit;
- Develop sustainable construction guidelines;
- Increase citywide energy efficiency; and
- Promote energy conservation.

Water

- Decrease per capita water use to reduce electricity demand associated with water pumping and treatment.

Transportation

- Power the City's vehicle fleet with alternative fuels; and
- Promote alternative transportation (e.g., mass transit and rideshare).

Other Goals

- Create a more livable City through land use regulations;
- Increase recycling, reducing emissions generated by activity associated with the Port of Los Angeles and regional airports;
- Create more city parks promoting the environmental economic sector; and
- Adapt planning and building policies to incorporate climate change policy.

At this time, the USEPA does not regulate GHG emissions. In April 2007, the USEPA issued an important ruling in its first case on global warning. In the case of *Massachusetts v. USEPA*, the United States Supreme Court reviewed a USEPA decision not to regulate GHG emissions from cars and trucks under the Clean Air Act. The Court found that Massachusetts was injured by global warming. The lawsuit focused on Section 202 of the CAAA. The case resolved the following legal issues: (1) the CAAA grants the USEPA authority to regulate GHG, and (2) USEPA did not properly exercise its lawful discretion in deciding not to promulgate regulations.

F.5.3.1 National and State Ambient Air Quality Standards and Attainment Status

As required by the federal CAAA, NAAQS have been established for seven major air pollutants: CO, NO_2, O_3, $PM_{2.5}$, PM_{10}, SO_2, and Pb. The CAAA requires USEPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in Table F-2. The USEPA has classified SCAB as maintenance for CO and nonattainment for O_3, $PM_{2.5}$, and PM_{10}. As discussed above, the CAAQS are generally more stringent than the corresponding federal standards (NAAQS) and, as such, are used as the comparative standard in the air quality analysis contained in this report. The state standards are summarized in Table F-2.

The CCAA requires the CARB to designate areas within California as either attainment or non-attainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment. Under the CCAA, the Los Angeles County portion of the SCAB is designated as a nonattainment area for O_3, $PM_{2.5}$, and PM_{10}.

Sensitive Receptors for the Maintenance Facility Site

CARB has identified the following typical groups who are most likely to be affected by air pollution: children under 14, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors within 0.25 miles of the maintenance site alternatives are listed below.

Site #14 – Arbor Vitae/Bellanca Alternative

- Residential land uses located approximately 280 feet or further to the north;
- Residential land uses located approximately 350 feet or further to the east;
- Residential land uses located approximately 375 feet or further to the west;
- Bright Star Secondary Charter Academy located approximately 600 feet to the east;

Table F-2. State and National Ambient Air Quality Standards

Pollutant	Averaging Period	Federal		California	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O_3)	1-hour	--	--	0.09 ppm (180 μg/m^3)	Nonattainment
	8-hour	0.075 ppm (147 μg/m^3)	Nonattainment	0.070 ppm (137 μg/m^3)	N/A
Respirable Particulate Matter (PM_{10})	24-hour	150 μg/m^3	Nonattainment	50 μg/m^3	Nonattainment
	Annual Arithmetic Mean	--	--	20 μg/m^3	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	24-hour	35 μg/m^3	Nonattainment	--	--
	Annual Arithmetic Mean	15 μg/m^3	Nonattainment	12 μg/m^3	Nonattainment
Carbon Monoxide (CO)	8-hour	9 ppm (10 mg/m^3)	Maintenance	9.0 ppm (10 mg/m^3)	Attainment
	1-hour	35 ppm (40 mg/m^3)	Maintenance	20 ppm (23 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.053 ppm (100 μg/m^3)	Attainment	0.030 ppm (56 μg/m^3)	Attainment
	1-hour	--	--	0.18 ppm (338 μg/m^3)	Attainment
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	0.030 ppm (80 μg/m^3)	Attainment	--	--
	24-hour	0.14 ppm (365 μg/m^3)	Attainment	0.04 ppm (105 μg/m^3)	Attainment
	3-hour	--	--	--	--
	1-hour	--	--	0.25 ppm (655 μg/m^3)	Attainment
Lead (Pb)	30-day average	--	--	1.5 μg/m^3	Attainment
	Calendar Quarter	0.15 μg/m^3	Attainment	--	--

- = No standard; N/A = Not Available; ppm – parts per million; μg/m^3 = Micrograms per Cubic Meter of Air
Source: USEPA, *Greenbook*, 2008; CARB, *Ambient Air Quality Standards*, November 17, 2008.

- Animo Leadership Charter High School located approximately 750 feet to the northeast; and
- Residential land uses located approximately 850 feet or further to the south.

The above sensitive receptors have the greatest potential to be impacted by air emissions. Additional sensitive receptors are located in the surrounding community and may be impacted by air emissions.

Methodology for Maintenance Facility Site

Operational emissions were based on vehicle miles of travel (VMT). Automobile emissions factors were obtained from the CARB's EMFAC2007 model. EMFAC2007 is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects the CARB's current understanding of how vehicles travel and how much they pollute. The EMFAC2007 model can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future. Construction GHG emissions were estimated using OFFROAD2007 and mobile source GHG emissions were estimated using EMFAC2007. GHG emissions associated with electricity use were provided by Metro for the Division 22 Maintenance Facility and increased by a factor of 1.54 to account for a larger facility.

F.5.4 CEQA Thresholds

Significance Criteria

SCAQMD Guidance

Based on SCAQMD guidance, a significant impact would result if:

- Daily operational emissions were to exceed SCAQMD operational emissions thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10};
- Project-related traffic causes CO concentrations at study intersections to violate the CAAQS for either the one- or eight-hour period. The CAAQS for the one- and eight-hour periods are 20 ppm and 9.0 ppm, respectively;
- The Crenshaw/LAX Transit Corridor Project would generate significant emissions of TACs;
- The Crenshaw/LAX Transit Corridor Project would create an odor nuisance; and/or
- The Crenshaw/LAX Transit Corridor Project would not be consistent with the AQMP.

Greenhouse Gas Significance Criteria

CAPCOA completed an assessment of methodologies for determining significance associated with GHG emissions. In the absence of a certified threshold established by the SCAQMD, it has been determined that a 10,000 metric ton per year threshold is appropriate for determining GHG impacts.

The State has mandated a goal of reducing State-wide emissions to 1990 levels by 2020, even though State-wide population and commerce is predicted to grow substantially. To help meet this goal the California Climate Action Team recommended strategies that could be implemented by lead agencies to reduce GHG emissions. The Crenshaw/LAX Transit Corridor Project would comply with these strategies which include increasing building energy efficiency and reducing HFC use in air conditioning systems. The Crenshaw/LAX Transit Corridor Project would also comply with the Attorney General GHG reduction measures and the CARB Scoping Plan. Metro's Energy and Sustainability Policy would be implemented with the Crenshaw/LAX Transit Corridor Project. This Policy includes, at a minimum, constructing the Crenshaw/LAX Transit Corridor Project to achieve Leadership in Energy and Environmental Design (LEED) Silver certification as well as conducting energy use audits. The LEED rating system also includes rigorous energy efficiency requirements that can far exceed ASHRAE and Title 24 standards. Specifically, Metro has established the following sustainability goals for the proposed Project:

- Minimum LEED Silver certification
- Building life of 30 to 50 years with potential up to 100 years
- Produce onsite renewable energy with a photovoltaic system through a public-private partnership
- Reduce energy cost by 28 percent as compared to a minimally compliant building
- Utilize stormwater and greywater for bus wash and other non-potable water uses
- 30 percent to 40 percent savings in annual water usage from plumbing fixtures
- Use fly ash and recycled aggregate in concrete in all locations where feasible
- Use Energy Star Cement Plant Manufacturing in procurement process
- 75 percent construction waste recycling
- 10 to 20 percent recycled content materials
- 10 to 20 percent local/regional materials
- 5 percent reused materials
- Provide excellent daylighting and views
- Purchase and use Energy Star labeled equipment
- Track and monitor energy and water usage during occupancy

F.6 Noise and Vibration

F.6.1 Definitions

F.6.1.1 Measuring Noise Levels

Sound levels are expressed on a logarithmic scale of decibels (abbreviated as dB), in which a change of 10 units on the decibel scale reflects a 10-fold increase in sound energy. A 10-fold increase in sound energy roughly translates to a doubling of perceived loudness. In

evaluating human response to noise, acousticians compensate for people's response to varying frequency or pitch components of sound. The human ear is most sensitive to sounds in the middle frequency range used for human speech, and is less sensitive to lower and higher-pitched sounds. The "A" weighted scale is used to account for this sensitivity. Thus, most community noise standards are expressed in dB on the "A"-weighted scale, abbreviated dBA. Zero on the decibel scale is set roughly at the threshold of human hearing. The most commonly used noise metric is equivalent noise level (L_{eq}.) which represents the energy sum of all the sound that occurs during a measurement time period.

The community noise environment consists of wide varieties of sounds, some near and some far away, which vary over the 24-hour day. People respond to the 24-hour variation in noise but are most sensitive to noise at night. Thus, this section focuses on the metric known as day/night noise level (L_{dn}), which represents the average noise level over a 24-hour period. L_{dn} is a 24-hour L_{eq}, but with a 10-dB penalty assessed to noise events occurring at night between 10:00 p.m. and 7:00 a.m. The effect of this penalty is that, in the calculation of L_{dn}, any noise event during nighttime hours is equivalent to ten noise events during the daytime hours. This strongly weights L_{dn} toward nighttime noise to reflect most people being more easily annoyed by noise during the nighttime hours when background noise is lower and most people are sleeping. A rural area with no major roads nearby would have an average L_{dn} around 50 decibels A weighted (dBA); a noisy residential area close to major arterial streets would average 70 dBA. Figure F-1 illustrates typical L_{dn} values for rural and urban areas.

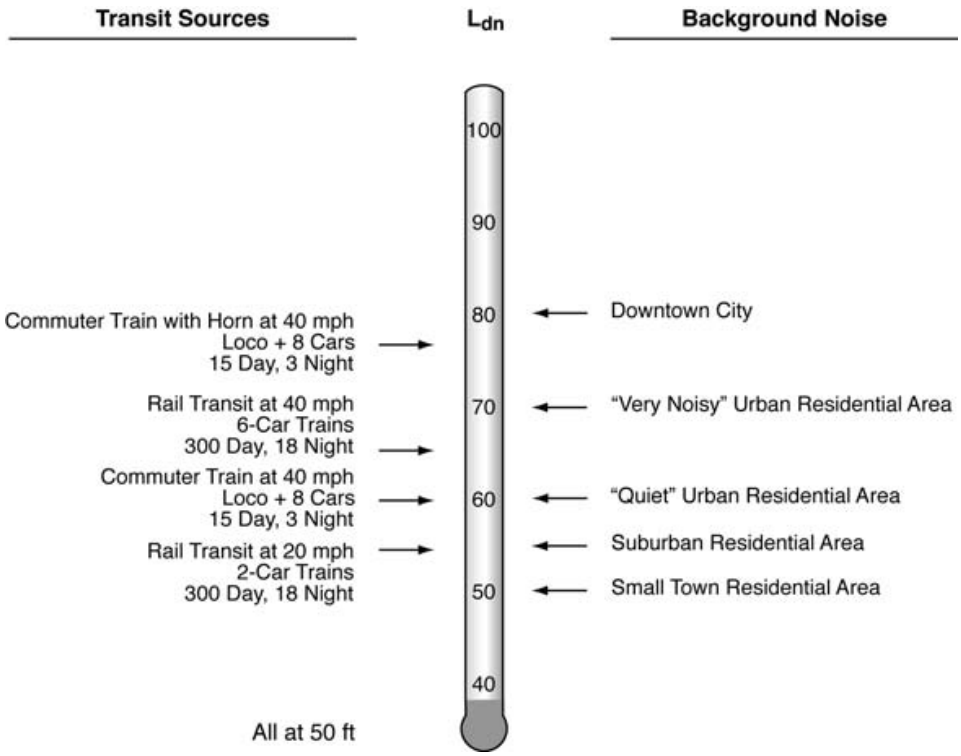
F.6.1.2 Ground-Borne Vibration

Ground-borne vibration is different from air-borne noise, as it is not a widespread environmental problem and it is generally limited to localized areas near roadways, rail systems, construction sites, and some industrial operations. Automobile and truck traffic rarely create perceptible ground-borne vibration, except when there are bumps, potholes, or other discontinuities in the roadway surface. When traffic causes phenomena, such as the rattling of windows, the cause is more likely to be air-borne vibration rather than ground-borne vibration. The unusual situations where traffic or other existing sources cause intrusive vibration may be an indication of geologic or soil conditions that would result in higher than normal levels of train vibration.

Existing background building vibration usually ranges from between 40 and 50 Vibration Velocity Levels (VdB), which is well below the range of human perception (Figure F-2). Although the perceptibility threshold is approximately 65 VdB, human response to vibration is not usually significant unless the Root Mean Square (RMS) vibration velocity level exceeds 70 VdB (Guidance Manual for Transit Noise and Vibration Impact Assessment, Federal Transit Administration [FTA], May 2006). This is a typical level of vibration noticed 50 feet from a rapid or light-rail transit system. Buses and trucks rarely create vibration that exceeds 70 VdB, unless there are large bumps or potholes in the road.

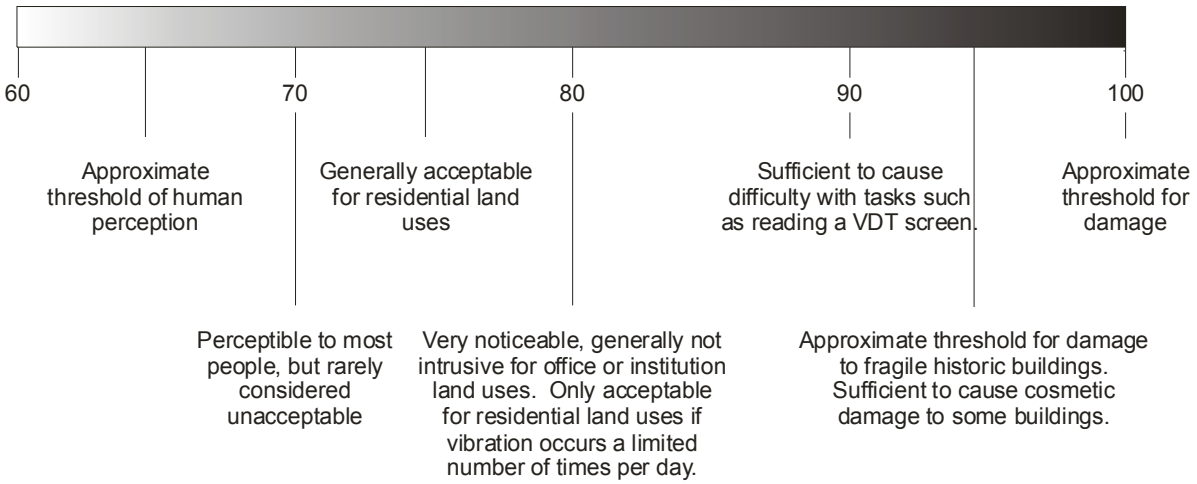
The transit operations would be subject to FTA noise and vibration criteria. Project construction would be subject to the noise ordinances of the local jurisdictions of the Cities of Los Angeles, Inglewood, Hawthorne, El Segundo, and the County of Los Angeles.

Figure F-1. Typical L_{dn} Values



Source: Guidance Manual for Transit Noise and Vibration Impact Assessment, FTA, May 2006.

Figure F-2. Typical Levels of Ground-Borne Vibration



Source: Guidance Manual for Transit Noise and Vibration Impact Assessment, FTA, May 2006.

Federal

FTA Noise Impact Criteria

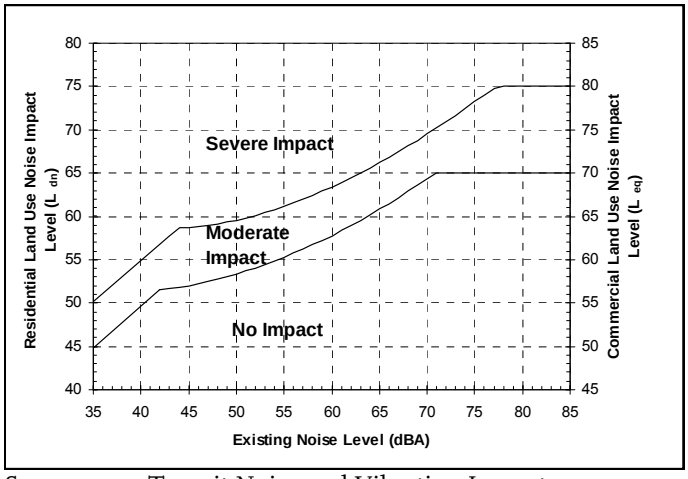
FTA has developed standards and criteria for assessing noise impacts related to transit projects. These standards, outlined in Transit Noise and Vibration Impact Assessment (FTA, 2006), are based on community reactions to noise. The criteria reflect changes in noise exposure using a sliding scale where the higher the level of existing noise, the smaller increase in total noise exposure is allowed. Some land use activities are more sensitive to noise than others, such as parks, churches, and residences, as compared to industrial and commercial uses. Non-sensitive uses do not require noise impact assessment. The FTA Noise Impact Criteria groups sensitive land uses into the following three categories:

- **Category 1** – Buildings or parks where quiet is an essential element of their purpose
- **Category 2** – Residences and buildings where people normally sleep. This includes residences, hospitals, and hotels, where nighttime sensitivity is assumed to be of utmost importance
- **Category 3** – Institutional land uses with primarily daytime use that depends on quiet as an important part of operations, including schools, libraries, and churches

L_{dn} is used to characterize noise exposure for residential areas (Category 2), and a maximum 1-hour L_{eq} (during the period that the facility is in use) is utilized for other noise-sensitive land uses such as school buildings (Categories 1 and 3).

The following two impact levels are included in the FTA criteria, as shown in Figure F-3: It is Metro's policy to mitigate only severe impacts.

Figure F-3. Noise Impact Criteria for Transit Projects



Source: Transit Noise and Vibration Impact Assessment, FTA, May 2006

- Moderate Impact – In this range, other project-specific factors must be considered to determine the magnitude of the impact and the need for mitigation. These other factors may include the predicted increase over existing noise levels, the type and number of noise-sensitive land uses affected, existing outdoor-indoor sound insulation, and the cost effectiveness of mitigating noise to more acceptable levels.
- Severe Impact – Noise mitigation will be specified for severe impact areas unless there is no practical method of mitigating the noise.

The noise impact criteria for transit operations are summarized in Table F-3.

Table F-3. FTA Noise Impact Criteria

Existing Noise Exposure L_{eq} or L_{dn} [1]	Noise Exposure Impact Thresholds for Transit Projects – L_{dn} or L_{eq} [1] (all noise levels in dBA)			
	Category 1 or 2 Sites		Category 3 Sites	
	Moderate Impact	Severe Impact	Moderate Impact	Severe Impact
<43	Ambient+10	Ambient+15	Ambient+15	Ambient+20
43-44	52	58	57	63
45	52	58	57	63
46-47	53	59	58	64
48	53	59	58	64
49-50	54	59	59	64
51	54	60	59	65
52-53	55	60	60	65
54	55	61	60	66
55	56	61	61	66
56	56	62	61	67
57-58	57	62	62	67
59-60	58	63	63	68
61-62	59	64	64	69
63	60	65	65	70
64	61	65	66	70
65	61	66	66	71
66	62	67	67	72
67	63	67	68	72
68	63	68	68	73
69	64	69	69	74
70	65	69	70	74
71	66	70	71	75
72-73	66	71	71	76
74	66	72	71	77
75	66	73	71	78
76-77	66	74	71	79
>77	66	75	71	80

Source: Transit Noise and Vibration Impact Assessment, FTA, May 2006.
Note: [1] L_{dn} is used for land uses where nighttime sensitivity is a factor. Daytime L_{eq} is used for land use involving only daytime activities.

The first column shows the existing noise exposure and the remaining columns show the additional noise exposure caused by a rail project that would result in the two impact levels. As the existing noise exposure increases, the amount of allowable increase in noise exposure from the project alternatives decreases. The future noise exposure would be the combination of the existing noise exposure and the additional noise exposure caused by a rail project.

FTA Vibration Impact Criteria

FTA has developed impact criteria for acceptable levels of ground-borne noise and vibration (May 2006). Table F-4 summarizes the FTA impact criteria for ground-borne vibration. These criteria are based on previous standards, criteria, and design goals, including noise and vibration guidelines from American National Standards Institute (ANSI) S3.29 (Acoustical Society of America, 1983) and the American Public Transit Association (American Public Transportation Association [APTA], 1981). Some buildings (e.g., concert halls, television and recording studios, and theaters) can be very sensitive to vibration, but do not fit into any of the three FTA sensitive land use categories previously described. Because of these buildings' sensitivity to vibration, they usually warrant special attention during the environmental review of a rail project. Table F-5 lists criteria for acceptable levels of ground-borne vibration for various types of special buildings.

Table F-4. FTA Ground-Borne Vibration Impact Criteria

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 Micro-inch/sec)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations	65 VdB[4]	65 VdB[4]	65 VdB[4]
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

Source: Transit Noise and Vibration Impact Assessment (FTA, May 2006)

Notes:
[1] "Frequent Events" are defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.
[2] "Occasional Events" are defined as between 30 and 70 vibration events of the same source per day. Most commuter rail lines have this many events.
[3] "Infrequent Events" are defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
[4] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

Table F-5. FTA Ground-Borne Vibration Impact Criteria for Special Buildings

Type of Building or Room	Ground-Borne Vibration Impact Levels (VdB re 11 micro-inch/sec)	
	Frequent Events[1]	Occasional or Infrequent Events[2]
Concert Halls	65 VdB	65 VdB
Television Studios	65 VdB	65 VdB
Recording Studios	65 VdB	65 VdB
Auditorium	72 VdB	80 VdB
Theaters	72 VdB	80 VdB

Source: Transit Noise and Vibration Impact Assessment (FTA, May 2006)
Notes: [1] "Frequent Events" are defined as more than 70 vibration events per day.
[2] "Infrequent Events" are defined as fewer than 70 vibration events per day. This category includes most commuter rail systems.

State Noise and Vibration Impact Criteria

The State of California uses the impact criteria developed by the FTA and Federal Railway Administration (FRA) to determine acceptable levels of noise and ground-borne vibration.

The California Public Utilities Commission (CPUC) regulates train operational warning devices. California Public Utilities Code Section 7604 states that a bell, siren, horn, whistle, or similar audible warning device should be sounded at any public crossing. Section 7604 generally references Section 222 of Title 49 of the Code of Federal Regulations and states that warning devices should comply with the federal regulations. Title 49 states that the locomotive horn on the lead cab car shall be sounded when the lead cab car is approaching a public highway-rail grade crossing. The sounding should include two long blasts, one short blast, and one long blast.

The CPUC has jurisdiction over the operation of light rail transit systems. CPUC regulations require the use of audible warning devices, including on-vehicle audible warnings and crossing bells, at all grade crossings that are protected by crossing gates. Regarding crossing bells, Section 9.5 of CPUC General Order 75-D specifies that: "Bells or other audible warning devices shall be included in all automatic warning device assemblies (except as provided in Section 10) and shall be operated in conjunction with the flashing light signals. See American Railway Engineering and Maintenance of Way Association's *Communications and Signals Manual of Recommended Practices* (AREMA) for reference."[2] The General Order does not specify a sound level for the bell. Sections 3-2.60 and 3-2.61 of the AREMA manual state that omni-directional crossing bells should generate a sound level between 75 dBA and 105 dBA at a distance of 10 feet from the bell.

[2] Section 10 states that, "Warning devices may be installed on raised island medians. At at-grade crossings where warning devices are installed on the right-hand side of traffic flow, backlights or audible warning devices are not required on median-mounted warning devices."

The FRA regulates train horn noise. The FRA requires that train horns provide a minimum of 96 and maximum of 110 dBA when measured 100 feet in front of the train in its direction of travel. The typical train horn produces a noise level of 105 dBA at 100 feet.

Wayside horns are a viable alternative to locomotive horns for audible warning at grade crossings. Wayside horns are mounted on poles at the crossing, have a more focused radiation pattern, and produce less community noise exposure. The FRA requires that wayside horns provide a minimum of 92 and maximum of 110 dBA when measured 100 feet from the centerline of the nearest track. The typical wayside horn produces a noise level of 97 dBA at 100 feet. The single greatest difference between wayside and train horns is that wayside horn noise is constant while train horn noise increases as the train approaches.

The CPUC has the final decision in designing grade crossing and implementing warning systems. Intersections with grade crossings must be designed to meet the CPUC regulations and the FRA warning standards. The CPUC considers each intersection during the final design process and works with the lead agency to install warning devices where necessary and wayside horns where appropriate

Local Noise and Vibration Impact Criteria

City of Los Angeles

The noise ordinance for the City of Los Angeles does not apply to "any vehicle which is operated upon any public highway, street or right-of-way" Section 114.02(a). Section 41.40 of the Los Angeles Municipal Code states that engaging in construction, repair, or excavation work with any construction type device or job-site delivering of construction materials without a Police Commission approved variance would constitute a violation:

- Between the hours of 9:00 p.m. and 7:00 a.m.
- In any residential zone, or within 500 feet of land so occupied, before 8:00 a.m. or after 6:00 p.m. on any Saturday, or at any time on any Sunday
- In a manner as to disturb the peace and quiet of neighboring residents or any reasonable person of normal sensitiveness residing in the area

However, Subsection (j) of Section 41.40 states that the noise standards do not apply to major public works construction by the City of Los Angeles and its proprietary Departments, including all structures and operations necessary to regulate or direct traffic due to construction activities. It also states that the Board of Police Commissioners will grant a variance for this work and construction activities will be subject to all conditions of the variance as granted. Concurrent with the request for a variance, the City Department that will conduct the construction work will notify each affected Council district office and established Neighborhood Council of projects where proposed Sunday and/or Holiday work will occur.

City of Inglewood

The City of Inglewood Municipal Code has no regulations that apply to the operation of transit vehicles. However, Section 5-43 makes it "unlawful for any person to operate any

motor driven vehicle within the City that, due to the nature of the operation of the vehicle or due to the operation condition of the vehicle, or due to modifications made to the vehicle, generates noise so that a reasonable person is caused discomfort or annoyance" (Ordinance 88-29 9-13-88).

Construction noise is regulated by Section 5-41 of the Municipal Code, which states: "It shall be unlawful for any person within a residential zone, or within a radius of 500 feet there from, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects or to operate any pile driver, pneumatic hammer, derrick, excavation or earth moving equipment, or other construction equipment between the hours of 8:00 p.m. and 7:00 a.m. of the next day in such a manner that a reasonable person residing in the area is caused discomfort or annoyance, unless beforehand a permit therefore has been obtained by the Permits and Licenses Committee of the City" (Ordinance 88-29 9-13-88).

City of El Segundo

The Municipal Code for the City of El Segundo, in Section 7-2-10: Exemptions, states: "The following activities shall be exempted from provisions of this Chapter:"

- "D. Construction Noise: Noise sources associated with or vibration created by construction, repair, or remodeling of any real property, provided said activities do not take place between the hours of 6:00 p.m. and 7:00 a.m. Monday through Saturday, or any time Sunday or a Federal holiday, and provided the noise level created by such activities does not exceed the noise standard of 65 dBA plus the limits specified in subsection 7-2-4C of this Chapter as measured on the receptor residential property line and provided any vibration created does not endanger the public health, welfare and safety"
- "F. Activities Preempted By State or Federal law: Any activity to the extent regulation thereof has been preempted by State or Federal law, including, but not limited to, aircraft, motor vehicles, railroads and other interstate carriers" (Ordinance 1242, 1-16-1996)."

County of Los Angeles

The Noise Control Ordinance of the County of Los Angeles, Section 12.08.440, Construction Noise, prohibits the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m. or at any time on Sundays or holidays, such that the sound there from creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance issued by the health officer. The ordinance also provides noise restrictions for mobile and stationary (periods of 10 days or more) construction activities during the daytime hours of 7:00 a.m. to 8:00 p.m. (Table F-6). At business structures, mobile equipment is restricted to a maximum noise level of 85 dBA for nonscheduled, intermittent, short-term operation of mobile equipment for all hours during daily operation, including Sunday and legal holidays.

Table F-6. County of Los Angeles Mobile and Stationary Noise Restrictions

Mobile Equipment	Single-Family Residential	Multi-Family Residential	Semi-Residential/ Commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA
Stationary Equipment			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

Source: County of Los Angeles Noise Control Ordinance.

F.7 Ecosystems/Biological Resources

F.7.1 Federal

Endangered Species Act

The Endangered Species Act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Section 7 of the Endangered Species Act requires federal agencies to aid in the conservation of listed species, and to ensure that the activities of federal agencies will not jeopardize the continued existence of listed species or adversely modify designated critical habitat. At the federal level, the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) are responsible for administration of the Endangered Species Act.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act decrees that all migratory birds and their parts (including eggs, nests and feathers) are fully protected. Under the act, taking, killing, or possessing migratory birds is unlawful. Projects that are likely to result in the taking of birds protected under the Migratory Bird Treaty Act will require the issuance of take permits from the USFWS. Activities that would require such a permit would include, but not be limited to, the destruction of migratory bird nesting habitat during the nesting season when eggs or young are likely to be present. Under the act, surveys are required to determine if nests will be disturbed and, if so, a buffer area with a specified radius around the nest would be established so that no disturbance or intrusion would be allowed until the young had fledged and left the nest. If not otherwise specified in the permit, the size of the buffer area would vary with species and local circumstances (e.g. presence of busy roads), and would be based on the professional judgment of the monitoring biologist.

F.7.2 State

California Endangered Species Act

The California Department of Fish and Game is responsible for the administration of the California Endangered Species Act. Unlike the federal Endangered Species Act, there are no State agency consultation procedures under the California Endangered Species Act. For projects that affect both a State and federal listed species, compliance with the federal Endangered Species Act will satisfy the California Endangered Species Act if the California Department of Fish and Game determines that the federal incidental take authorization is "consistent" with the California Endangered Species Act. Projects that result in a take of a State-only listed species require a take permit under the California Endangered Species Act. The federal and/or State acts also lend protection to species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat.

California Fish and Game Code Sections 3500 - 3705, Migratory Bird Protection

Sections 3500 through 3705 of the California Fish and Game Code regulate the taking of migratory birds and their nests. These codes prohibit the taking of nesting birds, their nests, eggs, or any portion thereof during the nesting season. Typically, the breeding/nesting season is from March 1st through August 30th. Depending on each year's seasonal factors, the breeding season can start earlier and/or end later.

F.7.3 Local

Los Angeles County General Plan

The *Los Angeles County General Plan* identifies Significant Ecological Areas (SEAs) containing biological resources and sets forth the goal of conserving these areas. While development within an SEA is not prohibited, the Plan does require development to be limited and controlled in order to avoid impacting valuable biological resources.

City of Los Angeles Native Tree Protection Ordinance

In an effort to slow the decline of native tree habitat, the City of Los Angeles passed a Native Tree Protection Ordinance (Ordinance No. 177,404), which became law on April 23, 2006. The Native Tree Protection Ordinance:

- Protects all native oak tree species (Quercus Spp) including California Sycamore (Platanus Racemosa), California Bay (Umbellularia Californica), and California Black Walnut (Juglans Californica);
- Applies to protected trees four inches or greater in diameter, at 4.5 feet above ground (multiple trunk trees are calculated by cumulative diameter);
- Applies to protected trees on private lots; and
- Requires that a protected tree report be submitted by a registered consulting arborist, landscape architect, or pest control advisor who is also a certified arborist.

Protected tree removal requires a removal permit by the Board of Public Works. Any act that may cause the failure or death of a protected tree requires inspection by the City's Urban Forestry Division. Although the law does not require a permit for the pruning of protected trees, the City recommends consultation with a certified arborist to ensure that the pruning of protected trees is performed carefully.

City of Inglewood General Plan

The *City of Inglewood General Plan* includes a chapter identifying the existing environmental resources in the City of Inglewood based on a search of the California Natural Diversity Database and reconnaissance level surveys. The Plan states that no protected species occur within the City of Inglewood, but redevelopment efforts would be impacted if any species are identified in the future through focused field surveys.

City of El Segundo General Plan

The *City of El Segundo General Plan* identifies sensitive plant and animal species that exist within the City and sets forth a policy for conservation. While most native vegetation has been replaced with landscaped exotic vegetation, some important plant communities do exist within the City of El Segundo, including the southern dune scrub plant community within the El Segundo Dunes. Several sensitive and endangered species, including the El Segundo Blue Butterfly and the Pacific Pocket Mouse, are known to exist in the El Segundo Dunes. In addition, the City's coastal area provides foraging habitat for shorebirds.

F.7.4 CEQA Thresholds

Appendix G of the *CEQA Guidelines* addresses impacts to biological resources under Section IV. The *CEQA Guidelines* state that a project would normally have a significant impact on biological resources if it could:

- Result in the loss of individuals, or the reduction of existing habitat, of a state or federal listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or federally listed critical habitat;
- Result in the loss of individuals or the reduction of existing habitat of a locally designated species or a reduction in a locally designated natural habitat or plant community;
- Interfere with wildlife movement/migration corridors that may diminish the chances for long-term survival of a sensitive species;
- Result in the alteration of an existing wetland habitat; and/or
- Interfere with habitat such that normal species behaviors are disturbed (e.g., from the introduction of noise, light) to a degree that may diminish the chances for long-term survival of a sensitive species.

In addition, Section 15065 the CEQA Guidelines establishes the mandatory finding of significance related to ecosystems/biological resources if the project:

- Has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels,; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.

F.8 Geotechnical/Subsurface/Seismic/Hazardous Materials

F.8.1 Federal

Hazardous Materials Resources

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 defines the term hazardous substance as any substance, material, or waste, the exposure to which results in, or may result in, adverse effects on health or safety.

F.8.2 State

Geology, Soils, and Seismicity Resources

Principal state guidance relating to geologic hazards is contained in the Alquist-Priolo Act (Public Resource Code [PRC]. 2621 et seq.) and the Seismic Hazards Mapping Act of 1990 (PRC 2690-2699.6). The Alquist-Priolo Act prohibits the location of most types of structures for human occupancy across active traces of faults in earthquake fault zones, shown on maps prepared by the state geologist, and regulates construction in the corridors along active faults (earthquake fault zones). The Seismic Hazards Mapping Act of 1990 focuses on hazards related to strong ground shaking, liquefaction, and seismically-induced landslides. Under its provisions, the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards. The maps are to be used by cities and counties in preparing their general plans and adopting land use policies to reduce and mitigate potential hazards to public health and safety.

Pursuant to the Surface Mining and Reclamation Act (PRC 2710 et seq.), the State Mining and Geology Board identifies, in adopted regulations, areas of regional significance that are known to contain mineral deposits judged to be important in meeting the future needs of the area (PRC 2426 and 2790; Title 14 PRC 3350, et seq.). The State Mining and Geology Board also adopts State policy for the reclamation of mined lands and certifies local ordinances for the approval of reclamation plans as being consistent with State policies (PRC 2755-2764, 2774 et seq.).

Hazardous Materials Resources

The California Health and Safety Code (Sections 25316 and 25317) identifies the substances, materials, and wastes that require hazardous substance removal, including petroleum and petroleum by-products, waste oil, crude oil, and natural gas. Other

pertinent regulations include the Resource Conservation and Recovery Act (RCRA), the Clean Water Act, and any Department of Transportation standards.

F.8.3 Local

The local jurisdictions, departments, and documents that regulate and oversee issues related to geology, soils, seismicity, and hazardous materials within the study area are listed below.

The City of Los Angeles

Geology, Soils, and Seismicity Resources

- The 1996 City of Los Angeles General Plan, Safety Element
- The City of Los Angeles Department of Public Works
- The City of Los Angeles Department of Building and Safety

Hazardous Materials Resources

- The City of Los Angeles Department of Building and Safety
- The City of Los Angeles Bureau of Sanitation, Industrial Waste Management Division
- The City of Los Angeles Fire Department, Hazardous Materials Division
- The City of Los Angeles Fire Department, Underground Storage Tank Division

The City of Inglewood

Geology, Soils, and Seismicity Resources

- The City of Inglewood General Plan (1980s and 1990s)
- The 2006 City of Inglewood General Plan Update, Technical Background Report
- The City of Inglewood Public Works Department
- The City of Inglewood Planning and Building Services Department

The City of Hawthorne

Geology, Soils, and Seismicity Resources

- The City of Hawthorne General Plan
- The City of Hawthorne Department of Building of Safety
- The City of Hawthorne Public Works Department

The City of El Segundo

Geology, Soils, and Seismicity Resources

- The 1992 City of El Segundo General Plan, Public Safety Element
- The City of El Segundo Public Works Department
- The City of El Segundo Planning and Building Safety Department

The County of Los Angeles

Geology, Soils, and Seismicity Resources

- The 1990 Los Angeles County General Plan, Seismic Safety Element
- The County of Los Angeles Department of Public Works

Hazardous Materials Resources

- The County of Los Angeles Regional Water Quality Control Board

The State of California

Hazardous Materials Resources

- The Department of Toxic Substances Control

F.8.4 CEQA Thresholds

The 2008 CEQA Guidelines use the following questions related to hazards and hazardous materials, and geology and soils to determine whether a significant impact would occur.

Significance Criteria
Hazards and Hazardous Materials

Would the project:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school?
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Geology and Soils

Would the project:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
  - Strong seismic ground shaking
  - Seismic-related ground failure, including liquefaction?
  - Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soil, creating substantial risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

F.9 Water Resources

F.9.1 Federal

Clean Water Act of 1977 (33 U.S. Code 1251-1376)

The Federal Water Pollution Control Act of 1948 first prescribed a regulatory system for establishing water quality standards applicable to interstate or navigable waters. In 1972, amendments to this Act established a system of standards, permits, and enforcement. Further amendments were passed in 1977, when the Act was renamed the Clean Water Act. Today, the Clean Water Act is the nation's primary mechanism for protecting and improving water quality. The Act makes the states and the USEPA jointly responsible for identifying and regulating both point and non-point sources of pollution. The 1987 amendment to the Clean Water Act added Section 402(p) that requires the USEPA to develop regulations for the control of nonpoint source discharges, such as urban storm water runoff.

The goal of the Clean Water Act is to eliminate the discharge of pollutants and to restore and maintain the chemical, physical, and biological integrity of the Nations' waters. The Act also established the National Pollutant Discharge Elimination System (NPDES) permit system. NPDES permits are required for discharge of pollutants from point sources into navigable waters. Section 404 of the Act establishes a permit program for the discharge of dredged or fill material into waters of the United States.

The specific steps to obtain an NPDES permit are as follows:

- File the appropriate NPDES application forms with the Regional Water Board.
- State or Regional Water Board staff reviews the application for completeness and may request additional information.
- Staff determines if the discharge is to be permitted or prohibited. If a permit is needed and the application is complete, staff prepares a draft and sends out a notice for a 30-day public comment period.
- The discharger must publish the public notice for one day in the largest circulated paper in the municipality or county and submit proof of posting or publication to the Regional Water Board within 15 days after posting or publication.
- The Regional Water Board holds a public hearing after the 30-day public notification. The State or Regional Water Board may adopt the permit as proposed or with modification, or not adopt it at all. A majority vote of the Water Board members is required to adopt the permit. USEPA has 30 days to object to the draft permit, and the objection must be satisfied before the permit becomes effective.

The permit issuance process takes approximately six months, but may take longer depending upon the nature of the discharge.

Section 402 of the Clean Water Act established the NPDES, administering and regulating discharges to waterways. In California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are responsible for administering the NPDES storm water program.

Section 303(d) of the Clean Water Act requires that states make a list of impaired waterbodies. These waterbodies do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that priority rankings be established for waterbodies on each list and that action plans, called Total Maximum Daily Loads (TMDL), be developed to improve water quality.

A TMDL is a written plan that describes how an impaired water body will meet water quality standards. It contains: a measurable feature to describe attainment of the water quality standard(s); a description of required actions to remove the impairment; an allocation of responsibility among dischargers to act upon the actions or water quality conditions for which each discharger is responsible.

Federal Emergency Management Agency – Executive Order 11988

Executive Order 11988 directs all federal agencies to avoid to the extent possible long-and short-term adverse impacts associated with the modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. The Federal Emergency Management Agency (FEMA) provides floodplain information and regulates development in and around FEMA established floodplains for many areas of the country through Flood Insurance Studies (FIS) and their associated Flood Insurance Rate Maps (FIRMs).

United States Army Corps of Engineers – Section 404

A section 404 permit is required by the US Army Corps of Engineers (USACE) when a project impacts waters of the U.S. The 404 permit is required for dredging or filling lakes, streams, tidelands, marshes, or low-lying areas behind dikes along the coast as well as the dumping of dredged material into the ocean. This permit is not required as part of the proposed project unless USACE jurisdictional waters are impacted, which is not anticipated for any of the build alternatives.

Fish and Wildlife Coordination Act

The USFWS Coordination Act (16 USC 661-666 or 16 USC 662 S.2) requires consultation with the USFWS and the state agency responsible for wildlife resources whenever a stream or other body of water is proposed to be modified for any purpose whatsoever. The proposed project is not anticipated to require USFWS coordination related to impacts of rivers, streams, or lakes.

Endangered Species Act of 1970 (16 USC 1531-1543)

The Endangered Species Act mandates the preservation of endangered species and their habitats. Sections 2081 and 2090 provide for consultation with California Department of Fish and Game (CDFG) regarding measures to minimize impacts on species listed by California Endangered Species Act. The proposed project is not anticipated to require consultation with CDFG for areas related to rivers, streams, or lakes.

F.9.2 State and Regional

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (1969), which became Division 7 ("Water Quality") of the State Water Code, established the responsibilities and authorities of the SWRCB and the nine RWQCBs. According to Section 13001 of the Act, these Boards are to be "... the principal state agencies with primary responsibility for the coordination and control of water quality." Section 13050 directs each Regional Board to "...formulate and adopt water quality control plans (Basin Plans) for all areas within the region."

The Regional Boards implement the Basin Plans by issuing, and enforcing, waste discharge regulations to individuals, communities, or businesses whose discharges can affect water quality. These regulations can be either Waste Discharge Requirements for discharges to land, or NPDES permits for discharges to surface water.

California Fish and Game Code - Section 1602

Section 1602 of the CDFG requires agencies to notify the CDFG of any project that will divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake. If CDFG jurisdictional areas are impacted by the proposed project, a Section 1602 Streambed Alteration Agreement would be required. The proposed project is not anticipated to impact CDFG jurisdictional areas related to rivers, streams, or lakes.

F.9.3 Local

Los Angeles Regional Water Quality Control Board

Discharge of construction dewatering activities is regulated under Los Angeles RWQCB Order No. R4-2003-0108 NPDES No. CAG994004 which establishes the discharge of groundwater from construction and project dewatering. The proposed project must also meet the effluent limits established by the permit.

The Los Angeles RWQCB is also responsible for identifying the Section 303(d) impaired waterbodies and establishing a TMDL for those waterbodies. The TMDLs are achieved on the local and regional levels through the NPDES construction permitting process and the implementation of regional and local watershed management plans and Standard Urban Storm Water Mitigation Plans (SUSMPs).

County of Los Angeles

Order No. 01-182 NPDES Permit No. CAS004001 establishes the waste discharge requirements for municipal storm water and urban runoff discharges within the County of Los Angeles and incorporated cities.

The County of Los Angeles Department of Public Works (DPW) is leading the planning and implementation of watershed management within the County. The main goal of the *Ballona Creek Watershed Management Plan* (DPW, September 2004) is to, "[set] forth pollution control and habitat restoration actions to achieve ecological health." The plan identifies methods and mechanisms for stakeholders to address issues and achieve ecological health within the watershed. The main goal of the *Dominguez Watershed Management Master Plan* (DPW, April 2004) is a comprehensive document to assist stakeholders in the protection, enhancement, and restoration of the environment and beneficial uses of the Dominguez Watershed. This plan identifies an action plan to reduce the adverse impacts of storm water and urban runoff within the watershed.

City of Los Angeles

The City of Los Angeles Department of Public Works, Watershed Protection Division is responsible for the development and implementation of storm water pollution abatement projects within the City. The Watershed Protection Division requires developers to develop a SUSMP or Site Specific Mitigation Plan. Regulations are enforced through permitting and site inspection.

F.9.4 CEQA Thresholds

According to the CEQA, the Crenshaw/LAX Transit Corridor Project would result in a significant impact to water resources if it would:

- Not have sufficient water supplies available to serve the project;
- Conflict with applicable legal requirements related to hydrology or water quality, including a violation of state water quality standards or waste discharge requirements;

- Substantially degrade groundwater quality or interfere with groundwater recharge, or deplete groundwater resources in a manner that would cause water-related hazards, such as subsidence;
- Alter the existing drainage pattern of the site or area in a manner that would cause substantial flooding, erosion, or siltation;
- Create or contribute to runoff that would exceed the drainage and flood control capacity of existing or planned storm water drainage systems; and/or
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows, or otherwise expose people and/or property to water-related hazards, such as flooding.

F.10 Energy

The California Energy Commission is the State's primary energy policy and planning agency. Created by the legislature in 1974, the commission has five major responsibilities: (1) forecasting future energy needs and keeping historical energy data, (2) licensing thermal power plants 50 megawatts or larger, (3) promoting energy efficiency through appliance and building standards, (4) developing energy technologies and supporting renewable energy, and (5) planning for and directing the State's response to energy emergency.

The commission published the *2007 Integrated Energy Policy Report* (IEPR) in October 2007. The IEPR was prepared in response to SB 1389, Chapter 568, Statutes of 2002, which requires that the commission prepare a biennial integrated energy policy report. This report contains an integrated assessment of major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety. The IEPR fulfills the requirement of SB 1389.

The SCAG is required by state and federal mandates to prepare a regional transportation plan every three years. The 2008 RTP is a long-range regional transportation plan that provides a blueprint to help achieve a coordinated and balanced regional transportation system. The SCAG 2008 RTP describes energy production and consumption throughout the SCAB and provides VMT by county. SCAB is a subregion of the SCAQMD, the agency principally responsible for comprehensive air pollution control in the State, and covers an area of 6,745 square miles. SCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. VMT is an indicator of the extent to which vehicles are used, providing a valuable factor in calculating the amount of energy consumed by transportation.

Metro has adopted an Energy and Sustainability Policy to control energy consumption and embrace energy efficiency, energy conservation, and sustainability to avoid unnecessary expenditure; help in protecting the environment; improve cost effectiveness, productivity, and working conditions; and prolong the useful life of fossil fuels by using resources more efficiently.

F.10.1 CEQA Thresholds

The Crenshaw/LAX Transit Corridor Project would result in a significant impact if it would result in an energy impact if it would lead to wasteful, inefficient, or unnecessary consumption of energy.

F.11 Historic, Archaeological, and Paleontological Resources

F.11.1 Federal

National Environmental Policy Act

The NEPA of 1969, as amended (42 USC 4321-4347) establishes the federal policy of protecting important historic, cultural, and natural aspects of our national heritage during federal project planning. NEPA also obligates federal agencies to consider the environmental consequences and costs of their projects and programs as part of the planning process. All federal or federally assisted projects requiring action pursuant to Section 102 of the Act must take into account the effects on cultural resources.

According to the NEPA regulations, in considering whether an action may "significantly affect the quality of the human environment," an agency must consider, among other things, unique characteristics of the geographic area such as proximity to historic or cultural resources (40 CFR 1508.27(b)(3)) and the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places (NRHP) (40 CFR 1508.27(b)(8)).

The NEPA regulations also require that to the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the National Historic Preservation Act (NHPA)(40 CFR 1502.25(a). Agencies should consider their Section 106 responsibilities as early as possible in the NEPA process, and plan their public participation, analysis, and review in such as way that they can meet the purposes and requirements of both statutes in a timely and efficient manner. The determination of whether an action is a "major Federal action significantly affecting the quality of the human environment," and therefore requires preparation of an EIS under NEPA, should include consideration of the undertaking's likely effects on historic properties. A finding of adverse effect on a historic property does not necessarily require an EIS under NEPA (36 CFR 800.8(a)(1)).

Section 106 of the National Historic Preservation Act

NEPA requires that federal agencies integrate the NEPA process with other environmental laws. Section 106 of the National Historic Preservation Act as amended (Section 106, 16 USC 470f) requires that impacts on significant cultural resources, hereafter called historic properties, be taken into consideration in any federal undertaking. “Historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional

religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet NRHP criteria" [36 CFR §800.16(l)].

Section 106 affords the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the NRHP. Section 101(d)(6)(A) of the NHPA allows properties of traditional religious and cultural importance to a Native American tribe to be determined eligible for inclusion in the NRHP. Under the NHPA, a find is significant if it meets NRHP criteria listed in Title 36 CFR 60.4.

Cultural resources studies for the proposed project alternatives, including the LPA, are subject to the procedures of and review of the FTA in consultation with the SHPO. These studies are shaped by the ACHP regulations (36 CFR Part 800) for implementing Section 106. Section 106 studies provide the information necessary to satisfy legal requirements for environmental documents under NEPA.

Section 4(f) of the United States Department of Transportation Act of 1966

Section 4.12 Parklands and Community Facilities presents the detailed regulatory framework for Section 4(f) of the Department of Transportation Act and provides information on existing parklands and community facilities that are located along and/or within 0.25-mile of either side of the project alignments, stations, and maintenance and operations facility sites. Section 4(f) is also applicable to the use or constructive use of historic properties (i.e., properties listed on or eligible for listing on the NRHP.

Antiquities Act

The Antiquities Act of 1906 (16 USC 431-433) was enacted with the primary goal of protecting cultural resources in the United States. As such, it prohibits appropriation, excavation, injury, or destruction of "any historic or prehistoric ruin or monument, or any object of antiquity" located on lands owned or controlled by the federal government, without permission of the secretary of the federal department with jurisdiction. It also establishes criminal penalties, including fines or imprisonment, for these acts, and sets forth a permit requirement for collection of antiquities on federally owned lands.

The Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) was enacted in 1979 and amended in 1988. ARPA states that archaeological resources on public or Indian lands are an accessible and irreplaceable part of the nation's heritage and provides for the following:

- Establishes protection for archaeological resources to prevent loss and destruction due to uncontrolled excavations and pillaging;
- Encourages increased cooperation and an exchange of information between government authorities, the professional archaeological community, and private individuals having collections of archaeological resources prior to the enactment of this act; and
- Establishes permit procedures to permit excavation or removal of archaeological resources (and associated activities) located on public or Indian land.

ARPA defines excavation, removal, damage, or other alteration or defacing of archaeological resources as a "prohibited act" and provides for criminal and monetary rewards to be paid to individuals furnishing information leading to the finding of a civil violation or conviction of a criminal violator.

Section 4 of ARPA and Sections 5-12 of the uniform regulations establish a permitting system through which federal agencies can authorize professional scientific excavation and removal of archaeological resources from their lands. Permits for these activities may still be issued under the Antiquities Act of 1906, but ARPA is now the standard federal archaeological permitting authority. Important provisions of these sections of the law and the regulations deal with applications for permits, the requirements to be met for permit issuance, consultation with Indian tribes regarding permits, and suspension and revocation of permits.

The American Indian Religious Freedom Act

The American Indian Religious Freedom Act (AIRFA) proclaims that the United States Government will respect and protect the rights of Indian tribes to the free exercise of their traditional religions; the courts have interpreted this as requiring agencies to consider the effects of their actions on traditional religious practices.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (1990) (104 Statutes 3048-3058) (NAGRPA) will also apply to this project if human remains of Native American origin are discovered on federal land during implementation of the project. NAGPRA requires Federal agencies and federally assisted museums to return "Native American cultural items" to the federally recognized Indian tribes or Native Hawaiian groups with which they are associated. Regulations (43 CFR 10) stipulate the following procedures be followed.

- If Native American human remains are discovered, the following provisions would be followed to comply with regulations:
- Notify, in writing, the responsible federal agency;
- Cease activity in the area of discovery and protect the human remains;
- Certify receipt of the notification;
- Take steps to secure and protect the remains;
- Notify the Native American tribes likely to be culturally affiliated with the discovered human remains within one working day; and
- Initiate consultation with the Native American tribe or tribes in accordance with regulations described in 43 CFR, Part 10 Subpart B, Section 10.5.

F.11.2 State

California Environmental Quality Act

According to the CEQA (PRC, Section 21084.1), historical resources include any resource listed, or determined to be eligible for listing, in the California Register of Historical

Resources (CR). Properties listed in or determined eligible for listing in the NRHP, such as those identified in the Section 106 process, are automatically listed in the CR. Therefore, all "historic properties" under federal preservation law are automatically "historical resources" under state preservation law. Historical resources are also presumed to be significant if they are included in a local register of historical resources or identified as significant in a qualified historical resources survey. Section 15064.5 of the CEQA Guidelines sets forth the criteria and procedures for determining significant historical resources, and the potential effects of a project on such resources.

CEQA also categorizes paleontological resources as cultural resources and requires an impact evaluation to such resources. Impacts to paleontological resources fall under CEQA only and are not considered historic properties to be evaluated under NEPA or the Section 106 process.

California Public Resource Code 5097

If human remains of Native American origin are discovered during project construction not on federal land, it will be necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC) (PRC 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner has been informed and has determined that no investigation of the cause of death is required; and
- if the remains are of Native American origin:
  - The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave foods as provided in PRC 5097.98, or
  - The NAHC was unable to identify a descendant or the descendant failed to make a recommendation within 48 hours after being notified by the NAHC.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped near discovered human remains until the coroner can determine whether the remains are those of a Native American.

Paleontological Regulatory Setting

Paleontological Resources are subject to compliance with CEQA, but not Section 106.

Significant paleontological resources are defined as fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or important to define a particular time frame or geologic strata, or that add to an existing body of knowledge in specific areas, in local formations or regionally. Paleontological remains are accepted as non-renewable resources significant to

our culture and, as such, are protected under provisions of the Antiquities Act of 1906 and subsequent related legislation, policies, and enacting responsibilities.

In the State of California, fossil remains are considered to be limited, nonrenewable, and sensitive scientific resources. These resources are afforded protection under the following State of California legislation (California Office of Historic Preservation 1983):

CEQA

- 13 PRC, 21000 et seq. Requires public agencies and private interests to identify the potential adverse impacts and/or environmental consequences of their proposed project(s) to any object or site important to the scientific annals of California (Division 1, Public Resources Code: 5020.1[b]).
- Guidelines for the Implementation of CEQA (as amended 1 January 1999).

State CEQA Guidelines Sec. 15064.5(a)(3)

This section of CEQA provides protection for historical (or paleontological) resources by requiring that they be identified and mitigated as historical resources under CEQA. The State CEQA Guidelines define historical resources broadly to include any object, site, area, or place that a lead agency determines to be historically significant.

F.11.3 Compliance Methodology

F.11.3.1 Federal

The following cultural resources sections summarize the Section 106 and determinations, to date, and are subject to change following SHPO review and concurrence. Details may be found in the Section 106 technical documents that will be submitted to the SHPO and other consulting parties, and available for public review with other technical reports prepared for this EIR/EIS. The cultural resources technical documents include the Historic Property Survey and Effects Report (HPSER) and Archaeological Survey Report (ASR).

Section 106 regulations prescribe the following steps, which are described in this and subsequent sections:

- Determine and document the Area of Potential Effects;
- Identify consulting parties;
- Identify potential historic properties;
- Evaluate significance of potential historic properties by applying NRHP eligibility criteria in consultation with SHPO or Indian tribes, as appropriate;
- Assess effects on historic properties by applying ACHP criteria of adverse effect;
- Develop avoidance and mitigation measures if necessary; and
- Document the process.

The Area of Potential Effects

As defined in the Section 106 regulations, the Area of Potential Effects (APE) means "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties." The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking" [36 CFR §800.16(d)]. On July 23, 2008, the FTA consulted with the SHPO to determine, document and define the APE. At the meeting the SHPO concurred with the APE definition for the various components of the proposed project (see SHPO meeting minutes, Appendix I).

Identify Consulting and Interested Parties

The Section 106 regulations require that a federal agency evaluate all properties within the APE and identify historic properties by gathering information from consulting parties, applying the NRHP Criteria, and seeking concurrence from the SHPO or Indian tribe, as appropriate.

National Register Criteria for Evaluation

In order for a property to be considered for inclusion in the NRHP it must meet the criteria for evaluation set forth in 36 CFR Part 60.4, as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of design, setting, materials, workmanship, feeling, and association and

- are associated with events that have made a significant contribution to the broad patterns of our history (A); or
- are associated with the lives of persons significant in our past (B); or
- embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (C); or
- have yielded, or may be likely to yield, information important in prehistory or history (D).

Among other criteria considerations, a property that has achieved significance within the last 50 years is not considered eligible for inclusion in the NRHP unless certain exceptional conditions are met. The 50-year age criterion for the proposed project has been set at 1975.

Identifying Historic Properties

For the proposed project, surveys have been undertaken and documentation prepared in accordance with the Secretary of Interior's Standards and Guidelines for Identification of Historic Properties (48 *Federal Register* [FR] 44716), using personnel who meet the Secretary of Interior's Professional Standards (48 FR 22716) in the fields of ethnography, pre-historic archaeology, historic archaeology, architectural history, and history. For the

purposes of this document, the broad pool of cultural resources within the APE that require evaluation for NRHP eligibility may be categorized into two major types, as follows:

- Archaeological Resources, which include resources that represent important evidence of past human behavior, including portable artifacts such as arrowheads or tin cans; non-portable "features" such as cooking hearths, foundations, and privies; or residues such as food remains and charcoal. Archaeological remains can be virtually any age, from yesterday's trash to prehistoric deposits thousands of years old.
- Historic and Architectural Resources, which include man-made features that comprise the recognizable built environment. This category typically includes extant, above-ground buildings and structures that date from the earliest territorial settlements until the present day.

F.11.3.2 State

The federal methodology steps are adequate to comply with Section 15064.5 of the CEQA guidelines, because the Section 106 guidelines have more rigorous review requirements. For example, CEQA does not require careful delineation of a study area such as the area of potential effects, and does not require consultation with the SHPO.

For the proposed project, no properties were identified that meet CR Criteria for Evaluation but do not meet NRHP criteria. Therefore, unless otherwise stated, there is no difference between the compliance methodology for "historic properties" under federal law and "historical resources" under state law. For the purposes of this environmental document, the term "historic properties" will hereafter be used to represent both the federal term "historic properties" and state term "historical resources," unless otherwise noted.

F.11.3.3 California Register Criteria for Evaluation

All properties listed in or determined eligible for the NRHP are automatically listed in the CR, and are, therefore, historical resources for the purposes of CEQA. In addition, Section 15064.5 of the CEQA Guidelines states that the term "historical resources" shall include the following:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CR (PRC SS5024.1, Title 14 California Code of Regulations (CCR), Section 4850 et seq.).
- A resource included in a local register of historical resources, as defined in section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource,

provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CR (PRC SS5024.1, Title 14 CCR, Section 4852), including the following:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.
- The fact that a resource is not listed in, or determined to be eligible for listing in the CR, not included in a local register of historical resources (pursuant to section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC sections 5020.1(j) or 5024.1.

As with the NRHP, a property that has achieved significance within the last 50 years is not considered eligible for the CR unless it is of exceptional importance.

F.12 Parklands and Community Facilities

F.12.1 Federal

Parklands and Schools

USDOT Act of 1966. Section 4(f) of the USDOT Act of 1966 (recodified as amended at 49 USC Section 303) affords special protection to public recreational lands and facilities, including local parks and school facilities, that are open and available to the general public for recreational purposes, significant cultural resources, and natural wildlife refuges. Federally-funded transportation improvement projects are prohibited from the encroachment (direct or constructive use, or a take) of Section 4(f) lands unless it can be demonstrated that no other alternative exists. Parks and recreational Section 4(f) lands within or adjacent to the corridor are discussed herein. A discussion of Section 4(f) related to historical resources is provided in Section 4.11 Historical, Archaeological, & Paleontological Impacts.

Since 1966, Section 4(f) has undergone several changes. In August 2005, Section 6009(a) of the SAFETEA-LU, made the first substantive revision to Section 4(f) since the 1966 USDOT Act. Section 6009, which amended existing Section 4(f) legislation at both Title 49 USC Section 303 and Title 23 USC Section 138, simplified the process and approval of projects that have only *de minimis* impacts on lands impacted by Section 4(f). Under the new provisions, once the FTA determines that a transportation use of Section 4(f) property results in a *de minimis* impact, analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete.

Fire Services

Uniform Fire Code. The *Uniform Fire Code* (UFC) contains regulations relating to the construction and maintenance of buildings and to the use of their premises. Topics addressed in the UFC include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire safety requirements, for new and existing buildings and their premises. The UFC contains specialized technical regulations related to fire and human safety.

F.12.2 State

Fire Services

CCR Title 24 of the *California Building Code* (CBC) is a compilation of building standards. State fire regulations set forth in Section 13000 et seq. of the California Health and Safety Code, include regulations for building standards (as also set forth in the CBC), fire protection and notification systems, fire protection devices, such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. In the case where there is no local fire authority, and in all state-owned and state-occupied facilities, the California State Fire Marshall has full enforcement jurisdiction of state fire regulations.

Educational Facilities

California Education Code (CEC). Each of the state school districts is subject to the regulations of the CEC and the governance of the California State Board of Education, relative to funding, school curriculum, operations, and facilities (including location considerations).

F.12.3 Local

Parklands, public services (i.e., police and fire protection), libraries, and other community facilities (i.e., educational facilities) are generally regulated by local agencies. Therefore, these components and the project alternatives are regulated primarily by the policies and agencies of Los Angeles County and the Cities of Los Angeles, Inglewood, and El Segundo, wherever the components of the proposed project alternatives are located. In addition, public schools within 0.25-mile of either side of the project alignments and stations, are within various school districts (i.e., the Los Angeles Unified School District and the Inglewood School District), which have their own policies and procedures. Specific policies that pertain to other community facilities are regulated through land use and zoning (refer to Section 4.1, Land Use and Development, of this Draft Environmental Impact Statement/Environmental Impact Report [EIS/EIR]). The following is a summary of many of the applicable local policies, listed by jurisdiction:

Los Angeles County (View Park/Windsor Hills)

View Park/Windsor Hills is an unincorporated community of Los Angeles County. Parklands and community facilities are subject to the guidelines set forth in the Los

Angeles County General Plan. The Los Angeles County General Plan has existing policies that also affect park and recreation facilities and police and fire services in the study area, including the following:

Parks and Recreation: Policy C/OS 1.1 requires the promotion for acquisition and preservation of open space areas throughout the county.

Police Services: Policy PS 8.1 promotes phased development, whereby land use proposals are developed in conjunction with approved law enforcement capabilities.

Fire Services: The Los Angeles County Fire Code and the general plan safety element establish the standards, policies, and goals for fire suppression facilities within the county. In addition, the general plan includes policies (such as Policy PS 7.1) that promote phased development, whereby land use proposals are developed in conjunction with approved fire protection capabilities.

City of Los Angeles

Citywide Level

Parks and Recreation: Recreational planning is accomplished through various land use plans, including the City of Los Angeles General Plan, and various community plans, specific plans, and recreational use plans, which are developed by the City of Los Angeles Department of Recreation and Parks. The City of Los Angeles periodically updates its general plan and other elements, such as the public recreation element, which is still under development (City of Los Angeles, December 28, 2007).

According to the existing City of Los Angeles Public Recreation Plan, a satisfactory recreation system must measure up to accepted standards in three respects: sufficient land area must be set aside for recreation; recreation areas must be properly distributed in residential areas throughout the city; and, facilities must meet different recreation needs, including both active and passive recreation, and provisions for all ages (City of Los Angeles, 1980).

Police Services: While there are no specific local or regional plans that address police services, the city's citywide general plan framework and specific community plan documents do contain policies and objectives that deal with ensuring adequate police service infrastructure.

Fire Services: The City of Los Angeles both surrounds and adjoins other cities, counties, and state and federally-controlled lands; therefore, it has joined a variety of mutual aid agreements with other jurisdictions for the cooperative response and management of fires and other emergency incidents. The Los Angeles Fire Department (LAFD) participates in automatic response agreements with the county, as well as the City of El Segundo. LAX has an on-site fire fighting operation and special equipment designed for the unique needs of airport facilities. The City of Los Angeles General Plan, the City of Los Angeles Fire Code (part of the city's municipal code), and the general plan safety element contain the goals, objectives, and policies related to fire prevention and suppression services.

Community Level

There are four designated City of Los Angeles communities within the study area: Wilshire, West Adams-Baldwin Hills-Leimert, Westchester-Playa Del Rey, and LAX. All four of these communities have community plans, which have applicable policies regarding existing parklands and community facilities. These policies are discussed below.

Wilshire Community

The Wilshire Community is a community within the City of Los Angeles located within the northern portion of the study area. The following is a summary of the applicable Wilshire Community Plan policies, listed by community facility:

Police Services: Policy 8-1.1 requires consultation with the Los Angeles Police Department (LAPD) in the review of development projects and land use changes, to determine law enforcement needs and requirements.

Fire Services: Policy 9-1.1 requires coordination with the LAFD during the review of significant development projects and general plan amendments, which effect land use, to determine the impacts on fire service demand. Programs complimenting this policy include: requiring decision-makers to continue to include findings on fire service demand, as a result of development projects and general plan amendments, and, by continuing to encourage consultation with the LAFD.

Libraries: Policy 7-1.1 encourages support for the construction of new libraries and the rehabilitation and expansion of existing libraries.

Educational Facilities: Policy 6-3.1 seeks to encourage the placement of public schools and other neighborhood facilities, at or near a transit station, transit center, or in a mixed-use area, in order to maximize the most efficient use of the land and neighborhood services. Placing educational facilities near transit stations, transit centers, and mixed-use districts, allows students to use the transit system to get to and from school. Additionally, Policy 6-3.1 encourages public and private redevelopment of existing public school sites in the immediate vicinity of transit stations and transit centers, so that the existing low-density land use would be replaced by a high-density, mixed-use development that would incorporate school facilities.

West Adams-Baldwin Hills-Leimert Community

The West Adams-Baldwin Hills-Leimert Community is a community within the City of Los Angeles located within the middle portion of the study area. The following is a summary of the applicable Adams-Baldwin Hills-Leimert Community Plan policies, listed by community facility:

Parks and Recreation: Policy 1-1.1 seeks to preserve the existing recreational facilities and park space by changing the existing zoning, as applicable to the open space zone, which provides such protection.

Police Services: Policy 5-1.1 requires coordination with the LAPD during the review of significant development projects and general plan amendments that effect land use, to determine the impacts on police service demand. This policy will require a decision-

maker to include a finding, which considers the impact on police service demands of a proposed project or land use plan change. This consultation with the LAPD is currently in effect for plan amendments, which must be reviewed by the General Plan Advisory Board, which includes representation from the LAPD.

Fire Services: Policy 6-1.1 requires coordination with the LAFD as part of the review of significant development projects and general plan amendments that effect land use, to determine the impact on service demands. This policy requires a decision-maker to include a finding as to the impact on fire service demands of a proposed project or land use plan change. This coordination with the LAFD is currently in effect for projects, which are subject to the subdivision process, and for plan amendments, which must be reviewed by the General Plan Advisory Board, which includes representation from the LAFD.

Libraries: Policy 4-1.1 encourages support for the construction of new libraries and the rehabilitation and expansion of existing libraries, as required to meet the changing needs of the community. In addition, the community plan designates the existing library sites within the Public Facilities (PF) category, and changes the zoning to PF as well. This new designation provides more protection to retain the existing uses on site, which allows for greater certainty for needed city approvals when rehabilitating or expanding structures on site.

Educational Facilities: Policy 3-1.2 requires that existing school sites be retained within the community plan area. This policy designates the existing school sites in the PF category and changes the zone to PF. This new designation provides more protection to retain the existing uses on site, which allows for greater certainty for needed city approvals when rehabilitating or expanding structures on site.

Westchester-Playa Del Rey Community

The Westchester-Playa Del Rey Community is a community within the City of Los Angeles located within the southern portion of the study area. The following is a summary of the applicable Westchester-Playa Del Rey Community Plan policies, listed by community facility type:

Parks and Recreation: Policy 4-1.1 seeks to preserve and improve the existing recreational and park facilities. This policy designates all existing recreation and park facilities as Open Space (OS), and supports the designation of all parklands acquired in the future as OS, through city-initiated plan amendments or future updates to the community plan. The OS designation corresponds to the OS zone in the municipal code, which prohibits most types of structures or other uses of the land. Therefore, recreation and park facilities are protected by this policy.

Police Services: Policy 8-1.1 requires consultation with the LAPD in the review of development projects and land use changes to determine law enforcement needs and requirements. The city's discretionary approval process implements this.

Fire Services: Policy 9-1.1 requires coordination with the LAFD during the review of significant development projects and general plan amendments that effect land use, to

determine the impacts on service demands. The city's discretionary review process requires the notification of, and consideration of, comments provided by the LAFD in the review of most discretionary projects, and supports more extensive coordination by decision-makers, whenever possible. City regulations require clearance from the LAFD prior to the issuance of most types of building permits.

Libraries: Policy 7-1.1 encourages support for the construction of new libraries and the rehabilitation and expansion of existing libraries, as required to meet the changing needs of the community. In addition, the community plan map designates existing library sites as PF, to be zoned PF, and also indicates their locations with a library symbol on the map. This gives the libraries additional protection to retain their existing use and allows a greater certainty in obtaining the necessary city approvals when rehabilitating or expanding.

Educational Facilities: Policy 6-1.2 requires that the expansion of existing public school facilities be considered prior to the acquisition of new sites. The Los Angeles Unified School District is responsible for providing public school facilities and coordinating possible school site locations within the Westchester-Playa Del Rey Community Plan area. Policy 6-1.3 seeks to encourage public school design that buffers classrooms from noise sources.

LAX Community

The LAX Community is a community within the City of Los Angeles located within the southern portion of the study area. The following is a summary of the applicable LAX Community Plan policies, listed by community facility type:

Police Services: Policy P4 requires consultation with the LAPD, the Los Angeles World Airports police department, other law enforcement agencies, and security experts, as appropriate, during the facility planning, design, and review phase. This consultation is required so that potential environmental contributors to criminal activity are reduced and to ensure the security of the airport, airline passengers, and the surrounding community.

Fire Services: Policy P6 requires consultation with the LAFD during the design phase of facilities to review plans and incorporate recommendations that enhance airport safety.

City of Inglewood

Parks and Recreation: The City of Inglewood Parks, Recreation, and Community Services Department is guided by the open space element of the *1995 City of Inglewood General Plan*. This document outlines the goals and policies for parks and recreational facilities in the city, as well as various sources for department funding. The policies of the *1995 City of Inglewood General Plan*, pertaining to parks and recreational facilities, as related to the proposed project alternatives, involve the priority to provide additional parks (policies one and four of the general plan).

Police Services: The safety element of the *1995 City of Inglewood General Plan* identifies provisions to provide sufficient manpower and the necessary special equipment to respond to emergencies of unlawfulness.

Fire Services: Fire safety policies in the City of Inglewood are governed by the UFC and the Inglewood Municipal Code (Chapter 6), which includes the Los Angeles Fire Code. In addition, the following measure was identified in the *1995 City of Inglewood General Plan* safety element: conducting pre-planning exercises for emergencies, for all significant fire hazards, which involve dangers to large numbers of persons or residential neighborhoods.

Educational Facilities: The City of Inglewood is serviced by the Inglewood Unified School District, which is discussed under a separate heading below.

City of El Segundo

Parks and Recreation: Policy OS1-1.8 prohibits all existing publicly-owned parkland that is open to the general public from being converted into other land uses.

Los Angeles Unified School District

The Los Angeles Unified School District (LAUSD) provides public education for kindergarten through grade 12 (K-12) in the study area. The LAUSD has various programs (such as the District Facilities Goals and Guidelines) that are used to guide the planning and construction of new schools. In addition, the LAUSD must meet the provisions and obligations associated with various state-funded programs and propositions (both state and local).

When the LAUSD proposes a new school, they consider a variety of potential safety factors, such as geological hazards and proximity to airports, high voltage power transmission lines, hazardous land uses (including uses that could pose a threat to the health and safety of students and staff, including, but not limited to, facilities within 0.25-mile of the proposed school sites that might reasonably be anticipated to emit hazardous air emissions), railroad tracks, and major roadways (California Office of Public School Construction, 2006).

Inglewood Unified School District

The Inglewood Unified School District (IUSD) provides services to the City of Inglewood. Although there are currently no plans for new school construction within the city, the IUSD has long-term plans to replace one-story classroom facilities with two-story buildings on each school site, except kindergarten sites, in order to create more open space for play areas(California Office of Public School Construction, 2006). The IUSD Facilities Master Plan describes the district's anticipated school facilities needs and priorities, funding sources, and timelines for building. The plan also details the district goals, objectives, policies, and community input regarding district facilities. Objectives include the consideration of locating schools within the community, adequate sound control, and safety (IUSD, Regulation 7110).

F.12.4 CEQA Thresholds

The *CEQA Thresholds* state that a project would normally have a significant impact on public facilities if it could:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection;
- For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working within the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands;
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection;
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools;
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities.

F.13 Economic and Fiscal Impacts

F.13.1 Federal

The primary federal guidance is provided by the FHWA's Technical Advisory T-6640.8A, "Guidance for Preparing and Processing Environmental and Section 4(f) Documents" dated October 30, 1987. Section V of this document addresses economic impacts. The guidance directs preparers of EIS documents to discuss foreseeable economic impacts. Potential impacts to be considered include the following topics:

(1) The economic impacts on the regional and/or local economy such as the effects of the proposed alternatives on development, tax revenues and public expenditures, employment opportunities, accessibility, and retail sales;

(2) The impacts on the economic vitality of existing highway-related businesses and resultant impacts on the local economy; and

(3) Impacts of the proposed action on established business districts.

F.13.2 State

Pursuant to the CEQA guidelines, economic or social effects of a project that are not related to physical changes in the environment shall not be treated as significant effects on the environment, but may be used to determine the significance of physical changes caused by the project (Section 15131(b)).

F.14 Safety and Security

There are both federal and State regulatory requirements that dictate the safety aspects of various facilities and systems. Federal requirements include those published by the FRA and FTA. State requirements include those contained in State laws administered by the CPUC. Metro has developed safety criteria and Board adopted policies that will be utilized in designing the elements for the project. Industry guidelines will also be used in developing the system design features. Local fire and police jurisdictions, general plan policies and ordinances are additional regulatory frameworks related to transit safety and security.

The study area encompasses a number of jurisdictions and agencies that have safety and security responsibilities, including the Metro, County of Los Angeles (Lennox) and the Cities of Los Angeles, Inglewood, Hawthorne, and El Segundo. The following provides a general description of the safety programs and police services that are provided in the study area.

F.14.1 Safety

Metro oversees the operation of bus and rail transit services throughout Los Angeles County. Metro is also responsible for implementing its own System Safety Program Plan (SSPP) and System Security Plan (SSP) during the operational phases of projects, which help to maintain and improve the safety and security of commuter operations, mitigate accidents, and comply with State regulations. These safety measures have been established to provide employee and passenger safety, crime prevention, adequate emergency response, and emergency procedures. Metro also uses numerous pedestrian and motorist safety devices, signs, and warning lights to alert pedestrians, passengers, employees, and the surrounding community. Figure 4-64 in Chapter 4 of this FEIS/FEIR illustrates several of these warning devices. Metro has also implemented several programs and/or projects to enhance the safety of passengers, employees, and the community. A brief description of these programs and/or projects is provided below.

Bus Safety and Security Measures

- Photo equipment has been installed on Metro buses, permitting live video to be observed;
- Direct communication services have been established to connect Metro buses with the Los Angeles Police Department or the Los Angeles County Sheriff's Department Transit Dispatch/Emergency Response Center.

Rail Safety and Security Measures

- Four quadrant gates have been installed at various high-risk highway light rail transit (LRT) grade crossings to deter motorists from driving around the lowered gates;
- Pedestrian swing gates and pedestrian automatic gates have been installed at various pedestrians paths that cross LRT tracks, to deter unsafe pedestrian movement; and
- Photo enforcement of grade crossing violations has been installed at various crossings along the Metro Blue Line to discourage motorists from driving around lowered gate arms and to discourage motorists from making illegal left turns.

General Safety and Education Programs

- Metro's comprehensive and award-winning rail safety outreach program communicates safety information to motorists and pedestrians offering behavior modification around transportation projects. Safety information is communicated through one-on-one presentations to schools, senior and recreation centers, business and community groups, medical and religious centers to ensure the total saturation of safety materials in the community. Safety information is communicated through site-specific presentations, safety orientation tours, and participation in community events;
- Rail Safety Education and Outreach are offered in a classroom setting using site-specific photos and safety videos for communities along the Metro Blue, Gold, and Orange Lines;
- Rail Safety Orientation Tours are offered to K-12 students and include safety and system information;
- The Metro Experience, a mobile theatre, is available for community events, and may be used as a theatre or a movable classroom; and

Metro personnel are offered Community Emergency Response Training (CERT) in collaboration with the Los Angeles City Fire Department. Employees are trained in earthquake awareness, disaster medical procedures, and rescue operations.

F.14.2 Security

Security and policing services are provided at Metro facilities by the Los Angeles County Sheriff's Department (LACSD). Metro currently provides (via contracts with the LACSD) police surveillance, non-uniformed police inspectors on transit and at major transit nodes, a closed-circuit television, and an

F.14.3 CEQA Thresholds

According to CEQA, project effects on safety and security would be considered significant if they:

- Cause or create the potential for substantial adverse safety conditions or substantially limit the delivery of community safety services, such as police, fire, or emergency services; and/or
- Cause or create the potential for substantial adverse security conditions, including: incidents, offenses, and crimes.

F.15 Construction Impacts

F.15.1 Federal

Under the USEPA, there are several areas of regulation that govern the assessment and consideration of construction. These areas of regulation include air quality, water quality, hazardous materials, biological resources and cultural preservation. To address the assessment of these areas, as well as others not pertaining specifically to construction, the USEPA created the NEPA (42 USC Section 4231), which puts regulatory responsibility on the federal government to "use all practicable means" to "assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings." The following federal regulations apply to the evaluation of construction effects for the proposed project.

Air Quality

The Federal Clean Air Act (CAA) regulates air quality in the United States. The USEPA is responsible for enforcing the federal CAA and establishing the NAAQS. NAAQS have been established for seven major air pollutants: CO, NO_2, O_3, $PM_{2.5}$ microns or smaller in diameter, PM_{10} microns or smaller in diameter, SO_2, and Pb. The CAA requires the USEPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The USEPA has classified the SCAB as maintenance for CO and nonattainment for O_3, $PM_{2.5}$, and PM_{10}.

Water Quality

The NPDES regulates the issuance of storm water permits necessary for projects that will discharge pollutants from any point source into waters of the United States. The Clean Water Act (CWA) provides the statutory basis for the NPDES permit program. Section 402 of the CWA requires the USEPA to develop and implement the NPDES program. The CWA gives USEPA the authority to set effluent limits on an industry-wide and water-quality basis. The CWA allows the NPDES to be administered and enforced at the State level, but the USEPA retains oversight responsibilities. A plan must be submitted to obtain a NPDES permit, which lists potential sources of pollutants during construction, and identifies erosion prevention, sediment control, and storm water management measures to be implemented during construction of the proposed project.

Hazardous Materials

The RCRA under Title 40, Protection of the Environment of the CFR, regulates hazardous wastes that may be encountered during construction activities. This statute provides for proper handling and disposal of any encountered hazardous materials. The Toxics Substances Control Act regulates handling of polychlorinated biphenol wastes encountered during construction or demolition. In addition, the Comprehensive Environmental Response, Compensation, and Liability Act regulates the handling and removal of underground storage tanks that may be encountered during construction.

Biological

The Endangered Species Act (ESA) regulates the removal or disturbance of biological resources (sensitive species, riparian habitats, migratory fish or wildlife, or wetlands). Lists of endangered or sensitive species are maintained by the USFWS and National Marine Fisheries Service.

Cultural

The NHPA is a multi-faceted statute which includes, but is not limited to, programs for identifying significant historic resources. Section 106 of this statute requires federal agencies to account for the effects of their undertakings on historic properties and allow comment with regard to such undertakings.

In addition to the USEPA, the following federal agencies have regulatory policies that would apply to construction activities for the proposed project.

The FHWA and the FTA established Environmental Impact and Related Procedures (23 CFR 771) for the evaluation of urban mass transit projects and the compliance of these projects with 23 USC 109(h) and 303, as well as other USCs.

The USDOT Act, Section 4(f), which has been part of the federal transportation law since 1966, applies to agencies within the USDOT and is generally referred to as 49 USC 303. Section 4(f) focuses on the preservation of public parks and recreation lands, wildlife and waterfowl refuges, and historic sites, and includes the preservation of their aesthetic integrity.

F.15.2 State

Water Quality

The State RWQCB is responsible for administering water quality at the State level.

Air Quality

In addition to being subject to the requirements of CAA, air quality in California is also governed by more stringent regulations under the CCAA. The CCAA, which is governed by the CARB, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles.

F.15.3 Local

Air Quality

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the region. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of Orange County; the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties; and the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin. The SCAQMD has developed regional and localized significance thresholds for air pollutants in order to determine potential project-specific impacts to regional air quality and local sensitive receptors.

Noise

The LAMC Section 112.05 provides noise ordinances that specify construction hours and construction equipment noise thresholds. The noise thresholds and applicable hours of construction are as follows:

- Construction activities lasting more than one day would exceed existing exterior noise levels by ten dBA or more at a sensitive use;
- Construction activities lasting more than ten days in a three-month period would exceed existing ambient exterior noise levels by five dBA or more at a noise sensitive use;
- Construction activities would exceed the ambient noise level by five dBA at a sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at anytime on Sunday.

F.16 Growth-Inducing Impacts

F.16.1 Federal

Guidance for the preparation of growth inducing impacts was obtained from both federal and State regulations. The regulations established by the Council on Environmental Quality (CEQ), regarding the implementation of the NEPA, require the evaluation of all potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine the indirect consequences, or secondary impacts, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future (40 CFR 1508.8). Secondary impacts may include changes in land use, economic vitality, and population density. These are all elements of growth.

FTA guidelines require MPOs to create regional growth projections by assuming future year conditions. The SCAG states in the 2008 RTP Program Environmental Impact Report (PEIR) that lead agencies for individual projects may use the PEIR as the basis of their regional impacts analysis. The 2008 RTP examines current and future transportation plans, population and employment growth, and land use data for the SCAG region to develop projections through the year 2035. The 2008 RTP, adopted on May 8, 2008, updates the 2004 RTP, which contains projections through year 2030. Since

the year for the analysis of this proposed project has been determined to be 2030, the 2004 RTP projections serve as the basis for this analysis of growth inducing impacts.

F.16.2 State

The CEQA also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Growth inducing impacts also include removing obstacles to growth and can include changes in the amount and distribution of growth.

F.17 Cumulative Impacts

The regulations established by the CEQ, regarding the implementation of the NEPA, define cumulative effects as those effects that result from incremental impacts of a proposed action when added to past, present, and reasonably foreseeable future actions, regardless of which agency (federal or nonfederal) or person undertakes such actions.

Section 15355 of the CEQA guidelines (2005) defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative effects can result from individually minor, but collectively significant actions that take place over a period of time (40 CFR 1508.7).

The process used in this cumulative impact analysis follows the guidelines provided in "Considering Cumulative Effects under the National Environmental Policy Act" (CEQ, January 1997). The analysis in this chapter is also consistent with CEQA guidelines, Section 15130(b)(1), which directs cumulative impact analyses to include "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact."

F.18 Environmental Justice

F.18.1 Federal

On February 4, 1994, Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, was signed into law. Executive Order 12898 requires federal agencies to achieve environmental justice by "identifying and addressing the social and economic effects of their programs, policies, and activities on minority populations and low-income populations in the United States." As Executive Order 12898 applies to the USEPA, environmental justice is the *fair treatment* and *meaningful involvement* of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or policies. Meaningful involvement means that: (1) potentially affected community residents have an

appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public's contributions can influence the regulatory agency's decision; (3) the concerns of all participants will be considered in the decision-making process; and, (4) the decision- makers shall seek out and facilitate the involvement of those potentially affected groups.

In response to Executive Order 12898, the USDOT issued an Order to Address Environmental Justice in Minority Populations and Low-Income Populations. This order, issued in April 1995, sets guidelines to ensure that all federally-funded transportation-related programs, policies, or activities that have the potential to adversely affect human health or the environment involve a planning and programming process that explicitly considers the effects on minority populations and low-income populations. Furthermore, in 1998, the FHWA has issued the "FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Population" that defines and provides guidance for environmental justice issues as they apply to projects overseen by the FHWA.

Executive Order 13166 requires federally assisted programs to identify any need for services to those persons with limited English proficiency (LEP) and develop and implement a system to provide those services so LEP persons can have meaningful access to them. Executive Order 13166 has a two-fold purpose. First, it provides enforcement and implementation of an existing obligation under Title VI of the Civil Rights Act of 1964 which prohibits recipients of federal financial assistance from discriminating based on national origins by failing to provide meaningful access to LEP individuals. Secondly, Executive Order 13166 sets forth a new obligation, which requires that all federal agencies meet the same standards as federal financial assistance recipients to provide meaningful access to LEP individuals to federally conducted programs. Additionally, like Executive Order 12898, each federal agency must develop a plan to provide this access. Meaningful access can include availability of vital documents, printed and internet-based information in one or more languages, depending on the location of the project, and translation services during public meetings.

The Age Discrimination Act of 1975 prohibits the discrimination based on age of individuals from having meaningful access and participating in federally funded programs.

F.18.2 State

Following the lead of the environmental justice movement at the federal level, a series of laws, beginning in 1999, have been enacted in California to implement environmental justice. The OPR has been designated the "coordinating agency in state government for environmental justice programs." As part of its new environmental justice coordinator role, the OPR must now incorporate environmental justice considerations into local government planning decisions. California law requires the OPR to coordinate with federal agencies regarding environmental justice based on Executive Order 12898.

F.18.3 Local

Metro includes guidelines and planning policies regarding environmental justice issues in its current *Long Range Transportation Plan* (LRTP). Metro's 2008 LRTP evaluates how much additional transit service would be provided in areas with high transit dependency and minority and low-income populations. The 2008 LRTP includes extensive transit investments and includes policies about placement of these investments in proximity to areas with minority and lower-income populations and to job opportunities that support those areas.

F.19 Best Management Practices

Best Management Practices (BMPs) are defined as physical, structural, or managerial practices that, when used individually or in combination, prevent or reduce pollution of water and attenuate peak flows and volumes (WDOT 1995). BMPs are grouped into three types: source control, water quality, and water quantity BMPs. Source control BMPs are designed to prevent the introduction of pollutants into runoff. Examples include mulches and cover over bare soil, and putting roofs over outside storage areas. Water quality BMPs include facilities that remove pollutants from runoff by simple gravity settling of particulate matter, filtration, biological uptake, and soil adsorption. Examples include wet ponds and vegetated swales. Water quantity BMPs protect stream ecosystems from excessive erosion by reducing the peak rate of runoff during a storm event by storing the flow and releasing it at a lower rate. Typical examples are dry ponds and dry vaults.

The selection of the proper BMP for a project is dependent on characteristics of the project site, and often any one of a number of BMPs could be utilized to accomplish the same result. Some project sites may require a combination of BMPs.

Detailed information on applicable BMPs can be obtained from the sources listed below.

Caltrans, *Construction Site Best Management Practices Manual*, March 2003.

The following are permanent treatment stormwater BMPs that are proposed for incorporation into the proposed project. The final selection of BMPs will occur in the final design phase:

BMP1 – Storm Drain/Catch Basin Inserts

Catch basin inserts should be considered for the study area. This is a device that can be inserted into existing catch basin designs to provide some runoff contaminant removal. The most frequent application is for reduction of sediment, oil, and grease levels in stormwater runoff.

BMP2 – Extended/Dry Detention Basins or Underground Detention Tanks

These are depressed basins that temporarily store some stormwater runoff following a storm. They function similarly to detention basins, but are located underground. The objective of these systems is to remove particulate pollutants and reduce maximum runoff values associated with development to their pre-development levels. They may be corrugated metal pipe, concrete pipe, or vaults.

BMP3 – Infiltration Basins/Trenches

An infiltration basin is a surface pond which captures first-flush stormwater and treats it by allowing it to percolate into the ground and through permeable soils. Infiltration trenches are excavated trenches that have been lined with filter fabric and backfilled with stone to form an underground basin that allows runoff to infiltrate into the soil. As the water percolates through the ground, physical, chemical, and biological processes occur to remove both sediments and soluble pollutants. Pollutants are trapped in the upper layers of the soil, and the water is released to groundwater. Infiltration basins are generally dry except immediately following storms, but a low-flow channel may be necessary if a constant base flow is present.

BMP5 – Bioretention Facility

This BMP utilizes soils and both woody and herbaceous plants to remove pollutants from stormwater runoff. Runoff must be reduced to sheet flow as it moves to the treatment area, which consists of a grassy buffer strip, sand bed, ponding area, organic or mulch layer, planting soil, and plants. Runoff passes through the sand bed, which decreases the velocity of the runoff, and distributes it evenly along the length of the ponding area. This area is depressed in its center, and water is ponded to a depth of six inches and gradually infiltrates the biorentention area and/or is evapotranspired. These areas are applicable as on-lot retention facilities that are designed to mimic forested systems that naturally control hydrology. The bioretention area is graded to drain excess runoff over a weir and into the storm drain system, and the stored water located in the bioretention area's planting soil is infiltrated over a period of days into the underlying soils.

BMP8 – Media Filtration

Media filters are two-stage constructed treatment systems, including a pretreatment settling basin and a filter bed containing sand or other filter media. The filters are not designed to treat the entire storm volume, but the water quality volume that contains higher pollutant levels.

BMP9 – Porous Pavement

This BMP is asphalt based paving material that allows stormwater to quickly infiltrate the surface pavement layer to enter into a high-void aggregate sub-base layer. The captured runoff is stored in this "reservoir" layer until it either infiltrates into the underlying soil strata or is routed through an underdrain system to a conventional stormwater conveyance system. However, these are typically only applicable to low-traffic volume areas.

BMP10 – Vegetated Filter Strips

These are known as vegetated buffer strips, and are typically sections of land similar to grassed swales, except that they are essentially flat with low slopes, and are designed only to accept runoff overland sheet flow. They may appear in form from grassland to forest, and are designed to intercept upstream flow, lower flow velocity, and spread water out as sheet flow. This BMP facilitates conventional pollutant removal through detention, filtration by vegetation, and infiltration into soil. These are most useful in contributing watershed areas where peak runoff velocities are low.

In addition to the Stormwater BMPs, the following are construction BMPs.

Temporary Soil Stabilization

- Scheduling
- Preservation of Existing Vegetation
- Hydraulic Mulch
- Hydroseeding
- Soil Binders
- Straw Mulch
- Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats
- Wood Mulching
- Earth Dikes/Drainage Swales & Lined Ditches
- Outlet Protection/Velocity Dissipation Devices
- Slope Drains
- Streambank Stabilization

Temporary Sediment Control

- Silt Fence
- Sediment/Desilting Basin
- Sediment Trap
- Check Dam
- Fiber Rolls
- Gravel Bag Berm
- Street Sweeping and Vacuuming
- Sandbag Barrier
- Straw Bale Barrier
- Storm Drain Inlet Protection

Wind Erosion Control

- Wind Erosion Control

Tracking Control

- Stabilized Construction Entrance/Exit
- Stabilized Construction Roadway
- Entrance/Outlet Tire Wash