

Environmental Checklist Discussion

Attached is Section 4.0 of the DRAFT Preliminary Environmental Assessment Report (PEAR) checklist discussion. This discussion explains in more detail the impacts of the proposed project according to the existing conceptual plans. This document is required by the California Department of Transportation (Caltrans). Caltrans has not yet reviewed nor approved this document. It is not a requirement of the California Environmental Quality Act (CEQA) nor the National Environmental Policy Act. (NEPA). Further, more detailed, technical analysis will be required when CEQA and NEPA environmental documents are produced in subsequent phases of project development, after the completion of the Major Corridor Study. Below is the Table of Contents for Section 4.0 of the attached discussion.

TABLE OF CONTENTS

4.0	Environmental Checklist Discussion	4-1
4.1	Acquisitions and Right-of-Way	4-1
4.2	Aesthetics and Visual Quality	4-6
4.3	Air Quality	4-14
4.4	Agriculture	4-14
4.5	Biological Resources	4-15
4.6	Cultural Resources	4-18
4.7	Geology, Seismicity, and Soils	4-21
4.8	Hazardous Materials	4-22
4.9	Hydrology, Water Quality, and Floodplains	4-27
4.10	Land Use and Planning	4-34
4.11	Noise	4-40
4.12	Parks and Recreation	4-46
4.13	Socioeconomic Conditions	4-51
4.14	Transportation/Traffic	4-59
4.15	Utilities	4-59

4.0 ENVIRONMENTAL CHECKLIST DISCUSSION

4.1 ACQUISITIONS AND RIGHT-OF-WAY

Methodology/Setting

Land uses and potential right-of-way required for each alternative were designated for the study area and drawn over Year 2000 aerial photography using GIS. Any structure located on the aerial either completely or partially within the proposed new right-of-way (ROW) of each alternative also denoted on the aerials was counted as a “take” or potential acquisition. Only structures were counted and any take of a structure was considered a full take. There was no differentiation between full and partial takes at this early level of analysis. In this section, Acquisitions and Right-of-Way, if a property is “impacted” then it has the potential of being acquired according to the current conceptual engineering plans. Analysis was conducted only using aerial photography and the conceptual engineering plans; this information was not field verified.

See Land Use and Planning, Section 4.10, for a discussion of the existing land uses within the area and how they were divided and categorized for this study.

Impacts Evaluation

Of the Build Alternatives, Alternative C would require the least acquisitions, with approximately 528 total structures and 240 acres impacted. Alternative D would result in the acquisition of approximately 896 structures and 340 acres. Alternative E would result in the acquisition of approximately 784 structures and 370 acres. Each alternative is analyzed in more detail below.

4.1.1 Alternative A

Alternative A would not require any acquisitions above those already planned and approved in previous projects.

4.1.2. Alternative B

Alternative B would not require any acquisitions above those already planned and approved in previous projects.

4.1.3 Alternative C

The estimates of potential acquisitions are presented by groups of major components of each alternative: I-710 Mainline Improvements, I-710 Interchanges, and Arterials. Alternatives C and D also present information for the extensions to the TI freeway included in these two alternatives.

I-710 Mainline Improvements

Mainline Widening: The following number of properties could potentially be acquired: 137 residences (7.9 acres), 21 commercial/industrial structures (11.8 acres), and one park, Bandini Park (0.2 acre).

Collector Distributor Lane System: The following number of properties could potentially be acquired: 58 residences (6.7 acres), 18 commercial/ industrial structures (9.7 acres).

Truck Inspection Facility: There are no structure acquisitions associated with this component.

I-405 Truck Bypass Lanes: The following number of properties could potentially be acquired: 2 commercial/industrial structures (7.1 acres), 1 railroad structure (1.3 acres), and 3 power/utility structures (0.8 acres).

SR-91/I-105 Truck Bypass Lanes: The following number of properties could potentially be acquired: 58 residences (9.6 acres), 1 commercial/industrial (4.61 acres), 2 power/utility structures (19.6 acres), Coolidge Park, (1.9 acres).

Pacific Coast Highway Truck Ramps: The following number of properties could potentially be acquired: 3 residences (0.04 acres), and 8 commercial/industrial structures (1.6 acres).

Washington Blvd. Truck Ramps: The following number of properties could potentially be acquired: 10 commercial/industrial structures (6.9 acres).

I-710 Interchanges

Freeway Interchanges

I-405/I-710: The following number of properties could potentially be acquired: 3 commercial/industrial structures (4.78 acres).

I-5/I-710 Right Side Ramp: The following number of properties could potentially be acquired: 3 residential vacant lots (0.31 acres), 12 commercial/industrial structures (9.2 acres), and one park, Bristow Park, (0.8 acres).

Local Interchanges

Anaheim Street Braid: The following number of properties could potentially be acquired: 20 commercial/industrial structures (13.6 acres).

Pacific Coast Highway Braid: The following number of properties could potentially be acquired: 39 residences (4.1 acres), and 10 commercial/industrial structures (7.2 acres).

Willow St. PARCLO: The following number of properties could potentially be acquired: 34 residences (3.6 acres), 3 commercial/industrial structures (0.9 acres).

Del Amo Blvd. PARCLO: The following number of properties could potentially be acquired: 3 commercial/industrial structures (1.6 acres), and 6 power/utility structures (2.3 acres).

Imperial Highway PARCLO: The following number of properties could potentially be acquired: 3 residences (0.4 acres).

Florence Ave. PARCLO: The following number of properties could potentially be acquired: 3 commercial/industrial structure (0.8 acres).

Atlantic Blvd./Bandini Blvd.: The following number of properties could potentially be acquired: 10 commercial/industrial structures (25.5 acres).

Washington Blvd. PARCLO: The following number of properties could potentially be acquired: 36 residences (6.3 acres), 8 commercial/industrial structures (3.5 acres), and one park, Bandini Park (0.2 acre).

Slauson Blvd. Diamond: The following number of properties could potentially be acquired: 10 commercial/industrial structures (4.5 acres).

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Extension: The following number of properties could potentially be acquired: 3 commercial/industrial structures (9.5 acres).

Arterials

There could be up to 1,012 residences (163.2 acres), 1,366 commercial/industrial structures (467.6 acres), and portions of 5 parks (Scherer Park, Cherry Avenue Park, All Souls Cemetery, Forest Lawn Memorial Park, and Darwell park) impacted by the arterials component of Alternative C, if all arterial improvements selected in Alternative C are comprised of the addition of one travel lane in each direction.

4.1.4 Alternative D

I-710 Mainline Improvements

Mainline Widening: The following number of properties could potentially be acquired: 213 residences (26.5 acres), 46 commercial/industrial structures (31.6 acres), 5 railroad structures (10 acres), 2 power/utility structures (27.2 acres), and one park, Bandini Park (0.2 acre).

I-710 Interchanges

Freeway Interchanges

I-405/I-710: The following number of properties could potentially be acquired: 11 residences (1.1 acres) 5 commercial/industrial structures (9.6 acres), 1 railroad structure (0.4 acres), and 3 power/utility structures (0.8 acres).

I-405/I-710 HOV Connector: The following number of properties could potentially be acquired: 4 commercial/industrial structures (3.2 acres).

SR-91/I-710: The following number of properties could potentially be acquired: 230 residences (32.8 acres), 11 commercial/industrial structures (6.6 acres), and Coolidge Park (5.6 acres).

I-5/I-710: The following number of properties could potentially be acquired: 132 residences (21.9 acres), 64 commercial/industrial structures (33 acres), and one park, Bristow Park (0.8 acre).

Local Interchanges

Willow St. Diamond: The following number of properties could potentially be acquired: 35 residences (2.6 acres).

Del Amo Blvd. Diamond: The following number of properties could potentially be acquired: 6 commercial/industrial structures (6.2 acres), and 4 power/utility structures (2.2 acres).

Long Beach Boulevard: The following property could potentially be acquired: 1 railroad right-of-way (0.09 acres).

Imperial Highway Diamond: The following number of properties could potentially be acquired: 11 residences (2.2 acres), 2 commercial/industrial structures (1.1 acres).

Florence Ave. Diamond: The following number of properties could potentially be acquired: 16 residences (0.5 acres), 6 commercial/industrial structures (2 acres).

Atlantic Blvd./Bandini Blvd: The following number of properties could potentially be acquired: 10 commercial/industrial structures (24.7 acres).

Washington Blvd. PARCLO: The following number of properties could potentially be acquired: 40 residences (5.2 acres), 11 commercial/industrial structures (8.9 acres), and one park, Bandini Park (0.2 acre).

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Truck Expressway Connector: The following number of properties could potentially be acquired: 28 commercial/industrial structures (27.4 acres).

Arterials

There would be approximately 649 residences (96.9 acres), 983 commercial/industrial structures (319 acres), and portions of 4 parks (Scherer Park, Cherry Avenue Park, All Souls Cemetery, and Forest Lawn Memorial Park) impacted by the arterials component of Alternative D, if all arterial improvements selected in Alternative D are comprised of the addition of one travel lane in each direction.

4.1.5 Alternative E

I-710 Mainline Improvements

Exclusive Truck Facility: The following number of properties could potentially be acquired: 273 residences (44.3 acres), 155 commercial/industrial structures (110 acres), 18 power/utility structures, and three parks: Bandini Park, Coolidge Park, and Julia Russ Asmus Park.

I-405 Truck Ramps: The following number of properties could potentially be acquired: 3 commercial/industrial structures (0.4 acres), and 4 power/utility structures (2.1 acres).

SR-91 Truck Ramps: The following number of properties could potentially be acquired: 110 residences (12.2 acres), and one park, Coolidge Park.

Firestone Blvd. Truck Ramps: No structure acquisitions are associated with this component.

Washington Blvd. Truck Ramps: The following number of properties could potentially be acquired: 15 residences (1.7 acres), 12 commercial/industrial structures (5.1 acres), and one park, Bandini Park (0.4 acre).

I-710 Interchanges

Freeway Interchange

I-405 /I-710: The following number of properties could potentially be acquired: 26 residences (5.3 acres).

SR-91/I-710: The following number of properties could potentially be acquired: 30 residences (5.6 acres) and Coolidge Park (2.2 acres).

I-5/I-710: The following number of properties could potentially be acquired: 80 residences (19.2 acres), 51 commercial/industrial structures and (36.3 acres), one park, Bristow Park (0.8 acre).

Local Interchanges

Slauson Ave. PARCLO: The following number of properties could potentially be acquired: 7 commercial/industrial structures (7.8 acres).

Arterials

There would be 8 residences (0.9 acres), 246 commercial/industrial structures (118.4 acres), and one park (Darwell Park) impacted by the arterials component of Alternative E, if all arterial improvements selected in Alternative E are comprised of the addition of one travel lane in each direction.

4.2 AESTHETICS AND VISUAL QUALITY

Methodology/Setting

The proposed project is located in the southeast region of Los Angeles County along the I-710 freeway between the SR-60 freeway to the north and the Port of Long Beach to the south. Topography within the proposed project area consists primarily of low level flatlands with the exception of Signal Hill, which consists of the "hill" itself, surrounded by areas of gentle slopes. The proposed project area includes portions of the cities of Bell, Bell Gardens, Bellflower, Carson, Commerce, Compton, Cudahy, Downey, Huntington Park, Lakewood, Long Beach, Lynwood, Maywood, Paramount, Signal Hill, South Gate, and Vernon. Most of these cities contain primarily industrially oriented uses, with the exception of Long Beach, which includes several tourist attractions, historic sights, and the commercially significant Port of Long Beach. The proposed project area is highly urbanized, consisting mainly of industrial/manufacturing areas and some scattered residential neighborhoods. Most of these residential areas are screened from view of I-710 by sound walls and vegetation. Landscaping in the area is minimal and consists primarily of non-native plant and tree species, with the exception of some native coastal scrub located closer to the southern part of the proposed project area.

The I-710 freeway is a heavily traveled corridor serving the Port of Long Beach and several major freeways. Within the proposed project area, I-710 provides connections to State Route 60 (SR-60),

Interstate 5 (I-5), Interstate 105 (I-105), State Route 91 (SR-91), and Interstate 405 (I-405). The I-710 freeway and these interchange connections represent a significant visual element within the proposed project study area. Other elements include the Union Pacific Railroad yard and tracks located just south of I-5 that extend below the freeway to the east and west. East of I-710, the Los Angeles River parallels the freeway throughout most of the project area. Also located east of I-710 is the Rio Hondo River, which intersects the Los Angeles River just above Imperial Highway. To the west of I-710 just below Del Amo Boulevard, Compton Creek also intersects the Los Angeles River. From approximately I-405 to Atlantic Avenue, high-power electrical transmission towers can be seen along the northbound side of the freeway. At Atlantic Boulevard the transmission lines veer away from the freeway both to the east and west. The transmission towers reappear at I-105, where the transmission lines cross I-710 in an east-west direction as well as north along the east bank of the Los Angeles River. The transmission lines and towers continue past Imperial Highway at which point one set crosses I-710 to continue along the east bank of the Los Angeles River and the second set heads northeast along the Rio Hondo River. The transmission lines and towers continue parallel to I-710, with several other large transmission lines crossing the freeway at Southern Avenue, Firestone Boulevard, and the Union Pacific Railroad until Slauson Avenue where they continue west, following the Los Angeles River.

Impacts Evaluation

Visual impact is related to the change in the existing visual environment. The visual environment consists of both tangible and intangible elements. Tangible elements may consist of landscaping, historic structures, or unique topography. Intangible elements are reflected in policy documents and the perception of viewers. These elements play a role in establishing the existing quality of the visual environment and can be used to determine whether changes to the visual environment may result in an impact. An impact can be either positive or negative. In order to evaluate whether impacts to the existing visual environment would occur as a result of implementation of any of the proposed Alternatives, a screening level analysis was conducted using criteria that combined both the tangible and intangible elements. The first criterion is sensitive land uses. The I-710 corridor was characterized based on field surveys to determine areas that represented visually sensitive land uses. These uses included residential neighborhoods, parks, and cultural resources. By identifying these areas the impacts to the intangible elements within the existing visual environment could be considered. These areas represented intangible elements related to policies protecting visual resources and viewer perception. The second criterion is physical change. Engineering plans were reviewed to determine areas where a physical change to the existing visual environment would occur. Change was represented by either the removal or addition of physical elements such as the removal of a building or the addition freeway structures. Physical change is associated with the removal or addition of tangible elements within the existing visual environment.

Each proposed Alternative was evaluated for potential visual impacts based on anticipated physical changes resulting from implementation of the various components. Each component identified within the various Alternatives was evaluated to determine whether they would result in a physical change to a sensitive land use area. The criterion used to determine whether an impact might occur was related to either removal or introduction of a physical element. Examples would be the removal of buildings, introduction of elevated freeway structures, or introduction of additional lighting. The focus of the evaluation was on highly sensitive resource areas such as residential neighborhoods, parks, and other public facilities. These areas represent uses and viewers that would be more sensitive to changes in the visual environment. For example, residents are usually familiar with the existing visual environment and often feel an ownership over those views. Therefore, any changes to those views would be perceived by the residential viewers as potentially having more of an impact on the visual environment. Visual impacts within sensitive use areas such as a park may also be perceived as having a greater impact because of the visual expectation of park users. Park users have an expectation that the visual environment will be pleasant and of good quality. Physical changes that result in a disruption of the parks visual environment

may be perceived as having a greater impact. It is anticipated that adverse visual impacts would occur in any area where construction would result in the removal or introduction of physical elements. However, a majority of these areas are primarily industrial with low to moderate visual quality. Physical changes within sensitive use areas such as parks, open spaces, and residential communities are anticipated to result in a perception of greater negative impact therefore these areas were used to evaluate the level of impact for each alternative

4.2.1 Alternative A

Alternative A is a baseline alternative consisting primarily of operational improvements. These operational improvements have already been planned and committed for the year 2025. Impacts associated with these improvements have already been evaluated. No additional impacts associated with visual quality are anticipated to occur beyond what has already been studied and approved.

4.2.2. Alternative B

Alternative B is a low impact alternative consisting of operational investments, policies, and actions targeted at improving goods movement, passenger auto and transit travel and reducing environmental impacts of transportation facilities and operations in the area of impact. Most of the improvements associated with this alternative are anticipated to have a beneficial impact on visual quality by providing additional landscaping, hardscape design treatments, improved signage, and aesthetic improvements to curbs and gutters. However, the addition of high-mast illumination at freeway-to-freeway interchanges would have the potential to adversely affect surrounding areas particularly for residential areas located in close proximity to the interchanges. Although the I-710 corridor incorporates lighting for safety and directional purposes, the addition of high-mast illumination would represent a significant new light source that could have the potential to adversely affect sensitive areas.

4.2.3 Alternative C

I-710 Mainline Improvements

Mainline Widening: Mainline widening impacts present the total number of linear miles affected, which only includes the potential right-of-way impacts to sensitive use areas. Less than three miles of sensitive uses along the freeway would be affected by mainline widening for this Alternative. Impacts associated with the widening could include removal of landscape, hardscape, and buildings within visually sensitive areas. Impacts associated with the widening are anticipated to be potentially significant.

Collector Distributor Lane System: Approximately one and a half miles of freeway would be affected by the collector distributor roads for this Alternative. Impacts associated with the widening could include removal of landscape, hardscape, and buildings within visually sensitive areas. Impacts associated with the collector distributor roads are anticipated to be potentially significant.

Truck Inspection Facility: This facility would be located on the northbound side of I-710 within a primarily industrial area. Impacts are anticipated to be minor.

I-405 Truck Bypass Lanes: The addition of the bypass lanes is anticipated to have a minor affect on the visual environment due to their location at a major interchange within a primarily industrial area.

SR-91/I-105 Truck Bypass Lanes: The addition of the bypass lanes is anticipated to have a minor affect on the visual environment along the eastern side of the I-710 due to their location at two major interchanges within industrial areas along the eastern portion of the I-710. However, residential land uses lie along the western portion of the I-710 in the SR-91/I-105 interchange areas. These residences may experience a potentially significant visual impact from the elevated truck bypass lanes in this section of the study area.

Pacific Coast Highway Truck Ramps: The addition of the truck ramps is anticipated to have a minor affect on the visual environment due to their location within a primarily industrial area.

Washington Blvd. Truck Ramps: The addition of the truck ramps is anticipated to have a minor affect on the visual environment due to their location within a primarily industrial area.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: Impacts associated with these improvements may be potentially significant to the surrounding residences in the southwest quadrant of the interchange area. Impacts associated with these improvements are anticipated to be minor within the primarily industrial area surrounding the interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

I-5/I-710 Right Side Ramp: Impacts associated with these improvements may be potentially significant to those residences just north of the interchange. Impacts associated with these improvements are anticipated to be minor for the remainder of the interchange area, as the remainder of the interchange area is primarily industrial. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Local Interchanges

Anaheim Street Braid: Impacts associated with these improvements are anticipated to be minor as they are located within a primarily industrial area. Visual/aesthetic impacts to nearby residential uses may be potentially significant. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Pacific Coast Highway Braid: Approximately four acres of sensitive uses would be potentially significantly affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

Willow St. PARCLO: Approximately four acres would be potentially significantly affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

Del Amo Blvd. PARCLO: Impacts associated with these improvements are anticipated to be minor within the primarily industrial area. Visual/aesthetic impacts to residences in the interchange area may be potentially significant. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Imperial Highway PARCLO: Approximately one half acre of sensitive uses would be potentially significantly affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

Florence Ave. PARCLO: Impacts associated with these improvements are anticipated to be minor within the primarily industrial area. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Atlantic Blvd./Bandini Blvd.: Impacts associated with these improvements are anticipated to be minor as they are located within a primarily industrial area. Impacts to residences within the interchange area would be potentially significant. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Washington Blvd. PARCLO: Approximately seven acres would be affected by improvements at this interchange. Visual/aesthetic impacts associated with these improvements would be potentially significant. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

Slauson Blvd. Diamond: Impacts associated with these improvements are anticipated to be minor within the primarily industrial area surrounding the interchange. Impacts to the residential uses within the interchange area would be potentially significant. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Extension: This component consists of extending the Terminal Island Freeway (SR-103) from Willow Street to I-710 just north of I-405. The extension would be an elevated, four lane facility to be used primarily by trucks. Because the freeway extension would be elevated it would affect both properties adjacent to the facility as well as surrounding areas. The extension is planned for an area that is primarily residential; therefore impacts associated with this component are anticipated to be significant. The affected area is approximately four miles in length.

Arterials

Approximately 74 miles of arterial roadways would be affected by implementation of Alternative C. Impacts associated with these improvements may include the addition of travel lane in certain segments, which would result in acquisition of additional right-of-way. These impacts would be potentially significant. Right-of-way acquisition may involve removal of landscaping, sidewalks, parking, and buildings.

4.2.4 Alternative D

I-710 Mainline Improvements

Mainline Widening: Approximately seven miles of visually sensitive uses along the freeway would be affected by mainline widening for this Alternative. Impacts associated with the

widening could include removal of landscape, hardscape, and buildings within visually sensitive areas. Impacts associated with the widening are anticipated to be potentially significant.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: Approximately one acre of visually sensitive uses would be affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

I-405/I-710 HOV Connector: Impacts associated with these improvements are anticipated to be minor as they are located within a primarily industrial area. Impacts to residences in the interchange area would be potentially significant. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

SR-91/I-710: Approximately 38 acres of visually sensitive uses, including Coolidge Park, would be potentially significantly affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

I-5/I-710: Approximately 28 acres of visually sensitive uses would be potentially significantly affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

Local Interchanges

Willow St. Diamond: Approximately three acres of visually sensitive uses would be potentially significantly affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

Del Amo Blvd. Diamond: Impacts associated with these improvements are anticipated to be minor within the primarily industrial area surrounding the interchange; impacts would be potentially significant within the residential areas surrounding the interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Long Beach Boulevard: Impacts associated with these improvements are anticipated to be minor within the primarily industrial area surrounding the interchange; impacts would be potentially significant within the residential areas surrounding the interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Imperial Highway Diamond: Approximately two acres of visually sensitive uses would be potentially significantly affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

Florence Ave. Diamond: Impacts associated with these improvements are anticipated to be minor within the primarily industrial area surrounding the interchange; impacts would be potentially significant within the residential areas surrounding the interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Atlantic Blvd./Bandini Blvd: Impacts associated with these improvements are anticipated to be minor within the primarily industrial area surrounding the interchange; impacts would be potentially significant within the residential areas surrounding the interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Washington Blvd. PARCLO: Approximately five acres of visually sensitive uses would be potentially significantly affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Truck Expressway Connector: Impacts associated with the addition of the four-lane expressway are anticipated to be minor because the surrounding area is primarily industrial. Impacts associated with this component may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Arterials

Approximately 44 miles of visually sensitive uses along arterial roadways would be potentially significantly affected by implementation of Alternative D. Impacts associated with these improvements which include the addition of travel lanes, would result in acquisition of additional right-of-way. Right-of-way acquisition may involve removal of landscaping, sidewalks, parking, and buildings.

4.2.5 Alternative E

I-710 Mainline Improvements

Exclusive Truck Facility: Approximately 16 miles of freeway would be affected by the truck facility for this Alternative. This primarily elevated, four-lane facility would have impacts on properties immediately adjacent to it as a result of right-of-way acquisition and surrounding properties as a result of the addition of an elevated structure within visually sensitive areas. Impacts associated with the exclusive truck facility are anticipated to be potentially significant.

I-405 Truck Ramps: The addition of the truck ramps is anticipated to have a minor affect on the visual environment due to their location at a major interchange within a primarily industrial area.

SR-91 Truck Ramps: The addition of the truck ramps is anticipated to have a minor affect on the visual environment due to their location at a major interchange within a primarily industrial area.

Firestone Blvd. Truck Ramps: The addition of the truck ramps is anticipated to have a minor affect on the visual environment due to their location at a large interchange within a primarily industrial area.

Washington Blvd. Truck Ramps: The addition of the truck ramps is anticipated to have a minor affect on the visual environment due to their location at a large interchange within a primarily industrial area.

I-710 Interchanges

Freeway Interchanges

I-405 /I-710: Impacts associated with these improvements are anticipated to be minor as they are located within a primarily industrial area. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

SR-91/I-710: Approximately 10 acres would be affected by improvements at this interchange. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings within visually sensitive areas.

I-5/I-710: Impacts associated with these improvements are anticipated to be minor as they are located within a primarily industrial area. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Local Interchanges

Slauson Ave. PARCLO: Impacts associated with these improvements are anticipated to be minor as they are located within a primarily industrial area. Impacts may include right-of-way acquisition resulting in removal of landscaping, roadway paving, and buildings.

Arterials

Approximately 17 miles of arterial roadways would be affected by implementation of Alternative E. Impacts associated with these improvements include the addition of travel lanes, which is anticipated to result in acquisition of additional right-of-way. Right-of-way acquisition may involve removal of landscaping, sidewalks, parking, and buildings.

4.3 AIR QUALITY

Completion of analysis is pending based on traffic forecasts.

4.3.1 Alternative A

4.3.2. Alternative B

4.3.3 Alternative C

4.3.4 Alternative D

4.3.5 Alternative E

4.4 AGRICULTURE

Methodology/Setting

The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (FPPA) requires that before taking or converting farmland, a federal agency must examine the adverse effects and must consider alternatives to lessen them. Neither NEPA nor FPPA require that a project be modified solely to avoid or minimize the effects of conversion of farmland to nonagricultural use. Although no state or federal law explicitly prohibits the conversion of farmlands to other nonagricultural uses, there are established policies and programs to maintain farmland for agricultural use.

The California Department of Conservation and the National Resources Conservation Service (NRCS) classify agricultural lands into four categories (in order from highest quality): Prime Farmlands, Unique Farmland, Farmlands of Statewide Importance, and Farmland of Local Importance. The classification of “farmland” does not necessarily mean that the land has to be farmed. It is a technical term primarily rating the soil type, topography, type of crop grown, and its ability to be farmed.

There are areas within the proposed study area beneath the electrical utility corridors, which are currently leased and used for agricultural purposes; however, they are not designated as Prime Farmlands, Unique Farmland, Farmlands of Statewide Importance, or Farmland of Local Importance.

Impacts Evaluation

4.4.1 Alternative A

Alternative A would not acquire any designated farmlands other than those already planned and approved in previous projects.

4.4.2. Alternative B

Alternative B would not acquire any designated farmlands other than those already planned and approved in previous projects.

4.4.3 Alternative C

No designated Prime, State, or Unique farmlands were found within the proposed new rights-of-way for Alternative C components.

4.4.4 Alternative D

No designated Prime, State, or Unique farmlands were found within the proposed new rights-of-way for Alternative D components.

4.4.5 Alternative E

No designated Prime, State, or Unique farmlands were found within the proposed new rights-of-way for Alternative E components.

4.5 BIOLOGICAL RESOURCES

Methodology/Setting

The project study area lies in an urbanized setting, with few biological communities. The cities in the proposed project area are mostly built-out, with the exception of scattered vacant and open space parcels. A GIS records search of the California Natural Diversity Data Base (CNDDB, 2002) was conducted as the appropriate methodology at this stage of analysis. Biological resources are studied on a more regional basis because habitats and wildlife corridors span broader areas. Impacts were analyzed per alternative since the component level of analysis was too small. Biological resources in the proposed project area consists mainly of a variety of plant and animal habitats found on undeveloped areas, as well as open space within urban developments. The urbanized areas support mainly man-introduced species and landscaping materials. The city of Long Beach, however, still presents a variety of habitats, although many of those have been severely impacted by urbanization. In addition, five cities in the proposed project area have occurrences of sensitive, rare or endangered species. These cities are Carson, Los Angeles, Long Beach, Lakewood and Downey. The ranking of these species are shown in Table 4.5-1 below:

**Table 4.5-1
Sensitive Species Federal and State Ranking**

Scientific Name	Common Name	Federal Status	California Status
<i>Cordylanthus maritimus ssp maritimus</i>	salt marsh bird's-beak	Endangered	Endangered
<i>Perognathus longimembris pacificus</i>	pacific pocket mouse	Endangered	None
<i>Orcuttia californica</i>	California orcutt grass	Endangered	Endangered
<i>Sterna Antillarum Browni</i>	California least tern	Endangered	Endangered
<i>Passerculus sandwichensis beldingi</i>	belding's savannah sparrow	None	Endangered

Source: CNDDB, 2002

A project would have a significant effect on the environment if it would:

- Substantially affect a rare or endangered species of animal or plant, or the habitat of the species;
- Substantially affect a federally protected wetland;
- Interfere substantially with the movement of any resident or migratory fish or wildlife species; or
- Conflict with any local policies or ordinances protecting biological resources, or an adopted Habitat Conservation Plan or other approved protection plan.

See Section 4.9; Hydrology, Water Quality, and Floodplains; for a description of potential impacts to wetlands areas.

Impacts Evaluation

4.5.1 Alternative A

Improvements under Alternative A have already been planned and approved; therefore, no biological impacts are anticipated.

4.5.2. Alternative B

There are no major construction elements under Alternative B; therefore, no biological impacts are anticipated.

4.5.3 Alternative C

Roadway improvements listed as part of Alternative C could potentially affect biological resources. Roadway improvements for this Alternative involve arterial capacity enhancements to ten major arterials by potentially adding one lane in each direction. Of these arterials, Paramount Boulevard (from Carson Avenue to I-5), Firestone Boulevard (from Atlantic Boulevard to Paramount Boulevard), and Florence Avenue (From Atlantic Boulevard to Paramount Boulevard) may directly affect the California orcutt grass in Downey. This species is listed as endangered on both the Federal and the California List. Moreover, the improvements on the Pacific Coast Highway (from SR-103 to Cherry Avenue) would be 500 meters distant from the salt marsh bird's-beak habitat in the city of Long Beach. In addition, arterial enhancement of Willow Boulevard (From SR-103 to Cherry Avenue) is located about 160 meters from the habitat of the pacific pocket mouse in the city of Carson and southern part of the city of Los Angeles.

Construction activities associated may promote the spread of invasive plant species. Equipment operating within the area where invasive species are present would likely spread the species to other areas where construction would occur or to areas where the equipment would be cleaned.

4.5.4 Alternative D

The Terminal Island Freeway Truck Expressway Connector component of Alternative D could potentially have a direct, significant impact on the pacific pocket mouse, in the cities of Los Angeles and Carson, and on the salt marsh bird's-beak in Long Beach. The pacific pocket mouse is classified as endangered species on the Federal List, and the salt marsh bird's-beak is classified as endangered species on both Federal and State listings.

There are no locally designated natural communities or sensitive species within the project area of arterial improvements included as part of Alternative D. Therefore, no further biological impacts are expected to occur under this Alternative.

Construction activities associated may promote the spread of invasive plant species. Equipment operating within the area where invasive species are present would likely spread the species to other areas where construction would occur or to areas where the equipment would be cleaned.

4.5.5 Alternative E

Roadway improvements listed as part of Alternative E could potentially affect biological resources. Roadway improvements under this Alternative involve arterial capacity enhancements to five major arterials by potentially adding one lane in each direction. Of these arterials, Ocean Boulevard (from SR-47 to I-710) may directly affect the salt marsh bird's-beak plant habitat in the City of Long Beach and southern part of the City of Los Angeles, a species classified as endangered on both the Federal and State listings. In addition, improvements to the Pacific Coast Highway (from SR-103) would be located at a distance of 160 meters from the pacific pocket mouse's habitat located in the City of Carson and southern part of the City of Los Angeles.

Construction activities associated may promote the spread of invasive plant species. Equipment operating within the area where invasive species are present would likely spread the species to other areas where construction would occur or to areas where the equipment would be cleaned.

4.6 CULTURAL RESOURCES

Methodology/Setting

Section 106 of the National Historic Preservation Act (NHPA) requires that the effects of federally funded projects on cultural resources be carefully considered. These procedures apply to all federally assisted actions that may affect properties included in or eligible for inclusion in the National Register of Historic Places (NRHP).

Cultural resources are first evaluated for eligibility under the National Register criteria. After the initial assessment, eligibility is determined by the lead federal agency, in consultation with the State Historic Preservation Officer. The assessment of National Register eligibility is primarily based on federal guidelines contained in 36 CFR 60.4. Specifically, the quality of significance in American history, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) that embody the distinctive characteristics of a type, period, or method of construction, or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history.

Cultural resources would be affected/impacted if the property is acquired by the project. A project would have a significant effect on the environment if it would:

- Cause a substantial adverse change in the significance of historical or archaeological resources;
- Disturb any human remains; or
- Directly or indirectly destroy a unique paleontological resource or site.

A preliminary cultural resources survey was performed for the proposed project area. The survey included the area where undertaking may have effects on historic properties, if any such properties exist.

The Pacific Electric Bridge (north of Firestone), a bridge located south of Del Amo Boulevard, and a bridge south of Florence Avenue may be classified as historic bridges. In order to determine whether these bridges are classified as historical, a certified architectural historian must be consulted in subsequent study phases. The proposed project may have potentially significant impact on these sites. In order to determine whether the sites are impacted, a certified architectural historian must be consulted in subsequent study phases.

The following sources were researched: National Register of Historic Places or the California Inventory of Historic Resources (National Register of Historic Properties [2002], California Historical Landmarks [1996], County of Los Angeles General Plan [1980], general plans of the Cities of Bell, Bell Gardens [1995], Bellflower [1990], Carson [2002], Commerce [1987], Compton [1991], Cudahy [1992], Downey [1992], Huntington Park [1991], Lakewood [1996], Long Beach [1980], Lynwood [1990], Maywood

[1989], Montebello [1990], Monterey Park [2001], Paramount [1990], Signal Hill [1986], South Gate [1986], and Vernon [2001]).

Impacts Evaluation

With the proposed project area nearly built out, the discovery of new archeological or paleontological resources is unlikely. There is no record of known sites within the proposed project area or in immediate surrounding areas. There are no additional known cultural resources or Native American sites found within the proposed project area.

Alternatives A and B would have no additional impacts other than those already planned and approved. There are no cultural impacts along the I-710 Mainline for any of the alternatives. There are, however, impacts associated with the arterial components of the alternatives. Alternative C arterial improvements would have the greatest impact on cultural resources. This Alternative would potentially affect two sites listed on the National Register of Historic Places and five structures of local importance. Alternative D arterial improvements would affect the Lynwood Pacific Electric Railway Depot, which is listed on the NRHP in the City of Long Beach, and six structures listed in the general plans of the City of Commerce. Alternative E's arterial improvements would have the least impact on cultural resources, since it may affect only one cultural site of local importance in the City of Commerce.

4.6.1 Alternative A

Alternative A would have no additional impacts other than those already planned and approved for other projects.

4.6.2. Alternative B

Alternative B would have no additional impacts since it would not acquire any additional right-of-way.

4.6.3 Alternative C

I-710 Mainline Improvements, I-710 Interchanges, and Terminal Island Freeway (SR-47/SR-103)

There is no record of known cultural resource sites within the proposed project area or in immediate surrounding areas with the exception of the arterials component described below.

Arterials

The proposed improvements along Atlantic Boulevard could potentially impact the following Local Cultural Resources: Pillsbury Mill in the City of Commerce, and Robbie's Hobby Center, Graham's Auto Electric, and Scott Gasket in the City of Cudahy.

Proposed arterial improvements to Cherry Avenue/Garfield Avenue could impact two Local Cultural Resources, the Pillsbury Mill in the City of Commerce and Clara Street Water Company in the City of Bell Gardens.

Proposed improvements to Long Beach Boulevard could impact the Lynwood Pacific Electric Highway Depot in the City of Lynwood. This building was added to the National Register of Historic Places in 1974, building number 74000524.

The proposed Florence Avenue arterial improvements could impact Casa de Parley Johnson in the City of Downey. This building was added to the National Register of Historic Places in 1986, building number 86000449.

4.6.4 Alternative D

I-710 Mainline Improvements, I-710 Interchanges, and Terminal Island Freeway (SR-47/SR-103)

There is no record of known cultural resource sites within the proposed project area or in immediate surrounding areas with the exception of the arterials component described below.

Arterials

The proposed improvements along Atlantic Boulevard could potentially impact the following Local Cultural Resources: Pillsbury Mill in the City of Commerce and Robbie's Hobby Center, Graham's Auto Electric, and Scott Gasket in the City of Cudahy.

Mount Carmel and Vail Field are Local Cultural Resources in the City of Commerce and could be impacted by the proposed Garfield Avenue widening.

Proposed arterial improvements to Eastern Avenue could impact the Pillsbury Mill, a Local Cultural Resource in the City of Commerce.

Proposed improvements to Long Beach Boulevard could impact the Lynwood Pacific Electric Highway Depot, located in the City of Lynwood. This building was added to the National Register of Historic Places in 1974, building number 74000524.

4.6.5 Alternative E

I-710 Mainline Improvements and I-710 Interchanges

There is no record of known cultural resource sites within the proposed project area or in immediate surrounding areas with the exception of the arterials component described below.

Arterials

The site of the Sleepy Lagoon Murder is considered a Local Cultural Resource in the City of Commerce. It is associated with the proposed Bandini Boulevard Improvements.

4.7 GEOLOGY, SEISMICITY, AND SOILS

Methodology/Setting

Geologic, seismic, and soils resources are studied on a broader basis because of their more regional nature. They are not bound by political or jurisdictional boundaries. Therefore, impacts were analyzed

for the region in general and impact all the Alternatives equally. Differentiating factors may include impacts to those components with more elevated structures, requiring additional measures to ensure safety during an earthquake.

The proposed project is located within the northerly end of the Peninsular Ranges geomorphic province. The Peninsular Ranges Province extends the Los Angeles Basin south of the Santa Monica Mountains to the tip of Baja California. This geomorphic province is characterized by elongated northwest-trending mountain ranges separated by straight-sided sediment floored valleys. These include the Newport-Inglewood Fault zone, the Paramount syncline, the Dominguez anticline, the Gardena syncline, the Wilmington anticline, and the Wilmington syncline, all of which cross the corridor. The corridor is situated in the northern part of the physiographic basin known as the Los Angeles Basin or the Coastal Plain of Los Angeles. The most prominent landforms within the area of the corridor are the Dominguez Hills and Signal Hill.

The corridor is underlain by geologic units ranging in age from the Miocene to Holocene epochs. Marine sedimentary rock units of the Monterey Formation are exposed in the Palos Verdes Hills at the southerly end of the corridor. The San Pedro Formation underlies most of the Los Angeles Basin, as well as the Santa Monica and San Pedro shelves offshore. The San Pedro Formation is composed primarily of marine, semi-consolidated sand, gravel, silt, and clay. The Lakewood Formation overlies the early Pleistocene San Pedro Formation and extends beneath most of the Los Angeles Basin. It is composed of continental and marine deposits of sand, silt, clay, and gravel. Its character varies locally as a result of the differing source rocks from which sediments are derived. The majority of the corridor will be directly underlain by Holocene age alluvial deposits of the Downey Plain and Dominguez Gap. The alluvial deposits are composed of poorly consolidated sand, silt, clay, and gravel.

Several major faults are present within 50 miles of the project area. Numerous smaller faults are located throughout the Los Angeles Basin. Some directly underlie, or are in very close proximity to, the corridor. Some of these faults are considered active and capable of generating large damaging earthquakes. The maximum credible earthquake for faults in the area is a magnitude of 7.0 on the Richter Scale. Faults potentially affecting the project area include:

- Newport-Inglewood Fault Zone (crosses through the project area)
- Raymond Fault (8 miles north)
- San Andreas Fault Zone (2 miles southwest)
- Coyote Pass Fault (3 miles northeast)
- Charnock Fault (6 miles west)
- Elysian Park Structure (5 miles to the north-northeast)
- Santa Monica-Hollywood Fault (7 miles north-northwest)
- Norwalk Fault (8 miles east)
- Overland fault (9 miles west)

Impact Evaluation

Liquefaction potential, which is associated with earthquakes, has been found to be greatest where the groundwater level is shallow and loose fine sands occur within a depth of 50 feet or less. Liquefaction potential decreases with increasing grain size and clay and gravel content, but increases as the ground acceleration and duration of shaking increase. The proposed project would pass through the Dominguez and Wilmington oil fields. There is no documented ground subsidence associated with the Dominguez oil field. The corridor is located on relatively flat ground with no slope stability problems and no potential for lurching (movement at right angles to a steep slope during ground shaking).

4.8 HAZARDOUS MATERIALS

Methodology/Setting

As is appropriate for this phase of planning, a search was conducted using the Fidelity National Information Solutions database (Fidelity), formerly Vista Environmental Information Solutions, Inc., dated February 2002. Properties which are designated hazardous materials/waste sites were identified and categorized. Properties located either partially or fully within the new proposed right-of-way of each alternative were identified. Hazardous materials/waste sites can only be affected/impacted if the property is acquired by the project.

The following categories and distances from the project site were used as criteria for selecting potentially impacted hazardous materials/waste sites:

- Above Storage Tanks (AST) (within 250 feet/76 meters)
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) sites (within one-quarter mile/0.4 kilometer)
- Emergency Response Notification System (ERNS) (within 250 feet/76 meters)
- Leaking Underground Storage Tank (LUST) sites (within one-half mile/within 0.8 kilometer)
- No Further Remedial Action Planned (NFRAP) (within 250 feet/76 meters)
- Federal National Priorities List (NPL)/Superfund (within one mile/1.6 kilometer)
- Resource Conservation and Recovery Act (RCRA) Treatment, Storage, and Disposal (TSD) facilities (within one mile/1.6 kilometers)
- RCRA Corrective Action Sites (CORRACTS) (within one mile/1.6 kilometers)
- RCRA Violators (VIOL) (within one-half mile/0.8 kilometers)
- Spills-State (within one-quarter mile/0.4 kilometer)
- State CERCLA or State Superfund (SCL) (within one-quarter mile/0.4 kilometer)
- State Priority List (SPL) (within one mile/1.6 kilometers)
- State of California Solid Waste Landfills (SWLFs) (within one-quarter mile/0.4 kilometer)
- Toxic Chemical Release Inventory System (TRIS) (within one-quarter mile/0.4 kilometer)
- Underground Storage Tank (UST) sites (within project boundary)

Impacts Evaluation

Alternatives A and B would have the least impacts overall because they have no proposed property acquisitions. Alternative C would have the most impacts, traversing or adjacent to a total of 2,378 potential hazardous waste sites. Alternative D would have the second most impacts, totaling 1,525 potential hazardous waste sites. Alternative E would have the least impacts of the Build Alternatives, potentially affecting a total of 939 potential hazardous waste sites. This analysis includes potential impacts from the arterial street component of each alternative.

4.8.1 Alternative A

There would be no impacts to Hazardous Materials since there would be no property acquisitions.

4.8.2. Alternative B

There would be no impacts to Hazardous Materials since there would be no property acquisitions.

4.8.3 Alternative C

I-710 Mainline Improvements

Mainline Widening: There are a total of 331 hazardous waste sites potentially affected by this element.

Collector Distributor Lane System: There are a total of 62 potential hazardous waste sites potentially affected by this element.

Truck Inspection Facility: There are a total of 19 potential hazardous waste sites potentially affected by this element.

I-405 Truck Bypass Lanes: There are a total of 11 potential hazardous waste sites potentially affected by this element.

SR-91/I-105 Truck Bypass Lanes: There are a total of 93 potential hazardous waste sites potentially affected by this element.

Pacific Coast Highway Truck Ramps: There are a total of 65 potential hazardous waste sites potentially affected by this element.

Washington Blvd. Truck Ramps: There are a total of 27 potential hazardous waste sites potentially affected by this element.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: There are a total of 11 potential hazardous waste sites potentially affected by this element.

I-5/I-710 Right Side Ramp: There are a total of 31 potential hazardous waste sites potentially affected by this element.

Local Interchanges

Anaheim Street Braid: There are a total of 87 potential hazardous waste sites potentially affected by this element.

Pacific Coast Highway Braid: There are a total of 83 potential hazardous waste sites potentially affected by this element.

Willow St. PARCLO: There are a total of 9 potential hazardous waste sites potentially affected by this element.

Del Amo Blvd. PARCLO: There are a total of 10 potential hazardous waste sites potentially affected by this element.

Imperial Highway PARCLO: There are a total of 8 potential hazardous waste sites potentially affected by this element.

Florence Ave. PARCLO: There are a total of 15 potential hazardous waste sites potentially affected by this element.

Atlantic Blvd./Bandini Blvd.: There are a total of 30 potential hazardous waste sites potentially affected by this element.

Washington Blvd. PARCLO: There are a total of 31 potential hazardous waste sites potentially affected by this element.

Slauson Blvd. Diamond: There are a total of 32 potential hazardous waste sites potentially affected by this element.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Extension: There are a total of 16 potential hazardous waste sites potentially affected by this element.

Arterials

There are a total of 1,407 potential hazardous waste sites potentially affected by this element.

4.8.4 Alternative D

I-710 Mainline Improvements

Mainline Widening: There are a total of 254 potential hazardous waste sites potentially affected by this element.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: There are a total of 20 potential hazardous waste sites potentially affected by this element.

I-405/I-710 HOV Connector: There are a total of 5 potential hazardous waste sites potentially affected by this element.

SR-91/I-710: There are a total of 23 potential hazardous waste sites potentially affected by this element.

I-5/I-710: There are a total of 64 potential hazardous waste sites potentially affected by this element.

Local Interchanges

Willow St. Diamond: There are a total of 9 potential hazardous waste sites potentially affected by this element.

Del Amo Blvd. Diamond: There are a total of 21 potential hazardous waste sites potentially affected by this element.

Long Beach Boulevard: There are a total of 21 potential hazardous waste sites potentially affected by this element.

Imperial Highway Diamond: There are a total of 18 potential hazardous waste sites potentially affected by this element.

Florence Ave. Diamond: There are a total of 4 potential hazardous waste sites potentially affected by this element.

Atlantic Blvd./Bandini Blvd: There are a total of 37 potential hazardous waste sites potentially affected by this element.

Washington Blvd. PARCLO: There are a total of 33 potential hazardous waste sites potentially affected by this element.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Truck Expressway Connector: There are a total of 56 potential hazardous waste sites potentially affected by this element.

Arterials

There are a total of 960 potential hazardous waste sites potentially affected by this element.

4.8.5 Alternative E

I-710 Mainline Improvements

Exclusive Truck Facility: There are a total of 380 potential hazardous waste sites potentially affected by this element.

I-405 Truck Ramps: There are a total of 10 potential hazardous waste sites potentially affected by this element.

SR-91 Truck Ramps: There are a total of 18 potential hazardous waste sites potentially affected by this element.

Firestone Blvd. Truck Ramps: There are a total of 17 potential hazardous waste sites potentially affected by this element.

Washington Blvd. Truck Ramps: There are a total of 31 potential hazardous waste sites potentially affected by this element.

I-710 Interchanges

Freeway Interchanges

I-405 /I-710: There are a total of 9 potential hazardous waste sites identified in this element.

SR-91/I-710: There are a total of 10 potential hazardous waste sites potentially affected by this element

I-5/I-710: There are a total of 135 potential hazardous waste sites potentially affected by this element.

Local Interchanges

Slauson Ave. PARCLO: There are a total of 34 potential hazardous waste sites potentially affected by this element.

Arterials

There are a total of 295 potential hazardous waste sites potentially affected by this element.

4.9 HYDROLOGY, WATER QUALITY, AND FLOODPLAINS

Methodology/Setting

Water Quality

Protection of water quality in California is primarily the responsibility of the State Water Resources Control Board (SWRCB) and, on a regional basis, the nine California Regional Water Quality Control Boards. The water quality in the watersheds is primarily under the jurisdiction of the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB). The project study area is located within the Los Angeles River Watershed and part of the Dominguez Channel and Los Angeles/Long Beach Harbors Water Management Areas (WMA). The Los Angeles River watershed, covering an area approximately 324 square miles, includes major tributaries such as the Pacoima Wash, Tujunga Wash, Burbank Western Channel, Verdugo Wash, Arroyo Seco, Rio Hondo, and Compton Creek. The Los Angeles River is currently identified on the 1998 Clean Water Act Section 303(d) list of impaired waters for pH, ammonia, a number of metals, coliform, trash, scum, algae, oil, chlorpyrifos as well as other pesticides, and volatile organics. The Los Angeles River Channel has year-round flow which is maintained by urban and agricultural runoff, and discharges of treated wastewater. The soft bottom area of the river which is tidally influenced extends up to Willow Street Bridge, a distance of 2.6 miles from the mouth at Queensway Bay. Anywhere that the soft bottom portion of the river would be impacted, the California Department of Fish and Game (CDFG) would be involved.

The Dominguez Channel area historically consisted of marshes and mudflats with a large marshy area, Dominguez Slough, to the north, and flow from the Los Angeles River entering where Dominguez Channel now drains. The Dominguez Channel is currently identified on the 1998 Clean Water Act Section 303(d) for aldrin, ammonia, ChemA, chlorade, chromium, copper, DDT, Dieldrin, coliform, lead, PAHs, PCBs, and Zinc. The proposed project will need to be consistent with the total daily maximum load (TDML) for these rivers.

The I-710 begins at the Port of Long Beach in the San Pedro Bay. The freeway crosses the Los Angeles County Flood Control Channel (Los Angeles River) at Shoemaker Bridge and follows along the west side of the Los Angeles River. Compton Creek crosses the I-710 just south of Del Amo Boulevard. The I-710 crosses the Los Angeles River again just north of the Los Angeles River and Rio Hondo River confluence.

Floodplains

A review of the Flood Insurance Rate Maps (FIRM) for Los Angeles County revealed that the proposed project is within the Los Angeles River 100-year floodplain zone between 7th Street and Pacific Coast Highway and then again between Compton Creek and just north of Rio Hondo River. On February 25, 2000, the Federal Emergency Management Agency (FEMA) redesignated many communities within the project study area as not being within a flood zone as a result of the U.S. Army Corps of Engineers (Corps) restoration of a section of the Los Angeles River levee system. The freeway also experiences the Rio Hondo 100-year floodplain effects when the freeway is in the vicinity of the Rio Hondo River. The Dominguez Channel 100-year floodplain zone is limited to the channel. The zones of significance in relation to the 100-year floodplain include Zone A or any variant of Zone A.

Groundwater

The study area is located within the Coastal Plain Groundwater Basin. Groundwater accounts for most of the region's local supply of fresh water. The Los Angeles/Orange County coastal plain aquifer system extends across an area of approximately 860 square miles (2,230 square kilometers). Groundwater in the basin generally flowed toward the Pacific Ocean, although flow directions have been altered by increased withdrawals due to rapid urban development. The study corridor is located in the West Coast and Central Groundwater Basins. The general quality of groundwater within the Los Angeles Regional Water Quality Control Board (RWQCB) area has degraded substantially over the years as a result of fertilizers and pesticides; nitrogen and pathogenic bacteria from overloaded or improperly sited septic tanks; storage tanks that have leaked or are leaking hazardous substances into the subsurface; and a variety of other sources or conditions. In areas with industrial or commercial activities, aboveground and underground storage tanks contain vast quantities of hazardous substances. Results of basin-wide monitoring have confirmed that the quality of groundwater extracted from the Central Basin has been good. However, there is a continuing problem with industrial solvents contaminating groundwater within limited areas of the Central Basin. Also, seawater intrusion that has occurred in these basins is now under control in most areas through an artificial recharge system consisting of spreading basins and injection wells that form fresh water barriers along the coast; however, large plumes of saline water have been trapped behind the barrier of injection wells in the West Coast Basin, degrading significant volumes of groundwater with high concentrations of chloride.

Water level measurements from the Los Angeles County Department of Public Works (LACDPW) indicate that shallow groundwater exists along the corridor in the vicinity of the Dominguez Gap and the Los Angeles Harbor area along Alameda Street, south of Pacific Coast Highway, and in the vicinity of Henry Ford Avenue. Although shallow groundwater was found in the above-mentioned adjacent areas, further investigation would be need to be conducted for subsequent environmental planning studies, via observation wells, to determine if shallow groundwater areas exist in the study area.

Water recharge areas are provided by a combination of permeable areas including spreading facilities, yards, parks, utility rights-of-way, and water recharge areas within the Rio Hondo and Los Angeles Rivers rights-of-way. The Los Angeles County Department of Public Works (LADPW) operates 2,436 acres of spreading grounds and soft-bottom channel spreading areas for replenishment of local groundwater supplies. Spreading facilities located within the project study area include the Dominguez Gap and Rio Hondo Coastal Spreading Facilities. A search of the U.S. Department of Transportation, Federal Highway Administration website (2002) indicates that the I-710 study area is not designated as having sole-source aquifers.

Impacts Evaluation

During construction, there would be an increased potential for silt erosion and sediment transport due to grading and removal of vegetation. Implementation of best management practices (BMPs) for erosion and storm-water pollution control, in accordance with the National Pollution Discharge Elimination System (NPDES) and compliance with all RWQCB water quality standards and waste discharge requirements would reduce potential impacts on drainage patterns and erosion to less than significant. Specific short-term and long-term erosion control measures prepared and implemented for the proposed project would reduce potential impacts from erosion and siltation to less than significant.

Adverse impacts could occur if the hydrology of the river system is affected. In cases where portions of the proposed project cross the Los Angeles River and Compton Creek, pier walls would be constructed or lengthened to raise the water level in those areas.

Reconstruction of overcrossings, on- and off-ramps, and construction of elevated portions of the freeway may affect areas identified within floodplain zones. Redevelopment activity has the potential to impede or redirect flood flows and each redevelopment project will need to be evaluated to ensure they do not adversely impact flooding. On December 2001, the final phase of flood control improvements conducted by the Corps were completed. Portions of the proposed project that may cross or modify the channel could adversely impact the hydrology of the river to sustain flood flows.

Of the Build Alternatives, Alternative D would have the most impacts to the hydrology of the surrounding project area because the Terminal Island Freeway Truck Expressway Connector directly impacts 100.5 acres of the Dominguez Channel, as a result of construction of potential structures such as piers and abutments that would be built in the Channel. Alternatives C and E do not directly impact the hydrology of the surrounding surface waters. Alternative D would impact a total of approximately 5.7 acres of floodplains and wetlands. Alternative C would impact a total of approximately 22.4 acres of floodplains and wetlands. Alternative E would impact a total of approximately 17.2 acres of floodplains and wetlands.

4.9.1 Alternative A

Alternative A would not result in any additional potential impacts to hydrology or water quality beyond what has already been studied for previously approved projects.

4.9.2. Alternative B

Alternative B would not result in any additional potential impacts to hydrology or water quality beyond what has already been studied for previously approved projects

4.9.3 Alternative C

I-710 Mainline Improvements

Mainline Widening: Adverse impacts are primarily due to potential impacts during construction and impacts to waterways. The proposed project crosses the Los Angeles River Channel north of the Rio Hondo River. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas. Approximately 5.5 acres of the proposed project are located within the 100-year floodplain.

Collector Distributor Lane System: Adverse impacts are primarily due to potential impacts during construction.

Truck Inspection Facility: Adverse impacts are primarily due to potential impacts during construction.

I-405 Truck Bypass Lanes: Adverse impacts are primarily due to potential impacts during construction.

SR-91/I-105 Truck Bypass Lanes: Adverse impacts are primarily due to potential impacts during construction, to waterways and wetlands. Impacts on the Dominguez Gap Spreading Grounds Facility may affect groundwater recharge in the area. Approximately 0.7 acres of the proposed project are located within the 100-year floodplain. Approximately 0.4 acres of wetlands are impacted by the proposed alternative.

Pacific Coast Highway Truck Ramps: Adverse impacts are primarily due to potential impacts during construction and to floodplains. Approximately 6.2 acres of the proposed project are located within the 100-year floodplain.

Washington Blvd. Truck Ramps: Adverse impacts are primarily due to potential impacts during construction.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: Adverse impacts are primarily due to potential impacts during construction and to waterways impacted by the proposed project. The proposed project crosses the Los Angeles River Channel. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas. The 100-year floodplain is contained in the Los Angeles River Channel. Groundwater resources in the project corridor include the Dominguez Gap Spreading Grounds Facility. Impact to this facility may affect groundwater recharge in the area.

I-5/I-710 Right Side Ramp: Adverse impacts are primarily due to potential impacts during construction.

Local Interchanges

Anaheim Street Braid: Adverse impacts are primarily due to potential impacts during construction and to waterways. Approximately 8.7 acres of the proposed project are located within the 100-year floodplain.

Pacific Coast Highway Braid: Adverse impacts are primarily due to potential impacts during construction and to floodplains. Approximately 6.2 acres of the proposed project are located within the 100-year floodplain.

Willow St. PARCLO: Adverse impacts are primarily due to potential impacts during construction.

Del Amo Blvd. PARCLO: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses the Compton Creek Channel. This would extend the pier walls in the river, causing the water to rise above existing levels in

those areas. The 100-year floodplain is contained within the channel. Approximately 0.2 acres of the proposed project are located within the 100-year floodplain.

Imperial Highway PARCLO: Adverse impacts are primarily due to potential impacts during construction.

Florence Ave. PARCLO: Adverse impacts are primarily due to potential impacts during construction.

Atlantic Blvd./Bandini Blvd.: Adverse impacts are primarily due to potential impacts during construction.

Washington Blvd. PARCLO: Adverse impacts are primarily due to potential impacts during construction.

Slauson Blvd. Diamond: Adverse impacts are primarily due to potential impacts during construction.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Extension: Adverse impacts are primarily due to potential impacts during construction.

Arterials

Adverse impacts are primarily due to potential impacts during construction and to waterways. Impacts may occur for modifications along the Compton Creek and Rio Hondo River, pier walls by potential arterials widenings. Construction of potential structures such as pier extensions and abutments built in the river would cause the water to rise above existing levels in those areas. Portions of the proposed project are located within the 100-year floodplain.

4.9.4 Alternative D

I-710 Mainline Improvements

Mainline Widening: Adverse impacts are primarily due to potential impacts during construction and to waterways. Impacts to the Dominguez Gap Spreading Grounds Facility may affect groundwater recharge in the area. Approximately 1.3 acres of the proposed project are located within the 100-year floodplain. Approximately 0.5 acres of wetlands are impacted by the proposed project.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses the Los Angeles River Channel. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas. Impacts to the Dominguez Gap Spreading Grounds Facility may affect groundwater recharge in the area.

I-405/I-710 HOV Connector: Adverse impacts are primarily due to potential impacts during construction.

SR-91/I-710: Adverse impacts are primarily due to potential impacts during construction and waterways impacted by the proposed project. The proposed project crosses the Los Angeles River Channel. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas. Impacts to the Dominguez Gap Spreading Grounds Facility may affect groundwater recharge in the area.

I-5/I-710: Adverse impacts are primarily due to potential impacts during construction.

Local Interchanges

Willow St. Diamond: Adverse impacts are primarily due to potential impacts during construction.

Del Amo Blvd. Diamond: Adverse impacts are primarily due to potential impacts during construction and to water quality. The proposed project crosses the Compton Creek, therefore, extending the pier walls. This could cause the water to rise above existing levels in those areas.

Long Beach Boulevard: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses the Los Angeles River Channel. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas.

Imperial Highway Diamond: Adverse impacts are primarily due to potential impacts during construction.

Florence Ave. Diamond: Adverse impacts are primarily due to potential impacts during construction.

Atlantic Blvd./Bandini Blvd: Adverse impacts are primarily due to potential impacts during construction.

Washington Blvd. PARCLO: Adverse impacts are primarily due to potential impacts during construction.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Truck Expressway Connector: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses the Dominguez Creek Channel. Approximately 100.5 acres would be impacted by the proposed project for structures, including footings, within the Channel. Groundwater resources in the area include the Dominguez Gap Barrier Project, which is a program to prevent seawater intrusion into the groundwater supply. Impacts to this facility may adversely affect groundwater recharge in the area. Roughly 1.1 acres of the proposed project are located within the 100-year floodplain. Approximately 0.3 acres of wetlands would be impacted by the proposed project.

Arterials

Adverse impacts are primarily due to potential impacts during construction and to waterways. Garfield Avenue, an arterial, crosses the Rio Hondo River. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas. Portions of the proposed alternative are located within the 100-year floodplain.

4.9.5 Alternative E

I-710 Mainline Improvements

Exclusive Truck Facility: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses Compton Creek and the Los Angeles River. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas. Impacts on the Dominguez Gap Spreading Grounds Facility may adversely affect groundwater recharge in the area. Approximately 14.1 acres of the proposed project are located within the 100-year floodplain. Approximately 1.1 acres of wetlands would be impacted by the proposed project.

I-405 Truck Ramps: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses the Compton Creek Channel. Approximately 0.8 acres of the proposed project are located within the 100-year floodplain. Approximately 0.5 acres of wetlands would be impacted by the proposed project.

SR-91 Truck Ramps: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses the Los Angeles River. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas. Approximately 0.7 acres of the proposed project are located within the 100-year floodplain.

Firestone Blvd. Truck Ramps: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses the Los Angeles River Channel. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas.

Washington Blvd. Truck Ramps: Adverse impacts are primarily due to potential impacts during construction.

I-710 Interchanges

Freeway Interchanges

I-405 /I-710: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses the Los Angeles River Channel. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas.

SR-91/I-710: Adverse impacts are primarily due to potential impacts during construction and to waterways. The proposed project crosses the Los Angeles River. This would extend the pier walls in the river, causing the water to rise above existing levels in those areas. Approximately 0.7 acres of the proposed project are located within the 100-year floodplain.

I-5/I-710: Adverse impacts are primarily due to potential impacts during construction.

Local Interchanges

Slauson Ave. PARCLO: Adverse impacts are primarily due to potential impacts during construction.

Arterials

Adverse impacts are primarily due to potential impacts during construction.

4.10 LAND USE AND PLANNING

Methodology/Setting

Existing land uses in the area were determined by using several sources: Eagle Aerial Photography (2000), SCAG Land Use Coverages (1993), Caltrans "As Built" and Topography (date varies), Thomas Brothers (2002), Southern California Edison (SCE) Mapping, and limited field checks. The different land use categories established for analysis throughout the study corridor are as follows:

- Residential
- Commercial/Industrial
- Railroad (active freight or passenger)
- Sensitive Uses (e.g., parks, wetlands, schools, cemeteries, hospitals, fire stations)
- Water / LA River (Los Angeles River/water channel or related use)
- Utility (power utility or known sewer/water corridors)
- Undeveloped (Parcels that are currently vacant and that have limited or no redevelopment potential)

The criterion for determining potential adverse impacts of this measure was established as any conversion of existing land uses to a different land use, such as transportation. This would be the case when widening the existing roadway to accommodate more lanes; as is the case in many of the components. Approximate areas by acreage are reported for each component, based upon the conceptual level of engineering pertinent at this phase of study.

Impacts Evaluation

4.10.1 Alternative A

Alternative A would not result in any additional potential impacts to land use or planning beyond what has already been studied for previously approved projects.

4.10.2 Alternative B

Alternative B would not result in any additional potential impacts to land use or planning beyond what has already been studied for previously approved projects.

4.10.3 Alternative C

I-710 Mainline Improvements

Mainline Widening: Adverse land use impacts would occur due to the conversion of residential (7.9 acres), commercial/industrial (11.8 acres), railroad rights-of-way (2.1 acres), power/utility right-of-way (7.7 acres), Sensitive Uses (0.1 acres), and undeveloped (2.2 acres) land uses.

Collector Distributor Lane System: Adverse land use impacts would occur due to the conversion of residential (6.7 acres), commercial/ industrial (9.7 acres), railroad right-of-way (0.2 acres), and Sensitive Uses (0.3 acres).

Truck Inspection Facility: Adverse land use impacts would occur due to the conversion of power/utility right-of-way (1.6 acres) land uses.

I-405 Truck Bypass Lanes: Adverse land use impacts would occur due to the conversion of commercial/industrial (7.0 acres), railroad right-of-way (1.3 acres), and power/utility right-of-way (0.8 acres) land uses.

SR-91/I-105 Truck Bypass Lanes: Adverse land use impacts would occur due to the conversion of residential (9.6 acres), commercial/industrial (4.6 acres), railroad right-of-way (0.9 acres), power/utility right-of-way (19.6 acres), Sensitive Uses (1.9 acres), and undeveloped (13.2 acres) uses.

Pacific Coast Highway Truck Ramps: Adverse land use impacts would occur due to the conversion of residential (less than 0.1 acre) and commercial/industrial (1.6 acres) land uses.

Washington Blvd. Truck Ramps: Adverse land use impacts would occur due to the conversion of commercial/industrial (7.0 acres) and railroad right-of-way (0.1 acres) land uses.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: Adverse land use impacts would occur due to the conversion of commercial/industrial (4.8 acres) and undeveloped (2.9 acres) land uses.

I-5/I-710 Right Side Ramp: Adverse land use impacts would occur due to the conversion of residential (0.3 acres), commercial/industrial (9.2 acres), and Sensitive Uses (0.1 acres) land uses.

Local Interchanges

Anaheim Street Braid: Adverse land use impacts would occur due to the conversion of commercial/industrial (13.6 acres) land uses.

Pacific Coast Highway Braid: Adverse land use impacts would occur due to the conversion of residential (4.1 acres) and commercial/industrial (7.2 acres) land uses.

Willow St. PARCLO: Adverse land use impacts would occur due to the conversion of residential (3.6 acres), commercial/industrial (0.9 acres), and undeveloped (0.1 acres) land uses.

Del Amo Blvd.PARCLO: Adverse land use impacts would occur due to the conversion of commercial/industrial (1.6 acres) and power/utility right-of-way (2.3 acres) land uses.

Imperial Highway PARCLO: Adverse land use impacts would occur due to the conversion of residential (0.4 acres) and commercial/industrial (0.09 acres) land uses.

Florence Ave.PARCLO: Adverse land use impacts would occur due to the conversion of commercial/industrial (0.8 acres) and power/utility right-of-way (0.5 acres) land uses.

Atlantic Blvd./Bandini Blvd.: Adverse land use impacts would occur due to the conversion of commercial/industrial (25.5 acres), railroad right-of-way (0.6 acres), and Sensitive Uses(0.1 acres).

Washington Blvd.PARCLO: Adverse land use impacts would occur due to the conversion of residential (6.3 acres), commercial/industrial (3.5 acres), railroad right-of-way (0.6 acres), and Sensitive Uses (0.3 acres).

Slauson Blvd. Diamond: Adverse land use impacts would occur due to the conversion of commercial/industrial (4.5 acres), railroad right-of-way (2.0 acres), and power/utility right-of-way (2.1 acres) land uses.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island FWY Extension.. Adverse land use impacts would occur due to the conversion of residential (0.9 acres), commercial/industrial (9.5 acres), and power/utility right-of-way (17.3 acres) land uses.

Arterials

Adverse land use impacts would occur due to the conversion of residential (163.2 acres), commercial/industrial (467.6 acres), railroad rights-of-way (3.0 acres), power/utility right-of-way (7.3 acres), Sensitive Uses (17.6 acres), and undeveloped (2.6 acres) land uses throughout the corridor from the potential widening of the proposed arterial segments in Alternative C.

4.10.4 Alternative D

I-710 Mainline Improvements

Mainline Widening: Adverse land use impacts would occur due to the conversion of residential (26.5 acres), commercial/industrial (31.6 acres), railroad right-of-way (10 acres), power/utility right-of-way (27.2 acres), Sensitive Uses (1.7 acres), and undeveloped (10.3 acres) land uses.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: Adverse land use impacts would occur due to the conversion of residential (1.1 acres) commercial/industrial (9.59 acres), railroad rights-of-way (0.4 acres), power/utility right-of-way (0.8 acres), and undeveloped (3.2 acres) land uses.

I-405/I-710 HOV Connector: Adverse land use impacts would occur due to the conversion of commercial/industrial structures (3.2 acres) and Sensitive Uses (1.1 acres) land uses.

SR-91/I-710: Adverse land use impacts would occur due to the conversion of residential (32.8 acres), commercial/industrial (6.6 acres), power/utility right-of-way (16.4 acres), and Sensitive Uses (5.6 acres).

I-5/I-710: Adverse land use impacts would occur due to the conversion of residential (21.9 acres), commercial/industrial (33.0 acres), and Sensitive Uses (5.9 acres) land uses.

Local Interchanges

Willow St. Diamond: Adverse land use impacts would occur due to the conversion of residential (2.6 acres) and undeveloped (0.5 acres) land uses.

Del Amo Blvd. Diamond: Adverse land use impacts would occur due to the conversion of commercial/industrial (6.2 acres) and power/utility right-of-way (2.2 acres) land uses.

Long Beach Boulevard: Adverse land use impacts would occur due to the conversion of commercial/industrial (1.0 acres), railroad right-of-way (0.1 acres), and power/utility right-of-way (5.9 acres) land uses.

Imperial Highway Diamond: Adverse land use impacts would occur due to the conversion of residential (2.2 acres), commercial/industrial (1.09 acres), and undeveloped (2.1 acres) land uses.

Florence Ave. Diamond: Adverse land use impacts would occur due to the conversion of residential (0.5 acres), commercial/industrial (2.0 acres), and power/utility right-of-way (0.1 acres) land uses.

Atlantic Blvd./Bandini Blvd: Adverse land use impacts would occur due to the conversion of commercial/industrial (24.7 acres), railroad right-of-way (0.7 acres), and Sensitive Uses (0.4 acres) land uses.

Washington Blvd. PARCLO: Adverse land use impacts would occur due to the conversion of residential (5.2 acres), commercial/industrial (8.9 acres), railroad right-of-way (0.9 acres), and Sensitive Uses (0.2 acres) land uses.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Truck Expressway Connector: Adverse land use impacts would occur due to the conversion of commercial/industrial structures and commercial/industrial (27.4 acres) land uses.

Arterials

Adverse land use impacts would occur due to the conversion of residential (96.9 acres), commercial/industrial (319.9 acres), railroad rights-of-way (2.7 acres), power/utility right-of-way (4.5 acres), Sensitive Uses (10.8 acres), and undeveloped (2.6 acres) land uses throughout the corridor from the potential widening of the proposed arterial segments in Alternative D.

4.10.5 Alternative E

I-710 Mainline Improvements

Exclusive Truck Facility: Adverse land use impacts would occur due to the conversion of residential (44.3 acres), commercial/industrial (110.0 acres), railroad rights-of-way (7.7 acres), power/utility right-of-way (47.9 acres), Sensitive Uses (2.82 acres), and undeveloped (31.0 acres) land uses.

I-405 Truck Ramps: Adverse land use impacts would occur due to the conversion of commercial/industrial (0.4 acres) and power/utility right-of-way (2.1 acres) land uses.

SR-91 Truck Ramps: Adverse land use impacts would occur due to the conversion of residential (12.2 acres), commercial/industrial (0.6 acres), power/utility right-of-way (7.1 acres), and Sensitive Uses (2.7 acres) land uses.

Firestone Blvd. Truck Ramps: Adverse land use impacts would occur due to the conversion of commercial/industrial (3.2 acres) and railroad right-of-way (0.2 acres) land uses.

Washington Blvd. Truck Ramps: Adverse land use impacts would occur due to the conversion of residential (1.7 acres), commercial/industrial (5.1 acres), railroad right-of-way (0.1 acres), and Sensitive Uses (0.4 acres) land uses.

I-710 Interchanges

Freeway Interchanges

I-405 /I-710: Adverse land use impacts would occur due to the conversion of residential (5.3 acres), commercial/industrial (0.4 acres), Sensitive Uses (2.9 acres), and undeveloped (0.03 acres).

SR-91/I-710: Adverse land use impacts would occur due to the conversion of residential (5.6 acres) and Sensitive Uses (2.2 acres) land uses.

I-5/I-710: Adverse land use impacts would occur due to the conversion of residential (19.2 acres), commercial/industrial (36.3 acres), railroad rights-of-way (0.8 acres), Sensitive Uses (4.7 acres), and undeveloped (0.5 acres) land uses.

Local Interchanges

Slauson PARCLO: Adverse land use impacts would occur due to the conversion of commercial/industrial (7.8 acres), railroad right-of-way (0.2 acres), and power/utility right-of-way (3.9 acres) land uses.

Arterials

Adverse land use impacts would occur due to the conversion of residential (0.9 acres), commercial/industrial (118.4 acres), railroad rights-of-way (0.3 acres), and power/utility right-of-way (4.1 acres) land uses throughout the corridor from Alternative E.

4.11 NOISE

Methodology/Setting

Traffic noise levels are analyzed for the peak noise one-hour period to comply with the Federal Highway Administration (FHWA) and Caltrans noise abatement criteria (NAC). A 15-minute measurement of traffic is statistically representative of a one-hour period and is an acceptable sampling period to quantify a one-hour traffic noise level.

The 15-minute noise measurements were taken during free flow traffic conditions, for weekday, daytime hours. Three vehicle classifications were simultaneously counted as part of the noise survey: automobiles, medium trucks, and heavy trucks. A medium truck is defined as having six wheels and two axles and is designed for the transportation of cargo. Generally the gross vehicle weight is greater than 4,500 kilograms (10,000 pounds), but less than 11,800 kilograms (26,000 pounds or 13 tons). A heavy truck has three or more axles. Generally, the gross weight is greater than 11,800 kilograms (26,000 pounds).

The maximum exterior FHWA NAC is 67 dBA for sensitive receptors/receivers (e.g. residential areas, playgrounds, parks, schools, churches, libraries, and hospitals) and 72 dBA for commercial areas. All residential areas currently exposed to freeway noise along the I-710 exceed the NAC level of 67 dBA. Any increase to the noise levels is considered significant under federal guidelines. Potential noise mitigation would need to reduce the future noise levels (with the project in place) by 5 dBA or more in order to be considered feasible.

In instances in this section where there are references to “first row” or “second row.” This is a reference to the parcels adjacent to the freeway or arterial component. The first row is defined as those parcels (typically business or residences) directly adjacent to the freeway. The only thing between these parcels and the freeway could be a sound barrier and/or landscaping. The second row is defined as those parcels which are located directly behind the first row of parcels. The first row acts as a noise barrier for the second row as the noise dissipates with distance. If, for example, the first row is removed when the freeway or arterial is widened, then the second row then becomes the first row and experiences an increase in noise levels.

Impacts Evaluation

There would be no additional impact as a result of Alternative A. All potential noise impacts were studied and mitigated, if possible, by the projects which are already planned and approved. Alternative B has no impact to low impact. All but one component will have no effect of traffic noise level. The extended gate hours at the ports may cause traffic noise levels to increase in non-peak hours. Alternative C would have a high impact. Noise levels will increase in residential areas along the I-710, and new areas will be exposed to freeway noise level due to the extension of the Terminal Island Freeway, Truck Bypass

Lanes and the extended collector distributor lane system. Alternative D would have a moderate impact. Noise levels will increase in residential areas, however, impacting areas already exposed to the I-710. The noise levels may increase for those parcels already exposed to freeway noise. However, this alternative would not expose any additional parcels to new sources of noise. Alternative E would have a high impact. Noise levels will increase in residential areas along the I-710, and new areas will be exposed to freeway noise level due to property acquisitions around the SR-91/I-710 freeway interchange and between Imperial Highway and Slauson Avenue due to the proposed elevated truckway.

In areas that are already above the FHWA and Caltrans noise abatement criteria (NAC) noise level and existing sound barriers would be removed by the project elements, any proposed improvements would require a detailed noise study in subsequent planning phases.

4.11.1 Alternative A

The noise impacts for Alternative A are expected to be low. Projects associated with Alternative A are planned and approved and should have their own noise studies and mitigation in place.

4.11.2 Alternative B

Extending the gate hours at the port would create a moderate impact because it would raise the noise levels of the relatively quiet hours between 12:00 A.M. and 4:00 A.M depending upon the number of truck trips shifted to these hours in the future. This would expose affected areas to higher noise levels over a longer time frame but have little to no effect on existing peak hour noise levels. The other elements associated with this alternative would have a low noise impact on the area.

4.11.3 Alternative C

I-710 Mainline Improvements

Mainline Widening: There are sensitive receivers in both areas that are already over the NAC of 66 dBA. The proposed widening would require the moving of the existing noise barrier and some of the first row homes to be taken, which would increase the traffic noise levels by 1 to 3 dBA.

Collector Distributor Lane System: The four additional lanes of traffic would increase the noise levels by 1-2 dBA; the roadway widening would increase the levels at the right-of-way by 2-3 dBA, for a total increase of 3-5 dBA. It would also take some of the existing first row of buildings, causing the second and third row of homes to have more noise exposure to the I-710.

Truck Inspection Facility: There are no sensitive receptors in the area.

I-405 Truck Bypass Lanes: Noise sensitive receivers are located to the east of the proposed ramps. Existing noise levels are due to traffic noise from Wardlow Road and from the I-405 at the north end of this element. The proposed alignment of this element would expose these areas to freeway noise, thus substantially increasing the noise level.

SR-91/I-105 Truck Bypass Lanes: The proposed southbound truck bypass lane would affect 4.8 miles of noise sensitive receivers. Because this component moves the truck lanes close to the right-of-way line and is elevated, noise levels in areas that are currently protected by a

noise barrier would increase. Since the travel lanes would be closer, it would also increase the noise level for structures which are the second and third row from the I-710 freeway.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: There are no sensitive receptors in the area.

I-5/I-710 Right Side Ramp: There are no sensitive receptors in the area.

Local Interchanges

Anaheim Street Braid: There are no sensitive receptors in the area.

Pacific Coast Highway Braid: The proposed southbound off-ramp to Pacific Coast Highway would require that the existing noise barrier be moved and the removal of first and some of the second row of residences. This would create greater noise exposure to the I-710 for the second and third row of residences that remain.

Willow St. PARCLO: The proposed southbound off-ramp to Pacific Coast Highway and the southbound on-ramp to the I-710 would require that the existing noise barrier be moved and remove the first and some of the second row of residences. This would create greater noise exposure to the I-710 for the second and third row of residences that remain.

Del Amo Blvd. PARCLO: There are no sensitive receptors in the area.

Imperial Highway PARCLO: Improvement to the I-710/Imperial Highway interchange could cause a noise increase of 1 to 2 dBA to the parcels located to the west of the I-710 and to the north and south of Imperial Highway.

Florence Ave. PARCLO: Improvements to the I-710/Florence Ave interchange would not cause a noise increase to any noise sensitive receivers.

Atlantic Blvd./Bandini Blvd.: There are no sensitive receptors in the area.

Washington Blvd. PARCLO: The proposed improvements would take most of the first and some of the second row of residences, leaving the remaining residences with greater noise exposure to the I-710.

Slauson Blvd. Diamond: There are no sensitive receptors in the area.

Pacific Coast Highway Truck Ramps: Only the proposed Truck Ramp on the southbound off-ramp to Pacific Coast Highway would require that the existing noise barrier be moved. It would also remove the first and some of the second row of residences. This would create greater freeway exposure to the second and third row of residences.

Washington Blvd. Truck Ramps: There are no sensitive receptors in the area.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Extension: There are five residential areas along the proposed alignment. Existing noise levels are currently below the NAC because the residential areas are only exposed to traffic noise from local roads. The proposed alignment would expose these residential areas to freeway noise, thus substantially increasing the noise level.

Arterials

Due to the speed and nature of traffic on arterials, adding one lane in each direction may cause the traffic noise to increase by one dBA for the first row of parcels adjacent to the arterials. Along most of the arterials, the first row of businesses directly adjacent to the arterials are not a considered sensitive receivers. Therefore, in these areas, the noise level will not exceed the NAC of 75 dBA for business. In areas where the first row is residential, the improvements may increase the peak hour noise level by one dBA. In areas where the improvements call for the removal of the first row of buildings, the remaining residential areas will have greater exposure to traffic noise.

4.11.4 Alternative D

I-710 Mainline Improvements

Mainline Widening: The proposed widening to the west for both general purpose lanes and the HOV lanes requires that the existing noise barrier be moved closer to the residences. The increased traffic lanes and moving the existing noise barriers may cause the traffic noise level to increase by 1 to 2 dBA. The proposed widening of the I-710 by one mixed flow lane in each direction between I-405 and Imperial Boulevard would move existing noise barriers, causing a 1 to 2 dBA increase in the traffic noise levels to areas already directly exposed to I-710. In areas where property acquisitions are needed, the second row of properties would have greater exposure to the traffic noise. In areas where new freeway lanes would be above the existing noise barriers, the proposed four-lane elevated HOV structure would increase the traffic noise levels by 1 to 2 dBA, with the exception of the I-710/SR-91 interchange. The proposed elevated HOV structure calls for a widening of the existing freeway, therefore increasing the noise levels for homes which are currently sheltered by first and second row homes.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: There are no sensitive receptors in the area.

I-405/I-710 HOV Connector: There are no sensitive receptors in the area.

SR-91/I-710: Moving the ramps closer to the sensitive receivers or adding capacity would increase the traffic noise level would by 1 to 3 dBA.

I-5/I-710: Moving the ramps closer to the sensitive receivers or adding capacity would increase the traffic noise level would by 1 to 3 dBA.

Local Interchanges

Willow St. Diamond: Reconfiguring the ramps would not increase the noise levels for the existing sensitive uses in the area.

Del Amo Blvd. Diamond: There are no sensitive receptors in the area.

Long Beach Boulevard: There are no sensitive receptors in the area of improvement.

Imperial Highway Diamond: Improvements to the I-710/Imperial Highway interchange could cause a noise increase of 1 to 2 dBA to the receivers located to the west of the I-710 and to the north and south of Imperial Highway.

Florence Ave. Diamond: There would be no noise impacts to sensitive receptors at this location.

Atlantic Blvd./Bandini Blvd: There are no sensitive receptors in the area.

Washington Blvd. PARCLO: The proposed improvement would take most of the first and some of the second row of homes, leaving the remaining homes with greater exposure to the I-710.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Truck Expressway Connector: There are no sensitive receptors in the area.

Arterials

Due to the speed and nature of traffic on arterials, adding one lane in each direction may cause the traffic noise to increase by one dBA for first row receivers. Along most of the arterials, this first row is a not sensitive receiver, most are businesses. Therefore, in these areas, the noise level will not exceed the NAC of 75 dBA for business. In areas where the first row is residential, the improvements may increase the peak hour noise level by one dBA. In areas where the improvements call for the removal of the first row of buildings, the remaining residential areas will have greater exposure to traffic noise.

4.11.5 Alternative E

I-710 Mainline Improvements

Exclusive Truck Facility: In those areas where the elevated truck lanes are moved outside the existing freeway right-of-way, traffic noise to the surrounding area would increase by more than 3 dBA. There are also areas which would acquire several rows of homes, leaving the remaining homes more exposed to the I-710 and moving truck traffic closer to the sensitive receivers.

I-405 Truck Ramps: There are no sensitive receptors in the area.

SR-91 Truck Ramps: Moving the ramps closer to the sensitive receivers or adding capacity would increase the traffic noise level would by 1 to 3 dBA.

Firestone Blvd. Truck Ramps: There are no sensitive receptors in the area.

Washington Blvd. Truck Ramps: There are no sensitive receptors in the area.

I-710 Interchanges

Freeway Interchanges

I-405 /I-710: There are no sensitive receptors in the area.

SR-91/I-710: If the ramps are moved closer to the sensitive receivers or if additional capacity is added then the traffic noise level would increase by 1 to 3 dBA.

I-5/I-710: Moving the ramps closer to the sensitive receivers or adding capacity would increase the traffic noise level would by 1 to 3 dBA. The Atlantic Boulevard viaduct could increase the traffic noise level for the second row of residences, by bringing freeway traffic along Atlantic Boulevard at a height above the first row of buildings.

Local Interchanges

Slauson Ave. PARCLO: There are no sensitive receptors in the area.

Arterials

Due to the speed and nature of traffic on arterials, adding one lane in each direction may cause the traffic noise to increase by one dBA for first row receivers. Along most of the arterials, this first row along the street fronts are not sensitive receivers; most are businesses. Therefore, in these areas, the noise level will not exceed the NAC of 75 dBA for business. In areas where the first row is residential, the improvements may increase the peak hour noise level by one dBA. In areas where the improvements call for the removal of the first row of buildings, the remaining residential areas will have greater exposure to traffic noise.

4.12 PARKS AND RECREATION

Methodology/Setting

Existing parks and recreational facilities in the area were identified using Aerial Photography (2000), SCAG Land Use Coverages (1993), Thomas Brothers (2002), and limited field checks. Facilities considered included public and private parks, public and private golf courses/country clubs, and cemeteries.

Park locations were compared to the proposed project alternative footprints to determine partial and full land displacements. The criterion for determining potential adverse impacts was established as any displacement of a whole or partial park or recreational facility to a new use such as roadway rights-of-way.

Impacts Evaluation

4.12.1 Alternative A

Alternative A would not result in any additional potential impacts to parks or recreation beyond what has already been studied for previously approved projects. There would be no property acquisitions with Alternative A.

4.12.2. Alternative B

Alternative B would not result in any additional potential impacts to parks or recreation beyond what has already been studied for previously approved projects. There would be no property acquisitions with Alternative B.

4.12.3 Alternative C

I-710 Mainline Improvements

Mainline Widening: Bandini Park, a 3.1-acre park located northeast of the I-710/Washington Boulevard interchange, may be adversely affected by this component. The Julia Russ Asmus Park, an approximately one acre park located at 8321 Jaboneria Road, may be adversely affected by this component.

Collector Distributor Lane System: No parks or recreational facilities would be affected by this component.

Truck Inspection Facility: No parks or recreational facilities would be affected by this component.

I-405 Truck Bypass Lanes: No parks or recreational facilities would be affected by this component.

SR-91/I-105 Truck Bypass Lanes: Coolidge Park, a 7.5-acre park located near the southwest quadrant of the SR-91/I-710 Interchange, would be impacted by this component.

Pacific Coast Highway Truck Ramps: No parks or recreational facilities would be affected by this component.

Washington Blvd. Truck Ramps: No parks or recreational facilities would be affected by this component.

I-710 Interchanges

Local Interchanges

I-405/I-710: No parks or recreational facilities would be affected by this component.

I-5/I-710 Right Side Ramp: Bristow Park, an 11.1-acre park located southeast of the I-5/I-710 interchange, may be adversely affected by this component.

Local Interchanges

Anaheim Street Braid: No parks or recreational facilities would be affected by this component.

Pacific Coast Highway Braid: No parks or recreational facilities would be affected by this component.

Willow St. PARCLO: No parks or recreational facilities would be affected by this component.

Del Amo Blvd. PARCLO: No parks or recreational facilities would be affected by this component.

Imperial Highway PARCLO: No parks or recreational facilities would be affected by this component.

Florence Ave. PARCLO: No parks or recreational facilities would be affected by this component.

Atlantic Blvd./Bandini Blvd.: No parks or recreational facilities would be affected by this component.

Washington Blvd. PARCLO: Bandini Park, a 3.1-acre park located northeast of the I-710/Washington Boulevard interchange, may be adversely affected by this component.

Slauson Blvd. Diamond: No parks or recreational facilities would be affected by this component.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Extension: No parks or recreational facilities would be affected by this component.

Arterials

The following parks and recreational facilities would be adversely affected by the potential arterial widening proposed for Alternative C.

- Scherer Park (west of Atlantic Ave., between Del Amo Blvd. and Carson St.)
- Cherry Avenue Park (west of Cherry Avenue, between Del Amo Blvd. and Carson St.)
- All souls Cemetary (east of Cherry Avenue, between Del Amo Blvd. and Carson St.)
- Forest Lawn Memorial Park (west of Cherry Avenue, between Del Amo Blvd. and Carson St.)
- Darwell Park (north of Florence Ave., between Garfield Ave. and Eastern Ave.)

4.12.4 Alternative D

I-710 Mainline Improvements

Mainline Widening: Bandini Park, a 3.1-acre park located northeast of the I-710/Washington Boulevard interchange, may be adversely affected by this component. The Julia Russ Asmus Park, an approximately one acre park located at 8321 Jaboneria Road, may be adversely affected by this component.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: No parks or recreational facilities would be affected by this component.

I-405/I-710 HOV Connector: No parks or recreational facilities would be affected by this component.

SR-91/I-710: Coolidge Park, a 7.5-acre park located near the southwest quadrant of the SR-91/I-710 Interchange, would be impacted by this component.

I-5/I-710: Bristow Park, an 11.1-acre park located southeast of the I-5/I-710 Boulevard interchange, may be adversely affected by this component.

Local Interchanges

Willow St. Diamond: No parks or recreational facilities would be affected by this component.

Del Amo Blvd. Diamond: No parks or recreational facilities would be affected by this component.

Long Beach Boulevard: No parks or recreational facilities would be affected by this component.

Imperial Highway Diamond: No parks or recreational facilities would be affected by this component.

Florence Ave. Diamond: No parks or recreational facilities would be affected by this component.

Atlantic Blvd./Bandini Blvd.: No parks or recreational facilities would be affected by this component.

Washington Blvd. PARCLO: Bandini Park, a 3.1-acre park located northeast of the I-710/Washington Boulevard interchange, may be adversely affected by this component.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Truck Expressway Connector: No parks or recreational facilities would be affected by this component.

Arterials

The following parks and recreational facilities would be adversely affected by the potential arterial widening proposed for Alternative D:

- Scherer Park (west of Atlantic Ave., between Del Amo Blvd. and Carson St.)
- Cherry Avenue Park (west of Cherry Avenue, between Del Amo Blvd. and Carson St.)

- All Souls Cemetary (east of Cherry Avenue, between Del Amo Blvd. and Carson St.)
- Forest Lawn Memorial Park (west of Cherry Avenue, between Del Amo Blvd. and Carson St.)

4.12.5 Alternative E

I-710 Mainline Improvements

Exclusive Truck Facility: Coolidge Park, a 7.5-acre park located near the southwest quadrant of the SR-91/I-710 Interchange, would be impacted by this component. Bandini Park, a 3.1-acre park located northeast of the I-710/Washington Boulevard interchange, may be adversely affected by this component. The Julia Russ Asmus Park, an approximately one acre park located at 8321 Jaboneria Road, may be adversely affected by this component. A small portion of the Dominguez Gap Spreading Grounds Facility lies beneath the proposed elevated truck facility. The facility is described in more detail in Hydrology, Water Quality, and Floodplains (Section 4.9) of this document.

I-405 Truck Ramps: No parks or recreational facilities would be affected by this component.

SR-91 Truck Ramps: Coolidge Park, a 7.5-acre park located near the southwest quadrant of the SR-91/I-710 Interchange, would be impacted by this component.

Firestone Blvd. Truck Ramps: No parks or recreational facilities would be affected by this component.

Washington Blvd. Truck Ramps: Bandini Park, a 3.1-acre park located northeast of the I-710/Washington Boulevard interchange, may be adversely affected by this component.

I-710 Interchanges

Freeway Interchanges

I-405 /I-710: No parks or recreational facilities would be affected by this component.

SR-91/I-710: Coolidge Park, a 7.5-acre park located near the southwest quadrant of the SR-91/I-710 Interchange, would be impacted by this component.

I-5/I-710: Bristow Park, an 11.1-acre park located southeast of the I-5/I-710 Boulevard intersection, may be adversely affected by this component.

Local Interchanges

Slauson Ave. PARCLO: No parks or recreational facilities would be affected by this component.

Arterials

Darwell Park (north of Florence Ave., between Garfield Ave. and Eastern Ave.) is the only facility that would be adversely affected by the potential arterial widening proposed for Alternative E.

4.13 SOCIOECONOMIC CONDITIONS

Methodology/Setting

Analysis of population impacts in the proposed project area, at this preliminary level of analysis, was based on a GIS analysis of data from the 2000 U.S. Census tracts and block groups within the study area. This included all block groups and tracts that were within or adjacent to the I-710 right-of-way, for all components of each alternative. The GIS maps of population data were overlain on the existing and proposed additional right-of-way provided on the engineering drawings for each alternative. The proportion of the Census block groups that were within the proposed right-of-way were determined, and the corresponding population proportion of the total for the block group population factor was calculated (e.g., total population, race/ethnicity, and poverty level data). This analysis assumed an even distribution of population throughout the block group or tract. Thus, if approximately 30 percent of the block group was physically within the right-of-way of an alternative, it was assumed that a corresponding 30 percent of the population of that block group would be affected/impacted by that alternative.

GIS analysis of census data provided details on the number of people, minorities, and persons living below the poverty level that would be affected by construction of the proposed project. Tables 4.13-1, 4.13-2, and 4.13-3 contain the breakdown of population, minorities and poverty, by city.

Impacts Analysis

Alternatives A and B would have no additional adverse impact on minorities or persons with incomes below the poverty level. Alternative C would affect the largest number of people in the study area. Based on the assumption of even population distribution within each block group, approximately 10,800 people live within those portions of adjacent Census block groups that lie within the proposed project right-of-way. Alternative C would also impact the largest number and percentage of people below the poverty level – approximately 540 people (5 percent of the total population affected) and the largest number of minorities – approximately 10,070 people. Alternative D would have the next highest impact, affecting approximately 8,300 people within the involved Census block groups. Of these people, roughly 410 are below the poverty level and 7,780 are minorities. Alternative E would have the least impact of the Build Alternatives on persons below the poverty level and minorities. The proportion of the population within the block groups affected by the right-of-way for Alternative E would be approximately 7,200 people. Of these people, roughly 350 are below the poverty level and 6,810 are minorities.

4.13.1 Alternative A

Alternative A consists of transportation projects that are already planned and committed for 2025. Since the projects are already planned and approved, it is assumed that impacts on population are either less than significant or already mitigated.

4.13.2. Alternative B

Alternative B consists of transportation projects that are already planned and committed for 2025. Since the projects are already planned and approved, it is assumed that impacts on population are either less than significant or already mitigated.

4.13.3 Alternative C

GIS analysis of 2000 Census data shows the population affected by the proposed project components of Alternative C – not including arterial improvements – is estimated to be 10,790 people. Of these, an estimated 542 (5 percent) have incomes below the poverty level and an estimated 10,067 (93.3 percent) are minorities. The greatest number of people affected is in the City of Long Beach, with an estimated 3,151 people. The City of Vernon would have only an estimated 5 people affected by implementation of Alternative C. Table 4.13-1 shows Alternative C impact on population for each of the cities affected.

**Table 4.13-1
Estimated Population Affected by Alternative C, by City**

Location	Grand Total	Poverty	Percent Poverty	Minority	Percent Minority
Bell	1,626	91	5.6	1,502	92.4
Bell Gardens	999	55	5.5	909	91.1
Carson	30	2	5.1	26	84.1
City Of Commerce	886	46	5.2	862	97.2
Compton	488	26	5.3	475	97.2
County	1,621	83	5.1	1,566	96.6
Long Beach	3,151	150	4.8	2,890	91.7
Los Angeles	35	2	4.4	32	92.9
Lynwood	493	26	5.3	433	87.8
Paramount	1,331	60	4.5	1,281	96.2
South Gate	123	3	2.2	86	70.1
Vernon	5	0	0.0	5	82.3
Grand Total	10,790	542	5.0	10,067	93.3

Source: U.S. Census Bureau, 2000

The total number of people affected by implementation of Alternative C including arterial improvements would be an estimated 22,555. Of these, approximately 1,244 (5.5 percent) are below the poverty level and an estimated 20,401 (90.5 percent) are minorities.

I-710 Mainline Improvements

Mainline Widening: Implementation of Mainline Widening would affect an estimated 3,545 people. Of these, approximately 3,263 (92 percent) are minorities and about 180 (5.1 percent) are below the poverty level.

Collector Distributor Lane System: Construction of the CD Roads would have an impact on an estimated 880 people. Of this total, approximately 861 (97.8 percent) are considered minorities and 43 (4.9 percent) are below the poverty level.

Truck Inspection Facility: Implementation of the Truck Inspection Station would have no impact on population. No minorities or people below the poverty level would be affected by this component in the proposed project area.

I-405 Truck Bypass Lanes: The 405 Truck Bypass Lanes would have an impact on approximately 50 people in the proposed project area. Of this total, an estimated 35 (70 percent) are minorities and 1 (2 percent) is below the poverty level.

SR-91/I-105 Truck Bypass Lanes: Implementation of the 91/105 Truck Bypass Lanes would have an impact on an estimated 4,211 people. Of this total, approximately 3,970 (94.3 percent) belong to minority groups and an estimated 197 (4.7 percent) are below the poverty level.

Pacific Coast Highway Truck Ramps: The PCH Truck Ramps would affect approximately 38 people in the proposed project area. Of these, an estimated 36 (94.7 percent) are minorities and 3 (7.9 percent) are below the poverty level.

Washington Blvd. Truck Ramps: The Washington Truck Ramps would affect an estimated 51 people in the proposed project area. Of this total, approximately 49 (96 percent) are minorities and 2 (3.9 percent) are below the poverty level.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: The 405/710 component of Alternative C would affect an estimated 323 people. Of these, approximately 284 (87.9 percent) are minorities and 12 (3.7 percent) are below the poverty level.

I-5/I-710 Right Side Ramp: The 5/710 Right Side Ramp would have an impact on an estimated 316 people. Of these, approximately 311 (98.4 percent) are minorities and 24 (7.6 percent) are below the poverty level.

Local Interchanges

Anaheim Street Braid: Construction of the Anaheim St. Braid component would impact an estimated 8 people. Of these, 7 (87.5 percent) are minorities and 1 (12.5 percent) is below the poverty level.

Pacific Coast Highway Braid: Implementation of the Pacific Coast Highway Braid would have an impact on an estimated 204 people. Of these, approximately 198 (97.1 percent) are minorities and 15 (7.4 percent) are below the poverty level.

Willow St. PARCLO: Construction of the Willow PARCLO would affect approximately 201 people. Of this total, 190 (94.5 percent) are estimated to be minorities and 4 (2.0 percent) are below the poverty level.

Del Amo Blvd. PARCLO: The Del Amo PARCLO would affect an estimated 155 people. Of these, approximately 130 (83.9 percent) are minorities and 9 (5.8 percent) are below the poverty level.

Imperial Highway PARCLO: Construction of the Imperial PARCLO would affect approximately 13 people in the proposed project area. Of these, 12 (92.3 percent) are minorities and none is below the poverty level.

Florence Ave. PARCLO: Implementation of the Florence PARCLO would have an impact on approximately 115 people in the proposed project area. Of this total, 108 (93.9 percent) are minorities and 5 (4.3 percent) are below the poverty level.

Atlantic Blvd./Bandini Blvd.: Implementation of the Atlantic/Bandini 1 component would affect an estimated 5 people. Of these, 4 (80 percent) are minorities and none is below the poverty level.

Washington Blvd. PARCLO: Implementation of the Washington PARCLO would affect an estimated 72 people in the proposed project area. Of these, 69 (95.8 percent) are minorities and 3 (4.2 percent) are below the poverty level.

Slauson Blvd. Diamond: The Slauson Diamond would affect approximately 25 people. Of these, 24 (96 percent) are minorities and 1 (4 percent) is below the poverty level.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Extension: Implementation of the Terminal Island FWY Extension component would impact an estimated 579 people. Of this total, approximately 514 (88.8 percent) belong to minority groups and 42 (7.3 percent) are below the poverty level.

Arterials

Arterial improvements under Alternative C would also have an impact on the population in the proposed project area. Arterial improvements associated with Alternative C would affect 701 acres and an estimated 11,765 people. Of these people, 10,334 (87.8 percent) are estimated to be minorities and 702 (6 percent) are below the poverty level.

4.13.4 Alternative D

According to GIS analysis using 2000 census data, implementation of all components (not including arterial improvements) would affect an estimated 8,301 people. Of this total, approximately 7,784 would be minorities (93.8 percent) and 409 are assumed to be below poverty (4.9 percent). The largest number of people affected would be in the City of Long Beach. In this case, about 3,456 people would be affected. The proposed project would have no impact on population in the City of Vernon. Table 4.13-2 shows Alternative D impact on population for each of the cities affected.

The total number of people affected by implementation of Alternative D, including arterial improvements, would be an estimated 15,691. Of these, approximately 847 (5.4 percent) are below the poverty level and 14,430 (92 percent) are minorities.

**Table 4.13-2
Estimated Population Affected by Alternative D, by City**

Location	Grand Total	Poverty	Percentage Poverty	Minority	Percentage Minority
Bell	777	42	5.4	731	94.2
Bell Gardens	505	29	5.8	473	93.8

Carson	21	1	2.6	18	85.5
City Of Commerce	871	44	5.1	851	97.6
Compton	418	22	5.3	407	97.2
County	1,438	87	6.1	1,412	98.2
Long Beach	3,456	147	4.3	3,157	91.4
Los Angeles	30	2	7.5	29	95.8
Lynwood	287	15	5.3	274	95.6
Paramount	376	17	4.4	346	92.0
South Gate	123	3	2.2	86	70.1
Vernon	0	0		0	
Grand Total	8,301	409	4.9	7,784	93.8

Source: U.S. Census Bureau, 2000

I-710 Mainline Improvements

Mainline Widening: The Mainline Widening component would affect an estimated 3,903 people. Of these, approximately 3,608 (92.4 percent) are minorities and 176 (4.5 percent) are below the poverty level.

I-710 Interchanges

Freeway Interchanges

I-405/I-710: Implementation of the 405/710 component would have an impact on approximately 123 people. Of these, an estimated 109 (88.6 percent) are minorities and 4 (3.3 percent) are below the poverty level.

I-405/I-710 HOV Connector: Construction of the 405/710 HOV Connector would have an impact on an estimated 43 people. Of these, approximately 33 (76.7 percent) are minorities and 1 (2.3 percent) is below the poverty level.

SR-91/I-710: Construction of the 91/710 component would affect an estimated 1,135 people. Of this total, approximately 1,040 (91.7 percent) are minorities and an estimated 59 people (5.2 percent) are below the poverty level.

I-5/I-710: Implementation of the 5/710 component would impact an estimated 1,972 people. Of these, approximately 1,936 (98.2 percent) are minorities and 116 (5.9 percent) are below the poverty level.

Local Interchanges

Willow St. Diamond: Construction of the Willow Diamond would affect an estimated 123 people. Of these, approximately 117 (95.1 percent) are minorities and 2 (1.6 percent) are below the poverty level.

Del Amo Blvd. Diamond: Implementation of the Del Amo Diamond would have an impact on an estimated 121 people. Of these, approximately 106 (87.6 percent) are minorities and 7 (5.8 percent) are below the poverty level.

Long Beach Boulevard: Long Beach Boulevard component would affect approximately 196 people. Of these, about 177 (90.3 percent) are minorities and about 9 (4.6 percent) are below the poverty level.

Imperial Highway Diamond: Implementation of the Imperial Diamond would have an impact on an estimated 186 people. Of this total, approximately 179 (96.2 percent) are minorities and 9 (4.8 percent) are below the poverty level

Florence Ave. Diamond: The Florence Diamond would affect approximately 78 people. Of these, an estimated 73 (93.6 percent) are minorities and 4 (5.1 percent) are below the poverty level.

Atlantic Blvd./Bandini Blvd: Implementing Atlantic/Bandini 2 would have an impact on approximately 5 people. Four out of these 5 people (80 percent) are estimated to be minorities and none is considered poor.

Washington Blvd. PARCLO: Construction of the Washington PARCLO would affect an estimated 92 people. Of these, 89 (96.7) are minorities and 4 (4.4 percent) are below the poverty level.

Terminal Island Freeway (SR-47/SR-103)

Terminal Island Freeway Truck Expressway Connector: Implementation of the Terminal Island Freeway Expressway Connector would have an estimated impact on 30 people. Of this total, 29 (96.7 percent) are minorities and 2 (6.7 percent) are below the poverty level.

Arterials

Arterial improvements under Alternative D would also have an impact on the population in the proposed project area. Arterial improvements associated with Alternative D would affect 460 acres and an estimated 7,390 people. Of these people, 6,646 (90 percent) are minorities and 438 (6 percent) are below the poverty level.

4.13.5 Alternative E

GIS analysis of 2000 census data shows that implementation of all elements of Alternative E would affect 7,204 people. Of this total, 6,809 would be from minority groups (94.5 percent) and 349 from below the poverty level (4.8 percent). The largest number of people affected would be in the City of Long Beach - 2,305 people. Implementation of the proposed project would have no impact on population in the city of Vernon. Table 4.13-3 shows Alternative E impact on population for each of the cities affected.

**Table 4.13-3
Estimated Population Affected by Alternative E, by City**

Location	Grand Total	Poverty	Percent Poverty	Minority	Percent Minority
Bell	155	7	4.5	149	96.1
Bell Gardens	1,054	60	5.7	991	93.9
Carson	0	0		0	

City Of Commerce	983	46	4.7	953	96.9
Compton	668	35	5.2	649	97.2
County	1,295	74	5.7	1,272	98.2
Long Beach	2,305	93	4.0	2,117	91.8
Lynwood	267	17	6.2	259	97.2
Paramount	340	15	4.4	321	94.1
South Gate	136	3	2.1	99	72.5
Vernon	0	0		0	
Grand Total	7,204	349	4.8	6,809	94.5

Source: U.S. Census Bureau, 2000

The total number of people affected by implementation of Alternative E, including arterial improvements, would be an estimated 7,764 people. Of these, approximately 381 (4.9 percent) are below the poverty level and 7,347 (94.6 percent) are minorities.

I-710 Mainline Improvements

Exclusive Truck Facility: Implementing the Exclusive Truck Facility would affect approximately 5,218 people. Of this total, about 4,929 people (94.5 percent) are minorities and about 255 (4.9 percent) are below the poverty level. Under Alternative E, the Exclusive Truck Facility is the component that would affect the most people, the most minorities, and the most people below the poverty level.

SR-91 Truck Ramps: The 91 Truck ramps would have an impact on an estimated 362 people. Of these, 340 (93.9 percent) are minorities and 16 (4.4 percent) are below the poverty level.

Firestone Blvd. Truck Ramps: Implementation of the Firestone Truck Ramps would affect approximately 10 people. Of these, 5 (50 percent) are minorities and none is below the poverty level.

Washington Blvd. Truck Ramps: Construction of the Washington Truck Ramps would affect approximately 51 people. Of these, 49 (96.1 percent) are minorities and 2 (3.9 percent) are below the poverty level.

I-405 Truck Ramps: The 405 Truck Ramps component would have impact on an estimated 94 people. Of these, 79 (84 percent) are minorities and 5 (5.3 percent) are below the poverty level.

I-710 Interchanges

Freeway Interchanges

I-405 /I-710: Implementation of the 405 IC Improvements would affect an estimated 214 people. Of these, approximately 191 (89.3 percent) are minorities and 7 (3.3 percent) are below the poverty level.

SR-91/I-710: The 91 IC Improvements would affect 92 people. Of these, 84 (91.3 percent) are minorities and 2 (2.2 percent) are below the poverty level.

I-5/I-710: The 5 IC Improvements would impact an estimated 1,063 people. Of these, approximately 1,033 (97.2 percent) are minorities and 56 (5.3 percent) are below the poverty level.

Local Interchanges

Slauson Ave. PARCLO: Implementing the Slauson PARCLO would impact an estimated 100 people. Of these, 98 (98 percent) are minorities and 5 (5 percent) are below the poverty level.

Arterials

Arterial improvements under Alternative E would also have an impact on the population in the proposed project area. Arterial improvements associated with Alternative E would affect 151 acres and an estimated 560 people. Of these people, approximately 538 (96.1 percent) are minorities and 32 (5.7 percent) are below the poverty level.

4.14 TRANSPORTATION/TRAFFIC

ANALYSIS PENDING

4.14.1 Alternative A

4.14.2. Alternative B

4.14.3 Alternative C

4.14.4 Alternative D

4.14.5 Alternative E

4.15 UTILITIES

Methodology/Setting

There are many utility lines that run along the I-710 corridor. These include water, electricity, gas, cable, telephone, sewer, petroleum, drainage channels, and flood basins. Many cities along the I-710 corridor furnish their own utilities as well as share the larger scale infrastructure regionally. Existing utilities were researched per city and are described below. The information was researched using the individual city's General Plans, websites, and calling either the service provider or city representatives. Potential project impacts were analyzed for the SCE and LADWP 220 kV power transmission lines along the I-710 corridor. However, impacts and potential relocations to other utilities will be discussed in a future environmental document when more refined engineering is completed.

There are two major 220 kV power transmission lines along the I-710 corridor which should be noted at this early phase in planning. The first is the Southern California Edison (SCE) Line. This line begins along the Terminal Island Freeway (at a point just south of the Union Pacific Railroad [UPRR]) in the City of Los Angeles near the Port of Los Angeles. At Pacific Coast Highway, this line enters the City of Long Beach, and continues to 31st Street, where it continues northeasterly, past the San Diego Freeway (I-405), and continuing on the east side of the I-710, then splits both east and west around 69th Street still in

the City of Long Beach. The second major transmission line is the Los Angeles Department of Water and Power (LADWP) Line. This line begins just south of Imperial Highway (east of the I-710, at around Borwick Avenue in the City of South Gate), and continues to parallel the Long Beach Freeway (reverting to the west side of the freeway at about Almira Road in South Gate), and continuing on the west side of the I-710, to Bell Place, where it forks off west to just past Atlantic Avenue. The electrical towers and lines would be relocated within their existing corridor without disruption of service to accommodate proposed improvements.

Components of Alternative C which would impact transmission lines are listed below along with the owners of the lines in parenthesis:

- Mainline (LADWP)
- Truck Inspection Facility (SCE)
- I-405/I-710 Interchange (SCE)
- SR-91/I-105 Truck Bypass (SCE, LADWP)
- Del Amo Interchange (SCE)
- Florence Interchange (LADWP)
- Slauson Diamond (LADWP)
- TI Freeway Extension (SCE)
- Arterials (SCE, LADWP)

Components of Alternative D which would impact transmission lines are listed below along with the owners of the lines in parenthesis:

- Mainline (SCE, LADWP)
- I-405/I-710 Interchange (SCE)
- I-405/I-710 HOV Connector (SCE)
- SR-91/I-710 Interchange (SCE)
- Long Beach Boulevard PARCLO (SCE)
- Arterials (SCE, LADWP)

Components of Alternative E which would impact transmission lines are listed below along with the owners of the lines in parenthesis:

- Exclusive Truck Facility (SCE)
- I-405/I-710 Interchange (SCE)
- SR-91/I-710 Interchange (SCE)
- SR-91 Truck ramps (SCE)
- Firestone Truck Ramps (LADWP)
- Slauson Blvd. PARCLO (LADWP)
- Arterials (SCE, LADWP)

Long Beach

The City of Long Beach Water Department provides water to the Long Beach area. The Los Angeles County Sanitation District provides wastewater services. There are three solid waste operations functioning in Long Beach, located at 2701 W. Seaside Boulevard, at 1070 E. Spring Street, and at 2401 E. 68th Street. There are several oil facilities and refineries in the Terminal Island and Signal Hill areas, including Shell, Texaco, Ultramar, and others.

Carson

Water service is provided to the City of Carson by the California Water Service Company, Dominguez District (Cal Water) and by Southern California Water Company, Southwest District (SCWC). The City of Carson owns the sanitary sewers within the city, and the Los Angeles County Department of Public Works maintains them. Waste Management provides waste collection services for residential, commercial and industrial wastes in the city. Storm water flows in the city are conveyed by several large drainage facilities to the Dominguez Channel, except for the southwest section of the city and two smaller areas to the northeast of the city. SCE's Compton Service provides electrical service through three substations, specifically, the Carson Substation at Alameda Street and Johns Manville; the Nola Street Substation at South Broadway and Victoria; and the Neptune Substation at 213th and Grace. There are approximately 12 (66kV) transmission facilities that extend along Wilmington and Alameda Street that feed the SCE service area. There are also numerous high voltage easements that traverse the City of Carson. Southern California Gas, Pacific Region supplies natural gas to Carson. A medium and high-pressure distribution pipeline system and a high-pressure transmission pipeline system transect Carson.

Compton

Water service in Compton is supplied by the City of Compton Water Department and several other minor water suppliers, including Dominguez Water Corporation the cities of Long Beach and Lynwood, Midland Park Water Trust, Park Water Company, Southern California Water Company, La Hacienda Water Company, Los Angeles County Water Works District 10, Lynwood Park Mutual Water Company, Paramount County Water District and Sativa Los Angeles Water Company. Sewer services are provided by the Los Angeles County Sanitation Districts Joint Outfall Districts. Wastewater is treated at the Joint Water Pollution Control Plant in Carson. Storm drainage facilities are provided by the city and the Los Angeles County Flood Control District. SCE provides electrical service via overhead lines and substations located throughout the city. Southern California Gas provides natural gas via transmission and distribution lines. Gas mains are generally located along major arterials.

Paramount

The City of Paramount is served by six different water companies, the largest of which is the City of Paramount Water Department. The source of water supply is groundwater which is pumped through wells distributed throughout the City. Sewer facilities in the City of Paramount are City-owned. Maintenance of these facilities is the responsibility of the Department of County Engineers – Facilities Sanitation Division. The City's sewage lines discharge into the Los Angeles County Sanitation District Number 2 Trunk Facilities. Electric service is provided by Southern California Edison and gas service is provided by the Southern California Gas Company. This website also shows that local disposal service is via Metropolitan Waste Disposal Services.

Los Angeles County (unincorporated areas)

Water service is provided by the California Water Services Company. Sewer services are provided by the Los Angeles County Sanitation Districts (LACSD). Solid waste services are provided by Waste Management. SCE and Southern California Gas Company provide electric and natural gas service, respectively to this area

Lynwood

The City of Lynwood Water Utilities Department is responsible for water production, distribution and water service maintenance. The City of Lynwood Utility Service Division is responsible for managing the city's sewer system. Western USA Waste is under contract to the City of Lynwood to provide rubbish collection services. Both SCE and Southern California Gas provide electricity and natural gas, respectively, to Lynwood

South Gate

Two purveyors supply water to customers in the City of South Gate: the city-owned and operated water company and the privately owned and operated Southern California Water Company (SCWC). The service area for SCWC includes the Hollydale section of the City between Gardendale and Century Boulevard. The rest of the city is served by the city water system. The operation and maintenance of the sewer system is the responsibility of the City of South Gate, while the treatment of effluent is the responsibility of the Los Angeles County Sanitation Districts. The City of South Gate Department of Public Works maintains the network of storm drains. SCE and Southern California Gas serve South Gate for electricity and gas services, respectively.

Downey

The City of Downey is served by four different water suppliers, the City Municipal Water Department, the City of Santa Fe Springs, Southern California Water, and the County of Los Angeles. The City of Downey Water Sanitation, combined with the Los Angeles County Sanitation Districts, provides sewer services. Two major flood control channels cross the City of Downey, the San Gabriel River Channel (easterly boundary of Downey) and the Rio Hondo Flood Control Channel (northwestern boundary of Downey). Flood control is provided by the Los Angeles County Department of Public Works. Both SCE and Southern California Gas provide electricity and natural gas, respectively. There are also a number of liquid fuel lines located in Downey.

Cudahy

Three water companies serve the City of Cudahy, Tract 349 Mutual Water, Tract 180 Mutual Water Company, and Southern California Water Company. Sewer service is provided by the Los Angeles County Department of Public Works and Sanitation District No. 1 (with sewage treatments at the Joint Water Pollution Control Plant (JWPCP) in Carson). Sewer mains are located on all north-south streets, including Salt Lake, Otis, Atlantic and Wilcox Avenues. The storm drainage system is maintained by the Los Angeles County Department of Public Works. The Los Angeles River is the major drainage channel in the area. Solid waste disposal is handled by approximately ten garbage haulers under contract to the city. SCE provides electricity via a "grid system" to individual users. SCE has a 66 kV transmission line at a substation at Otis and Salt Lake Avenues in Cudahy. Southern California Gas provides natural gas to commercial, industrial and domestic uses in the City of Cudahy. Pacific Bell provides telephone service.

Bell Gardens

Two water companies, Park Water Company (serves 25% of the city) and Southern California Water Company (serves 75% of the city), provide water service to the City of Bell Gardens. Bell Gardens has a fully-developed sewer system. This system is operated and maintained by the Los Angeles County Sanitation District (No. 2). SCE provides electrical power to the city and Southern California Gas Company provides natural gas.

Bell

The City of Bell is served by 5 water companies, Southern California Water Company, Maywood Mutual Water Company Number 3, Tract 349 Mutual Water Company, Tract 180 Mutual Water Company, and California Water Service Company. Los Angeles County Sanitation District Nos. 1 and 2 provide sewer service to the City. The Central City of Bell is within Sanitation District No. 1. Electrical service in the City of Bell is provided by Southern California Edison and gas service is provided by the Southern California Gas Company.

Maywood

Three separate mutual water companies, Maywood Mutual Water Companies 1, 2, and 3, provide water service in Maywood. Los Angeles County Sanitation District provides sewer services and Consolidated Disposal Company provides solid waste service. The Los Angeles County Flood Control District has purview over storm water in the city. SCE provides electrical power. A major LADWP power line is

routed adjacent to Maywood (across the Los Angeles River to the east, paralleling the I-710, and forking off west from the I-710 and ending just north of Fruitland. Southern California Gas provides natural gas service to Maywood.

City of Commerce

The City of Commerce provides water service via its own 2.5 million gallon tank and from California Water Company's 3 tanks (500,000 gallons each). The City of Montebello manages the portion of the Montebello water system which lies within Commerce. Sewer services are provided through the Los Angeles County Sanitation Districts (LACSD) Joint Outfall System. SCE maintains a 55-acre high-voltage electric power easement through the center of city. Southern California Gas provides natural gas to residents and businesses. Several major gas mains pass thru Commerce, including a large, high-pressure main. The city contains several abandoned landfill sites

Vernon

The City of Vernon, Southern California Water, and Cal Water Service provide water to the city. The other two are . An underground reservoir located beneath the parking structure in Civic Center stores 10 million gallons. The city has its own sewer and distribution system which is tied into the LACSD regional system. Hazardous and non-hazardous solid waste disposal is done by various disposal companies under contract to individual businesses in Vernon. SCE operates seven (66KV) transmission lines which loop throughout the city, three distribution substations, 1 generating station, 2 gas turbines, and other related facilities. Southern California Gas provides natural gas to the city through the Malburg Gas Generating Station, a new gas generating plant, which offers customers an alternative source of natural gas.

Los Angeles

The Los Angeles Department of Water provides both water and power to that area of Los Angeles areas located immediately north of Vernon and west of the City of -Commerce (south of the 60 Freeway). Wastewater service is provided by the Los Angeles County Sanitation Districts. Flood control is provided by the Los Angeles County Flood Control District. Water service to the area of East Los Angeles located north of the City of Commerce, and south of the 60 Freeway is provided by the Los Angeles Department of Water and Power. The Los Angeles County Flood Control District provides flood control. SCE provides electrical power services to this area, and Southern California Gas also serves the area.

Monterey Park

The City of Monterey Park forms the northern boundary of the study area. The City owns and operates the water system which serves most of the City. The city wells also taps into the Main San Gabriel Basin. In addition, the City has two emergency interconnections with the California Water Services Company. MWD provides backup water resources. The sewage collection system is maintained by the City's Maintenance Services Division (11 subsystems which outlet to the Los Angeles County Sanitation Districts [LACSD} regional system), except for an area around East Los Angeles Community College, which outlets into a LADWP collection system.