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## 4.4.3 Environmental Justice

### 4.4.3.1 Introduction

This section addresses the degree to which the Master Plan alternatives would comply with federal and state regulations and policies pertaining to environmental justice, specifically Executive Order 12898, U.S. Department of Transportation (DOT) Order 5610.1, California Public Resources Code Section 72000-72001, and California Environmental Protection Agency policy.<sup>207</sup> Supporting information is provided in Appendix F, *Environmental Justice Technical Report*, Appendix S-D, *Supplemental Environmental Justice Technical Report*, and Appendix F-A, *Environmental Justice Materials*, of this Final EIS/EIR.

### Federal Environmental Justice Requirements

Executive Order 12898 directs each federal agency "to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. . . ."<sup>208</sup>

By way of DOT Order 5610.2, the U.S. Department of Transportation (DOT) has adopted a policy to incorporate environmental justice principles into existing agency programs, policies, and activities. It is DOT's policy to promote the principles of environmental justice by fully considering them throughout the planning and decision-making processes. The analysis in this section is intended to carry out that policy by identifying potential disproportionately high and adverse human health or environmental effects on minority and low-income communities, by identifying past efforts and future opportunities to involve affected communities in the planning and decision-making process for the LAX Master Plan, which is the subject of the proposed FAA action, and by recommending measures or processes to avoid, eliminate, reduce, or offset disproportionately high and adverse human health or environmental effects to minority and low-income populations. For federal purposes, disproportionately high and adverse human health or environmental effects consist of only those impacts attributable to implementation of the proposed action, and do not include future impacts which would result absent implementation of the proposed federal action.

### State Environmental Justice Requirements

In 1999, the State of California enacted legislation establishing environmental justice as an aspect of state law.<sup>209</sup> Government Code Section 65040.12 was the first law to explicitly define "environmental justice" and to introduce environmental justice policy into California statutes. Section 65040.12 defines "environmental justice" as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." This law designates the Governor's Office of Planning and Research (OPR) as the coordinating agency for all environmental justice programs in California. Pursuant to Section 65040.12, OPR has conducted a survey of state agencies and departments to identify programs or activities that may have a bearing on environmental justice. Additionally, OPR has incorporated environmental justice principles into the 2003 General Plan Guidelines.

Enacted at the same time as Government Code Section 65040.12, Public Resources Code Sections 71110-71116 designate the California Environmental Protection Agency (CalEPA) as the public agency to implement the state's environmental justice programs. Specifically, CalEPA is required to "promote enforcement of all health and environmental statutes within its jurisdiction in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority populations and low income populations of the state." See Public Resources Code § 71110. CalEPA's other broad responsibilities include the implementation of environmental justice in the design and implementation of

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<sup>207</sup> Conclusions presented herein regarding environmental justice impacts and recommended mitigation measures and benefits have been determined by the City of Los Angeles for purposes of the Final EIR to be used in the City's decision-making process. The Final EIS to be approved by the FAA subsequent to completion of the City's decision-making process will present the environmental justice conclusions reached by the FAA, in accordance with the requirements of NEPA and other federal laws.

<sup>208</sup> Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, EO 12898, February 11, 1994.

<sup>209</sup> Government Code Section 65040.12; Public Resources Code Sections 71110-16.

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programs, policies and activities, the implementation of enforcement efforts, the design of public participation activities, and conducting health and environmental research and data collection. Pursuant to this law, CalEPA has developed a model environmental justice mission statement and convened a Working Group and an Advisory Group to develop an agency-wide strategy for identifying and addressing any gaps in existing programs, policies, or activities that could impede the achievement of environmental justice. On October 7, 2003, the Advisory Group finalized and published their Environmental Justice Recommendations to the Working Group, which provide a set of comprehensive recommendations to establish and implement an effective environmental justice program at CalEPA.<sup>210</sup>

Beyond these general environmental justice laws, there is currently no requirement or specific guidance for addressing environmental justice under CEQA. However, it is in recognition of the environmental justice principles and policies under Government Code Section 65040.12 and Public Resources Code Sections 71110-71116 and the still-developing statewide approach to environmental justice, that issues in this section are addressed.

In June 2000, LAWA formed an Environmental Justice Task Force to ensure that any proposed expansion of LAX is equitable, protects human health and the environment, and promotes economic vitality for *all* the people of the Los Angeles region. The Environmental Justice Task Force brought LAWA staff and consultants together with representatives of public interest groups with experience analyzing the impacts of transportation projects on minority and low-income individuals and communities. The Environmental Justice Task Force was asked by LAWA management to provide its views on: (1) how the concerns of minority and low income communities are addressed in the planning process; (2) how the benefits of any proposed expansion are distributed across various populations; and (3) how the burdens of any proposed expansion are distributed across various populations. This input helped form the Environmental Justice Program that was presented in the Draft EIS/EIR, carried forward during its circulation, as well as during the subsequent preparation and distribution of the Supplement to the Draft EIS/EIR, and reflected in this Final EIS/EIR.

This evaluation of the proposed LAX Master Plan alternatives effects on minority and low-income communities was completed in light of federal and state directives on environmental justice, and is based on a recognition that: minorities and low-income individuals and communities often bear a disproportionate share of the burdens of environmental degradation; may be denied a fair share of the benefits that flow from projects, policies and practices; and in many cases, have been excluded from the decision-making process that affects their lives and their environment.

In addition to providing the analysis required to fulfill the requirements of federal law, this section describes how LAWA is addressing environmental justice concerns in the context of the LAX Master Plan.

#### **Early Public Involvement in the LAX Master Plan Process**

To further the goals of environmental justice, and in accordance with federal and state directives, LAWA initiated a number of outreach efforts with nearby communities. During the five years leading up to publication of the Draft EIS/EIR, LAWA held a number of meetings, presentations, and discussions with specific focus on the LAX Master Plan in order to seek community input and maintain dialog with the community as the process moved along. LAWA staff met with neighborhood groups, homeowner associations, small business groups, minority and women owned business groups and local political leaders to seek their input, guidance and ideas regarding the effort to modernize the airport. Since the LAX Master Plan process was initiated, and prior to publication of the Draft EIS/EIR, members of the Board of Airport Commissioners, and LAWA executive staff and their representatives, met on more than 126 occasions with members of low-income and minority communities or their representatives. A listing of these meetings by organization and date is provided in **Table F4.4.3-1**, Summary of LAWA Outreach Efforts in Low-Income and Minority Communities.

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<sup>210</sup> These recommendations include four goals: Goal #1- Ensure meaningful public participation and promote community capacity building to allow communities to be effective participants in environmental decision-making processes. Goal #2: Integrate environmental justice into the development, adoption, implementation, and enforcement of environmental laws, regulations and policies. Goal #3: Improve research and data collection to promote and address environmental justice related to the health and environment of communities of color and low-income populations. Goal #4: Ensure effective cross-media coordination and accountability in addressing environmental justice issues. Cal. EPA, Recommendations of the CalEPA Advisory Committee on Environmental Justice, Final Report, pp. 13-34 (October 7, 2003).

Table F4.4.3-1

## Summary of LAWA Outreach Efforts in Low-Income and Minority Communities

Name of Organization <sup>1</sup>	Date
Manchester Square Neighborhood Watch	6/13/95
Crenshaw Community Planning Advisory Board	7/20/95
91st Street Homeowners Association	8/1/95
Inglewood Chamber of Commerce	8/10/95
Korean American Chamber of Commerce of Los Angeles	11/27/95
Asian Business League	1/9/96
Inglewood Public Forum	1/23/96
Inglewood/Airport Area Chamber of Commerce	3/27/96
Hawthorne Rotary Club	4/10/96
Women's Transportation Seminar	4/19/96
Asian Business Association, Minority Business Opportunity Committee	5/8/96
Black Business Association	5/8/96
100 Black Men	5/21/96
Greater Watts/Willowbrook Chamber	5/30/96
Inglewood City Council	6/4/96
100 Black Men	6/4/96
Black Business Association	6/18/96
Minority Business Opportunity Committee Workshop	6/19/96
Inglewood Employment Services/Innovative Educational Systems	6/20/96
National Association of Minority Contractors	6/21/96
Black Business Association	7/2/96
Inglewood City Councilmember Curran Price	7/2/96
Black Business Association	7/10/96
Latin Business Association	7/18/96
Councilmember Mike Hernandez	7/23/96
Wilmington Chamber of Commerce	7/24/96
Inglewood Chamber of Commerce	7/26/96
African American Chamber of Commerce	7/30/96
Hawthorne Chamber of Commerce, Executive Committee	8/14/96
Chinese International Transportation Professional Association	8/27/96
East Los Angeles Chamber of Commerce	8/28/96
United Chamber of Commerce	9/11/96
91st Street Homeowners Association	10/8/96
Black Business Association	10/17/96
Main Street Inglewood	10/25/96
Hawthorne President's Council	11/4/96
Filipino Business Association	11/7/96
Manchester Square Tour	11/7/96
Inglewood Continental Conversation/Inglewood Chamber of Commerce	11/12/96
Hawthorne President's Council	11/13/97
Congressman Xavier Becerra	11/13/97
Inglewood Public Forum	1/29/97
Hawthorne/Lennox Public Forum	2/6/97
City of Inglewood	2/12/97
Women in Transportation Seminar	2/20/97
Hawthorne City Council	2/24/97
East Los Angeles Chamber of Commerce	2/26/97
Manchester Square Neighborhood Watch	3/4/97
Latin Business Association	3/20/97
Playa del Rey Women's Club	4/8/97
NAACP Board of Directors	4/8/97
83rd Street Homeowners Association	4/28/97
91st Street Homeowners Association	6/11/97
Master Plan Public Scoping Meeting - Inglewood	7/12/97
Master Plan Public Scoping Meeting - Hawthorne	7/15/97
Hawthorne School District	7/22/97
Vermont Slauson Economic Development Corporation	7/28/97
Lennox Coordinating Council	8/7/97
82nd Street Block Club	10/11/97
Inglewood 1st District Block Club Coordinator	10/31/97
Past President, Inglewood/Airport Chamber of Commerce	11/5/97
Manchester Square Residents	11/10/97
Supervisor Yvonne Burke's Office	11/12/97
91st Street Homeowners Association	11/12/97
Councilmember Richard Alatorre	11/13/97

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Table F4.4.3-1

Summary of LAWA Outreach Efforts in Low-Income and Minority Communities

Name of Organization <sup>1</sup>	Date
Inglewood 2000	11/13/97
Inglewood City Staff Member	11/13/97
Hawthorne Chamber of Commerce	11/14/97
Lennox Town Hall W/ Supervisor Yvonne Burke	11/17/97
Inglewood 2000	11/18/97
Supervisor Yvonne Burke's Office	12/10/97
Inglewood City Staff Member	12/11/97
Inglewood Mayor Dorn	12/12/97
Greater Los Angeles African American Chamber of Commerce	12/18/97
Danny Bakewell	1/6/98
Manchester Square Leaders	1/12/98
Children's Dental Center, Inglewood	1/12/98
Inglewood Councilmember Garland Hardeman	1/20/98
Inglewood Community Forum	1/20/98
Inglewood Councilmember Jerome Horton	1/21/98
Inglewood Democratic Club	1/21/98
Inglewood Councilmember Jose Fernandez	1/22/98
Inglewood 2000	1/27/98
Eighth District Empowerment Congress	1/31/98
Manchester Square Leaders	2/3/98
Councilmember Garland Hardeman Community Meeting	2/7/98
Manchester Square Neighborhood Watch	2/10/98
Supervisor Yvonne Burke	2/12/98
Office of Councilmember Mark Ridley-Thomas	2/13/98
Office of Councilmember Nate Holden	2/13/98
Inglewood/Airport Chamber of Commerce	2/26/98
Southwest Area Empowerment Assembly	2/28/98
91st Street Homeowners Association	3/21/98
Assemblymember Ed Vincent	3/27/98
Manchester Square Neighborhood Watch	4/7/98
Wiseburn School District	4/14/98
Hawthorne School District	4/16/98
NAACP	5/16/98
Inglewood Chamber of Commerce, Government Affairs Committee	5/28/99
Asia Pacific Airport Symposium	6/7/99
Carlton Square Homeowners Association	8/7/99
City of Lynwood	8/17/99
Mayor Dorn, City of Inglewood	8/23/99
City of Compton	9/14/99
Inglewood Chamber	9/21/99
Elected Official Representatives	9/22/99
Japan Business Association of Southern California	9/23/99
Korean American Federation of Los Angeles	10/12/99
City of Maywood	10/13/99
Asian Media Day	10/14/99
Mayor Dorn's Town Hall Meeting	10/23/99
Hong Kong Association of Southern California	10/27/99
Lakewood Rotary	10/28/99
Asian-American Economic Development Enterprises	2/19/00
Filipino-American Society of Architects & Engineers	2/24/00
South Gate City Council	3/14/00
Korean-American Chamber of Commerce	3/21/00
Congressman Xavier Becerra	4/17/00
Pacific Rim Business Symposium	6/8/00
Lawndale Rotary	6/20/00
Chinese Chamber of Commerce	7/12/00
Antonio Villaraigosa	7/19/00
National Forum For Black Public Administrators	8/2/00
Lynwood City Council	8/9/00

Table F4.4.3-1

**Summary of LAWA Outreach Efforts in Low-Income and Minority Communities**

Name of Organization <sup>1</sup>	Date
City of Lynwood	8/17/00
Women's Transportation Coalition	10/5/00
<b>Total Given</b>	<b>126</b>

<sup>1</sup> Listing represents a summary of meetings, presentations, and discussions that dealt specifically with the Draft LAX Master Plan in order to seek input and maintain a dialog with communities as the Master Plan process has moved forward.

Source: LAWA, 2000.

In addition to these community meetings focused on the LAX Master Plan, LAWA held public meetings in affected communities to help the FAA and to identify the appropriate scope of the Draft EIS/EIR in accordance with NEPA and CEQA. The FAA is the lead federal agency responsible for preparation of the NEPA portions of the EIS/EIR, while the City of Los Angeles, through LAWA, is responsible for the CEQA portions. As described more fully at the end of this section, these efforts undertaken prior to circulation of the Draft EIS/EIR served as a starting point in LAWA and FAA's process to engage communities in decisions regarding mitigation of environmental impacts associated with implementation of the proposed action.

**4.4.3.2 General Approach and Methodology**

This environmental justice analysis follows the guidance outlined in Department of Transportation Order 5610.2 - *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.<sup>211</sup>

The DOT Order defines a "disproportionately high and adverse effect on minority and low-income populations" as an adverse effect that: "(1) is predominantly borne by a minority population and/or low-income population; or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or low-income population." The DOT Order also states that "[i]n making determinations regarding disproportionately high and adverse effects . . . mitigation and enhancement measures. . . and all offsetting benefits to the affected minority and low-income population may be taken into account . . . ."

This environmental justice analysis first identifies significant adverse impacts associated with each of the Master Plan alternatives. Next, the analysis assesses the extent to which these impacts fall on minority and/or low-income populations, and makes a preliminary finding as to whether any of the significant environmental effects identified might fall disproportionately on these communities. Finally, this analysis suggests some possible ways in which these impacts could be avoided, reduced, eliminated, offset, minimized, and/or mitigated.

Although a No Action baseline is ordinarily used for impact assessment under NEPA, certain analyses within this section, such as noise, use a 1996 environmental baseline for identifying environmental justice impacts. For the purposes of the environmental justice evaluation of noise impacts, the environmental baseline is being used herein to support a uniform approach that is more conservative and is also consistent with the approach being taken in this EIS/EIR to identify areas that would qualify for participation in LAWA's Aircraft Noise Mitigation Program.

Impacts to minority and low-income communities as compared to Year 2000 data are calculated and presented in these analyses; however, comparisons to 1996 baseline conditions continue to serve as the basis for the significance determinations presented in this document.<sup>212</sup>

<sup>211</sup> Department of Transportation Order 5610.2, *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, April 15, 1997. Other guidance, including Council on Environmental Quality *Environmental Justice under the National Environmental Policy Act*, December 10, 1997, was also consulted and helped form the approach to the analysis where consistent with the DOT Order.

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As discussed below, the environmental justice mitigation program was developed in conjunction with the affected communities based on response to these analyses and other public input. Where adverse impacts are identified and fall disproportionately on minority and low-income populations, general approaches to addressing environmental justice concerns through mitigation (e.g., enhancements, and other offsetting benefits) are described. FAA and LAWA have worked with the affected communities in developing mitigation programs tailored to the needs of these communities. Findings regarding disproportionately high and adverse human health or environmental effects on minority and low-income populations as a result of the LAX Master Plan are presented in subsection 4.4.3.6 below. These findings account for the mitigation measures and off-setting benefits developed through the Environmental Justice Program.

#### **Analysis of Impacts**

The identification of potential disproportionately high and adverse human health or environmental effects takes as its starting point when other sections of this document signify that significant impacts to a particular resource would occur. These significant impacts have been reassessed against all affected populations to determine if minority and low-income communities disproportionately sustain the impacts.

In order to ensure that this analysis fully conforms to the principles of environmental justice, both the severity of adverse impacts and the effectiveness of mitigation proposed in other sections of the document were reexamined to take into account factors that specifically relate to minority and low-income communities. This environmental justice analysis is intended to identify any significant adverse impacts that disproportionately affect minority and/or low-income communities as well as any situations in which proposed mitigation may be inadequate to fully address impacts to minority and/or low-income communities.

#### **Demographic Analysis**

A key step in the environmental justice analysis is to identify the minority and low-income communities that might be significantly affected by the proposed project. For this analysis, the study area, defined as the area in which the collective environmental effects resulting from the Master Plan alternatives would be likely to occur, extends beyond the areas immediately adjacent to LAX to include those neighborhoods potentially affected by aircraft noise (defined by the future aircraft noise contours) and aircraft or airport-related emissions, as well as airport-related traffic impacts, including congestion, noise and air pollution. For purposes of demographic analysis, and due to the size of the study area, its outer boundaries have been drawn along the boundaries of potentially affected census tracts. The study area includes portions of the following jurisdictions: Los Angeles, El Segundo, Inglewood, Hawthorne, and unincorporated areas of Los Angeles County. This area, comprised of 69 census tracts (1990 Census), is shown in **Figure F4.4.3-1**, Environmental Justice Study Area.

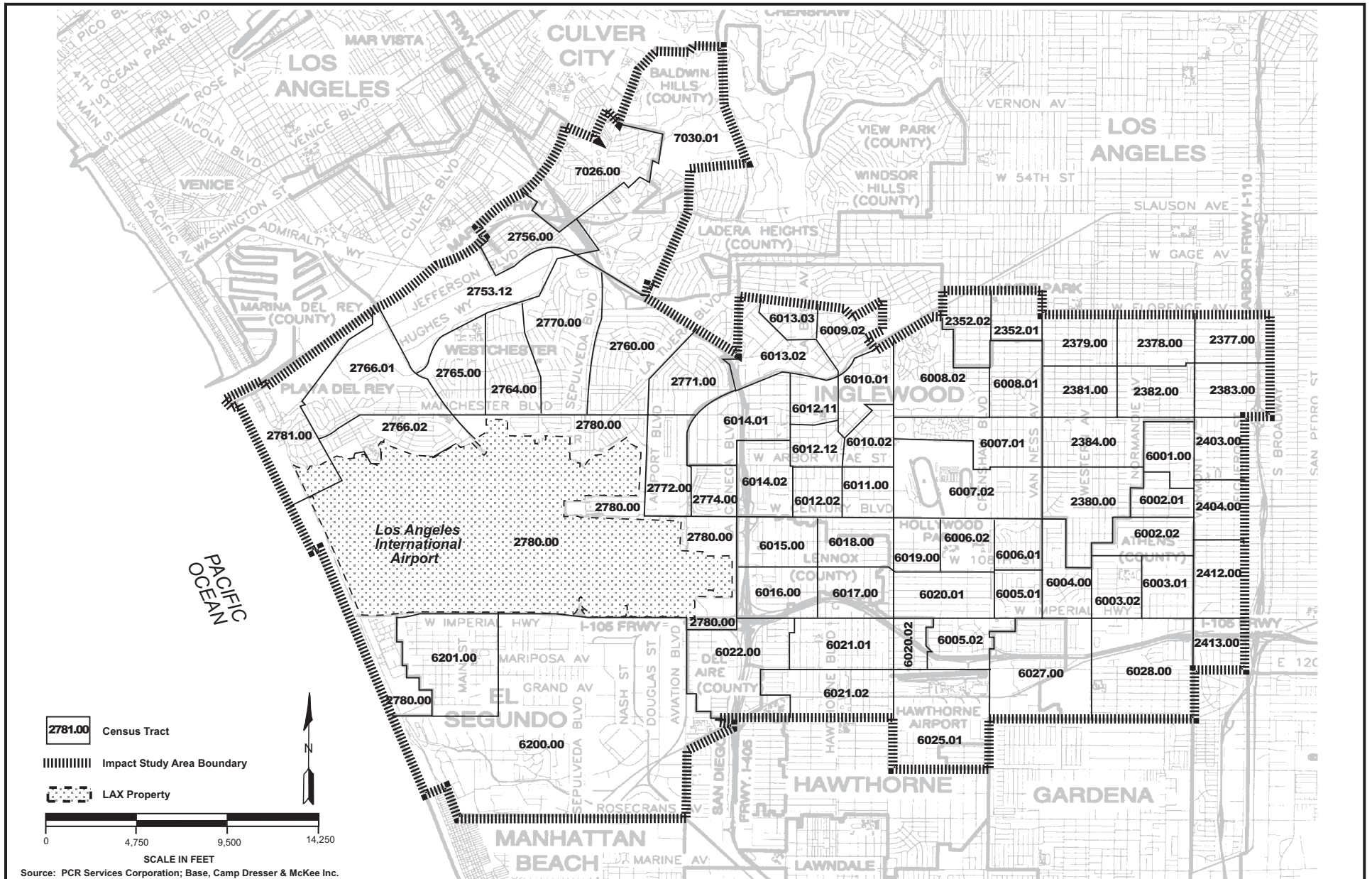
In order to assess impacts on minority and low-income populations at a neighborhood or sub-community level, this environmental justice analysis identified minority and low-income census tracts within the study area. This allowed comparison with other census tracts within the overall study area where necessary to determine if impacts might be more severe or of greater magnitude within the minority or low-income areas.<sup>213</sup>

Data from the 1990 U.S. Census was used for initial identification of minority and low-income status within the study area. U.S. Census data was deemed to be the most reliable and detailed source of demographic information available at the time the Draft EIS/EIR was prepared. Subsequent to publication of the Draft EIS/EIR and the initial identification of minority and low-income populations, data from the 2000 U.S. Census became available, and the identification of minority and low-income populations has been reassessed; however, as further described below, the changes in census data do not materially change the findings of the analysis presented in the Draft EIS/EIR or Supplement to the Draft EIS/EIR, therefore, comparisons to 1996 baseline conditions continue to serve as the basis for

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<sup>212</sup> Throughout the analyses, the 1996 baseline is used with 1990 U.S. Census data, whereas Year 2000 evaluations are used with the 2000 U.S. Census.

<sup>213</sup> In some cases, the minority census tracts correspond with boundaries of political jurisdictions, while in other cases they represent areas developed for the Census that do not necessarily reflect a cohesive community. Nonetheless, for ease of reference minority and low-income census tracts are identified as "communities" throughout this analysis.



**LAX Master Plan  
Final EIS/EIR**

**Environmental Justice Study Area**

Figure  
F4.4.3-1

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significance determinations in the environmental justice analysis presented herein.<sup>214</sup> For purposes of this analysis and consistent with guidance developed by the federal Interagency Working Group established by Executive Order 12898, minority communities were identified where the minority population of a census tract was greater than 50 percent.<sup>215</sup>

DOT Order 5610.2 defines low-income populations as those individuals whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines, which was \$17,050 for a family of four in the year 2000. The 1990 U.S. Census data used in this analysis reported families below the poverty level based on \$12,674 for a family of four in 1989. Because 1990 U.S. Census data was deemed to be the most reliable information available at the time the Draft EIS/EIR was prepared, the analysis generally applies 1990 U.S. Census data to determine significant impacts and applies 2000 U.S. Census data for comparison purposes where appropriate. For purposes of this environmental justice analysis, if a particular census tract's proportion of population below poverty level according to the 1990 U.S. Census is greater than that of Los Angeles County as a whole (15 percent), the census tract is considered to be low income.

#### **Basis of Comparison**

For purposes of this analysis, the assessment of disproportionate impacts was based on a comparison between affected and non-affected (or less-affected) areas, and looked at whether impacts fall predominantly or more severely on minority and low-income communities. Where impacts fall more or less equally on everyone within a geographically-defined community (for example, noise and air pollution), a comparison of this kind was deemed to be more relevant than the kind of statistical analysis typically used in Title VI investigations.<sup>216</sup> If impacts fall predominantly (or more severely) on minority or low-income communities, the impact may be disproportionate.

#### **4.4.3.3 Affected Environment/Environmental Baseline**

##### **Historic Background**

Mines Field, the predecessor of LAX, was leased by the City of Los Angeles in 1920 for use as an airfield with one east-west 2,000-foot runway and two hangars. In 1937, the City of Los Angeles purchased Mines Field, and a series of airport expansions began. At that time and up to the advent of commercial jet service in 1959, residential and other land use development occurred around the airport without notable conflict with airport operations. In the 1960s, however, with construction of a new north runway complex and the growth in jet aircraft operations, aircraft noise could no longer be contained within the airport boundary, and land use compatibility issues arose. Since the early 1960s, efforts have been ongoing to reconcile airport operations with the needs of surrounding communities.

From the early 1960s to the early 1970s, areas exposed to high noise levels from LAX were predominantly White. Airport acquisition of residential areas west of LAX, coupled with demographic shifts, have resulted in a reversal of that situation. For example, until the mid-1960s, the City of

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<sup>214</sup> Throughout the analyses, the 1996 baseline is used with 1990 U.S. Census data, whereas Year 2000 evaluations are used with the 2000 U.S. Census.

<sup>215</sup> "Minority" means a person who is: Black (having origins in any of the black racial groups of Africa); Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or Southern American, or other Spanish culture or origin, regardless of race); Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition). Interagency Working Group on Environmental Justice (IWG). Draft Guidance for Federal Agencies on Key Terms in Executive Order 12898. August 8, 1995.

<sup>216</sup> For example, in investigating whether the State of Louisiana violated Title VI in permitting facilities subject to the toxic release inventory (TRI), EPA looked at the percentage of African-Americans in proximity to TRI facilities and compared these statistics with the percentage of African-Americans in the statewide population. See "Draft Revised Guidance for Investigating Title VI Administrative Complaints Challenging Permits" (June 16, 2000). A related method evaluates whether project impacts fall on minority and low-income individuals at a statistically higher rate than on non-minority and higher-income individuals (or on the population at large). For example, a comparison of lifetime cancer risks among minority and low-income populations compared with the cancer risk of the statewide population might reveal a statistically significant difference, which in turn could suggest that minority and low-income populations were disproportionately exposed to carcinogens.

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Inglewood was almost exclusively White and still maintained a 77 percent White majority by 1970. However, by 1980, the minority population had increased to nearly 75 percent in the City of Inglewood.<sup>217</sup>

The FAA and the City of Los Angeles, through LAWA, has a long running interest in the environmental impacts of LAX on the City of Inglewood. In the early 1970s, the City of Los Angeles instituted the so-called "Over-the-Ocean" approach for nighttime aircraft operations from 12:00 midnight to 6:00 a.m. This was done in an effort to reduce the noise impacts of aircraft over-flying the communities to the east of the airport, including the City of Inglewood. The City of Los Angeles prepared one of the first Airport Noise Compatibility Programs (NCP) pursuant to the Aviation Safety and Noise Abatement Act of 1979. The NCP for LAX was approved by the FAA on April 4, 1985. Since 1986, the FAA has provided approximately \$85.7 million to the City of Inglewood through federal grants. The City of Los Angeles, through LAWA, has provided approximately \$23.3 million to the City of Inglewood as matching funds for federal grants. The FAA approved an application at LAX to use \$440 million in Passenger Facility Charge funds for additional noise mitigation including sound insulation and land acquisition. The initial grants given to the City of Inglewood were used to acquire noise-impacted land within the 65 CNEL noise contour and the land use subsequently changed. Included in the \$85.7 million total, recent federal grants provided to the City of Inglewood are specifically for residential sound insulation.

In 1998, the Secretary of the U.S. Department of Housing and Urban Development issued a Certificate of National Merit to the Century Project Area - Inglewood, California for work accomplished by the FAA and the City of Inglewood in reducing the number of people affected by airport noise of 65 CNEL and greater through land use changes.

In February 2001, a Memorandum of Understanding (MOU) was entered into between the City of Los Angeles and the City of Inglewood<sup>218</sup> to establish cooperation in pursuing and implementing certain new measures designed to study and mitigate the possible environmental impacts on Inglewood of existing and potential future operations and improvements at LAX. As further described in Technical Report S-1, *Land Use Technical Report* (subsection 2.2.2.2), the MOU includes proposals intended to extend and expedite sound insulation as well as reduce exposure to high levels of aircraft noise.

### **Los Angeles County Demographics**

Los Angeles County provides a context for population, ethnicity, and income status. According to the 1990 U.S. Census, the county had a total population of 8,863,164 and was comprised of 41.0 percent White; 37.3 percent Hispanic; 10.7 percent Black; 10.4 percent Asian American; 0.5 percent American Indian and Alaskan Native; and 0.2 percent Other Race. Based on Los Angeles County 1990 Census data, the county's aggregate minority population was 59.2 percent, while 15.1 percent of the population was below the defined poverty level. The 2000 U.S. Census indicated that the county's aggregate minority population had grown to 69 percent, and the percent of the population below the defined poverty level had increased to 18 percent, as shown in **Table F4.4.3-2**, 1990 - 2000 U.S. Census: Changes in Environmental Justice Study Area.

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<sup>217</sup> City of Inglewood, Inglewood General Plan Housing Element, May 1993.

<sup>218</sup> Memorandum of Understanding between the City of Los Angeles and the City of Inglewood, approved February 6, 2001.

Table F4.4.3-2

1990 - 2000 U.S. Census: Changes in Environmental Justice Study Area

Study Area	1990 Census	2000 Census	Change <sup>1</sup>
<b>Study Area</b>			
Number of Census Tracts in Study Area	69	79	+10
Number of Minority Census Tracts in Study Area	54	64	+10
Number of Low-Income Census Tracts in Study Area	33	45	+12
Percent Minority Population in Study Area	78%	84%	+6%
Percent Below Poverty Population in Study Area	18%	23%	+5%
Population in Study Area	345,287	359,681	+14,394 (+4%)
<b>Los Angeles County</b>			
Los Angeles County Population	8,863,164	9,519,338	+656,174 (+7%)
Percent Minority in Los Angeles County	59%	69%	+10%
Percent Below Poverty in Los Angeles County	15%	18%	+3%

<sup>1</sup> Percent change represents overall percentage point increases.

Source: 1990 U.S. Census; 2000 U.S. Census.

**Study Area Demographics**

The total population in the study area was 345,287 according to the 1990 Census. Based on the 1990 Census, population groups within the study area consisted of 41.6 percent Black; 32.2 percent Hispanic; 21.9 percent White; 0.2 percent American Indian and Alaskan Native 3.8 percent Asian American; and 0.3 percent Other Race. Other population characteristics for the study area in 1990 are shown in **Table F4.4.3-3**, Demographic Characteristics of Study Area (1990 Census).

Table F4.4.3-3

Demographic Characteristics of Study Area (1990 Census)

Percent Speaking English at Home	Percent Speaking Spanish at Home	Percent Speaking Other Language at Home	Percent Age 65 and Above	Percent with Children in Household	Percent Unemployed
64.6%	30.0%	5.3%	8.0%	35.7%	9.2%

Source: 1990 U.S. Census STF3.

As shown in **Table F4.4.3-2**, the 2000 U.S. Census counted 359,681 residents in the study area, an increase of 4.2 percent from 1990. Based on the 2000 Census, population groups within the study area consisted of 37.4 percent Black, 40.5 percent Hispanic, 16 percent White, 0.2 percent American Indian and Alaskan Native, 3.2 percent Asian, 0.3 percent Native Hawaiian and Other Pacific Islanders, and 2.4 percent Other (including two or more races).

Using the 2000 U.S. Census, there are 79 census tracts in the study area, an increase of ten compared to the 1990 U.S. Census. This increase in the number of census tracts within the study area is due to changes in census tract boundaries. A summary comparison of the differences in the 1990 and 2000 census tracts relative to the County as a whole is provided in **Table F4.4.3-2**.

### 4.4.3 Environmental Justice

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#### **Minority Composition**

Demographic data identify both the total numbers and general distribution of minority and low-income populations.<sup>219</sup> At the individual census tract level, 54 of the 69 total census tracts within the study area were considered to be minority in 1990, meaning that they had more than 50 percent minority population. The geographic distribution of these census tracts within the study area is illustrated in **Figure F4.4.3-2, Minority Census Tracts Within Study Area (1990 Census)**. This data reveals a readily discernible pattern of minority and low-income communities in the areas surrounding LAX. While the areas to the north and south of LAX are predominantly non-minority, the area east of I-405 within the study area is predominantly minority. Furthermore, within these areas east of I-405 minority populations are heavily concentrated: 39 of the 69 minority census tracts within the study area have minority percentages greater than 90 percent. The uneven distribution of minorities throughout the study area, as evidenced by the data showing that most census tracts have less than 20 percent or greater than 90 percent minorities, increases the potential for differential impacts on minorities and non-minorities.

Based on the 2000 Census, 64 of the 79 census tracts in the study area are considered to be minority tracts. The general pattern of minority and low-income populations within the study area based on the 2000 U.S. Census, as shown in **Figure F4.4.3-3, Minority and/or Low-Income Census Tracts - 2000 Census Changes**, has not changed since the 1990 U.S. Census; minority and low-income communities remain concentrated in areas east of LAX.

**Figure F4.4.3-3** illustrates the demographic changes in the Environmental Justice Study Area. Three census tracts (2756.01, 7030.01, and 6022) that were non-minority in 1990 are now minority tracts based on the 2000 Census. Census Tract 2756.01 is a consolidation of 1990 Census Tracts 2753.12 (a non-minority tract in 1990) and 2756 (a minority tract in 1990). The consolidated 2000 Census Tract 2756.01 is considered to be a minority tract. Census Tracts 6022 and 7030.01 were not subject to substantial boundary changes in the 2000 U.S. Census; however, they both experienced substantial population growth over the past decade. Census Tract 6022 has a minority population of 70 percent and Census Tract 7030.01 has a minority population of 60.3 percent.

#### **Low-Income Composition**

Based on the 1990 U.S. Census, of the 69 total census tracts within the study area, 33 are considered to be low-income (having more than the county average of 15 percent of the resident population below poverty level). The geographic distribution of low-income census tracts is illustrated in **Figure F4.4.3-4, Low-Income Census Tracts Within Study Area (1990 Census)**. It should be noted that 32 of the 33 census tracts identified as being low-income are also minority communities (defined as greater than 50 percent minority).

Of the 79 census tracts in the study area identified in the 2000 U.S. Census, 45 are considered to be low-income tracts. As illustrated in **Figure F4.4.3-3**, and similar to the 1990 U.S. Census, these 45 census tracts are primarily located east of LAX, in Inglewood, Hawthorne, and Lennox.

Nine census tracts (6013.03, 6012.11, 2774, 6004, 6003.02, 2412, 6025.01, 6021.05, and 6021.06) were not low-income in 1990 and are now low-income census tracts based on the 2000 U.S. Census. Census Tracts 6021.05 and 6021.06 were newly formed in the 2000 U.S. Census due to a split in 1990 U.S. Census Tract 6021.02. Although these census tracts were not considered low-income in 1990, all nine were identified as minority tracts and, therefore, this change does not alter their status as minority/low-income census tracts for purposes of the environmental justice analysis.

#### **Minority and Low-Income Composition**

When comparing the 1990 and 2000 U.S. Census, the population within the study area has, overall, become increasingly minority and low-income. This increase in minority and low-income populations corresponds with an overall increase in population within the study area and within Los Angeles County. However, as shown in **Table F4.4.3-2**, the County's population has increased by approximately 7 percent while population in the study area has increased by 4 percent. As a component of the total population,

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<sup>219</sup> See Appendix F, *Environmental Justice Technical Report*, Table 3-2, Minority and Low-Income Census Tracts, identifying the 1990 census tracts within the study area, the total tract population, the minority and non-minority populations residing in the census tract, and the percentage of the population in the tract that was classified as a minority population. For comparison purposes, Table 3-2 also presents the minority status of the United States, California and Los Angeles County.

minority and low-income populations in the County between 1990 and 2000 increased by 10 percent and 3 percent, respectively. In the study area for the same period, the concentration of minority and low-income populations increased by 6 percent and 5 percent, respectively.

**Figure F4.4.3-3** illustrates that for the study area as a whole, the increase in area defined as either minority or low-income communities based on the 2000 U.S. Census, focuses on two census tracts (7030.01 and 6022). The limited change in areas considered minority or low-income is largely due to overall population growth, as previously discussed. The changes in these two census tracts are generally reflective of broad based changes in demographics that have occurred in both the State of California and in the County. These two census tracts, newly identified as minority and/or low-income in the 2000 U.S. Census, are located north of Westchester in the City of Culver City and the unincorporated community of Baldwin Hills, and southeast of LAX in the unincorporated community of Del Aire.

### **Existing Conditions**

As described above, and as illustrated in **Figure F4.4.3-2**, **Figure F4.4.3-3**, and **Figure F4.4.3-4**, minority and low-income residential communities within the study area are currently concentrated east of LAX, separated from the airport by predominantly commercial and industrial airport-related land uses and the I-405 freeway. In contrast, residential areas of El Segundo and Playa del Rey/Westchester, to the immediate north and south of the airport, do not have high concentrations of minority or low-income populations. LAX has always had an east-west runway configuration to take advantage of the prevailing wind pattern and to maximize efficient use of airspace. The combination of the long-standing runway orientation and more recent changes in the demographic patterns in the area around LAX means that minority and low-income residential communities are directly under the primary arrival flight path. The primary impacts on minority and low-income communities from current airport operations are therefore mostly associated with aircraft noise and air emissions. While residential areas of El Segundo and Playa del Rey/Westchester directly adjacent to the airport are also exposed to high levels of side-line noise, the areas of exposure are much smaller in comparison to the noise-impacted residential communities to the east. El Segundo and Playa del Rey/Westchester are exposed to other impacts from airport operations, including surface traffic congestion and emissions, ground level noise, and visual intrusions. Further details regarding existing conditions for individual environmental topics are discussed below in subsection 4.4.3.5, *Environmental Consequences*, and under their respective section headings in Chapter 4, *Affected Environment, Consequences, and Mitigation Measures*.

### **4.4.3.4 Master Plan Commitments**

No Master Plan commitments for environmental justice are proposed. However, the following Master Plan commitment from another environmental discipline is relevant to this analysis.

◆ **RBR-1. Residential and Business Relocation Program (Alternatives A, B, C, and D).**

The above commitment is provided in its entirety in Chapter 5, *Environmental Action Plan*.

### **4.4.3.5 Environmental Consequences**

The following analysis covers those environmental impact areas that have the potential for disproportionate effects on minority and/or low-income populations. Other environmental impact areas that either do not involve significant impacts or that do not have the potential for differential effects on minority or low-income populations are discussed in their respective sections of this Final EIS/EIR. The extent of discussion and analysis varies by topic based on the level of analysis required to determine where there are disproportionate effects on minority and/or low-income communities. Conclusions presented herein regarding environmental justice impacts and recommended mitigation measures and benefits have been determined by the City of Los Angeles for purposes of the Final EIR to be used in the City's decision-making process. The Final EIS to be approved by the FAA subsequent to completion of the City's decision-making process will present the environmental justice conclusions reached by the FAA, in accordance with the requirements of NEPA and other federal laws.

Comparisons to 1996 baseline and Year 2000 conditions are provided below. As mentioned previously, comparisons to Year 2000 conditions are provided for informational purposes only; comparisons to 1996 baseline conditions continue to serve as the basis of the significance determinations.

### 4.4.3 Environmental Justice

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Environmental impacts associated with the LAX Expressway and the potential for related disproportionate effects on minority and/or low-income communities are evaluated in Appendix K, *Supplemental Environmental Evaluation for LAX Expressway and State Route 1 Improvements*.

#### **Aircraft Noise/Land Use**

Corresponding to the runway configuration described above, most of the noise impacts from aircraft operations occur to the east and west of the airport. An advantage of the airport's proximity to the Pacific Ocean is that aircraft normally can take off over the ocean, thus, reducing noise impacts to residential areas. Consequently, most of the arriving flights approach LAX from the east. Additionally, nighttime operational procedures call for both takeoffs and approaches over the ocean, further reducing noise impacts to residential areas. During periods when the wind direction shifts (approximately 6 percent of the time) planes arrive from the west (over the ocean) and depart over the communities to the east. As a result of the runway orientation, the minority and low-income communities to the east bear the greatest burden of aircraft noise from LAX. Based on 1996 conditions, of the approximately 49,000 individuals exposed to significantly high noise levels (65 CNEL or greater), an estimated 76 percent were minority and/or low-income and over 60 percent (or most) of the area within the 65 CNEL noise contour is in minority communities. See **Figure F4.4.3-5**, 1996 Baseline 65 CNEL Noise Contour. Based on Year 2000 conditions, approximately 83 percent of individuals exposed to high noise levels were minority and/or low-income and about 70 percent of the area within the 65 CNEL noise contour fell within minority communities.

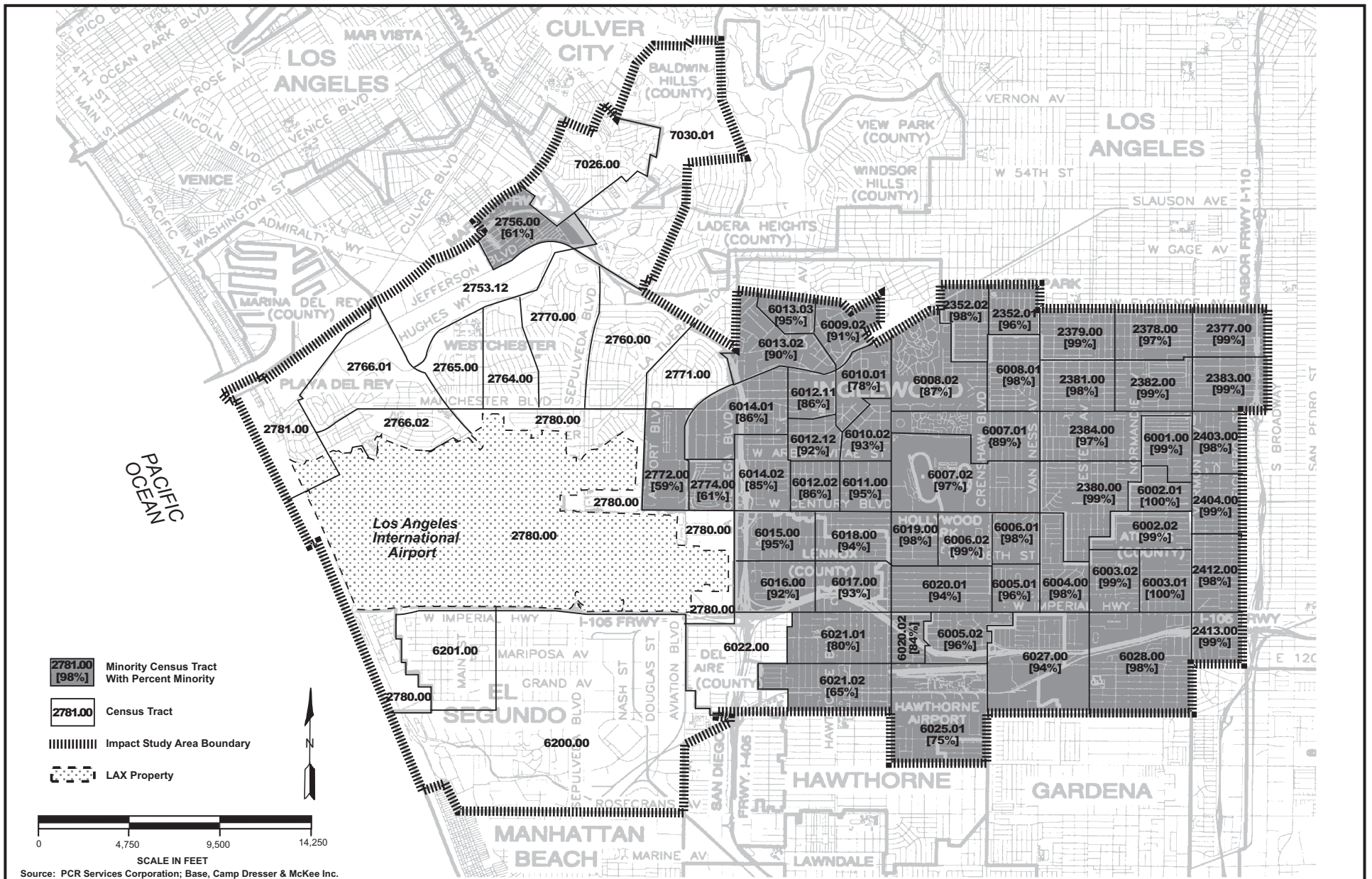
Although there has been progress under the Aircraft Noise Mitigation Program (ANMP) within minority and low-income communities, large areas remain exposed to high noise levels. Of the estimated \$485 million dollars committed to noise mitigation (sound insulation or property acquisition) by LAWA and the FAA between 1984 and 1999, approximately 94 percent of the funding has been directed toward predominantly minority and/or low-income areas.<sup>220</sup> Of the approximately 2,840 residential units within the ANMP boundaries that have been converted from incompatible to compatible use (either through sound insulation or acquisition), as reported by LAWA in September 2000, approximately 60 percent of the mitigation has occurred in minority and/or low-income areas, even though minority and low-income communities constitute more than 80 percent of the noise-impacted area.<sup>221</sup> This somewhat slower rate of progress in mitigating noise impacts within minority and/or low-income communities despite a greater share of available funding is largely the result of decisions made by local leaders or community members to pursue an acquisition approach instead of sound insulation. Acquisition typically involves higher costs per unit as an initial investment, and a longer timetable for implementation. Implementation of the current ANMP also has been hampered by the existence of substandard or non-code compliant housing stock in some of the most heavily noise-impacted areas.<sup>222</sup> Additionally, sizeable residential areas within these communities are zoned or designated for non-residential use. Prior to a recent change in the ANMP by LAWA, ANMP criteria did not allow for sound insulation of residential properties that were intended, based on zoning and/or land use designations, to be converted to non-residential use. The criteria was changed in an effort to eliminate this impediment to mitigation.

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<sup>220</sup> LAWA, Community Affairs Office.

<sup>221</sup> The noise impact area discussed in this analysis refers to the area over land outside of the current and proposed airport boundaries that would be exposed to high noise levels.

<sup>222</sup> For instance, based on information provided by LAWA and Los Angeles County Residential Sound Insulation Program staff in December 2003, approximately 40 percent of residential units in the community of Lennox have major code violations (e.g., illegal building additions or converted garages), and approximately 90 percent of units within Los Angeles County ANMP areas have at least minor code violations (e.g., no smoke detectors, ground fault interrupters), with many properties also having illegally converted garages. As a result, these properties are not eligible, or the owners are not willing to receive sound insulation, because the code violations would need to be corrected prior to issuance of a building permit for sound insulation.



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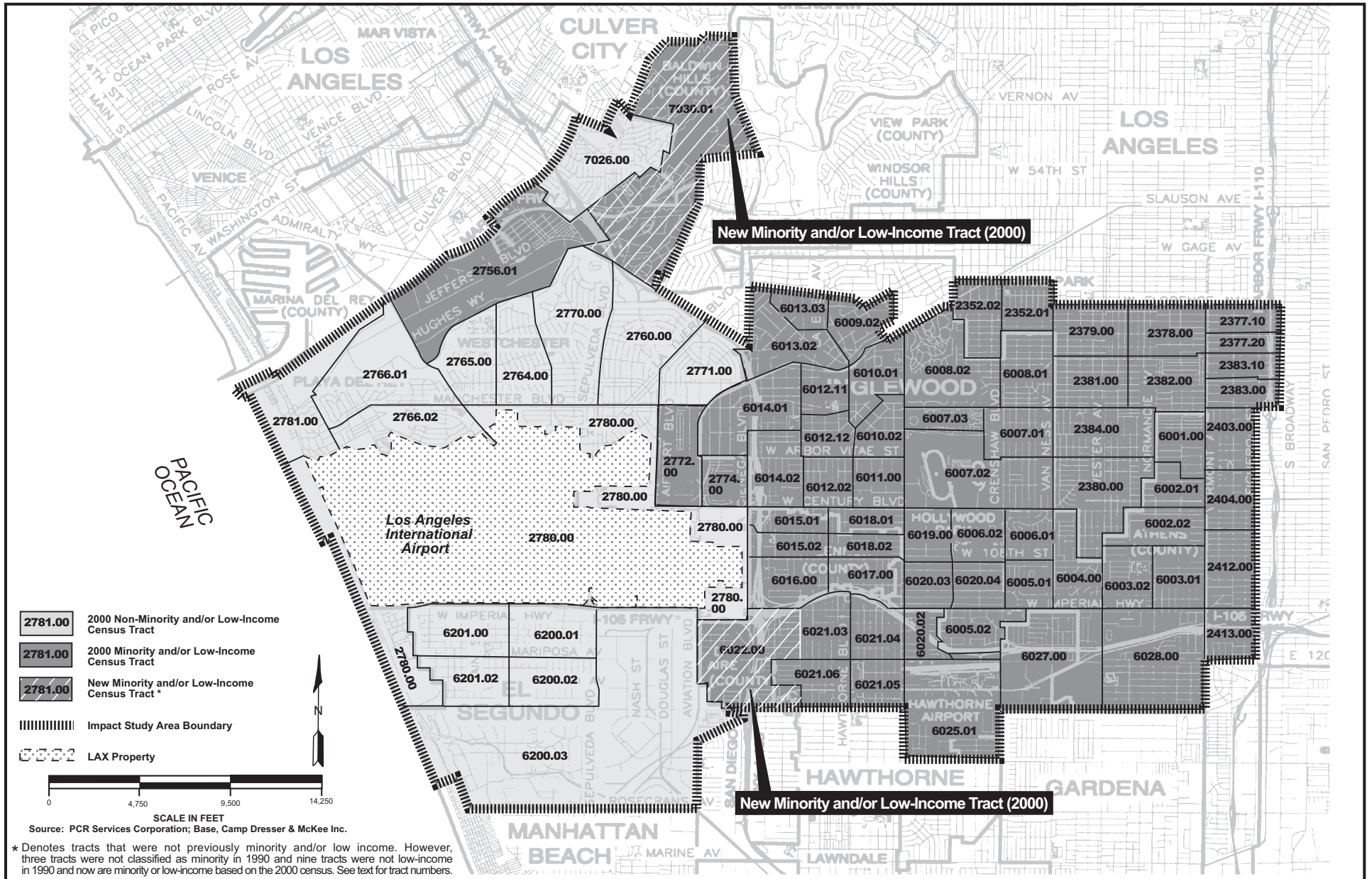
**Minority Census Tracts Within Study Area  
(1990 Census)**

Figure  
F4.4.3-2

### **4.4.3 Environmental Justice**

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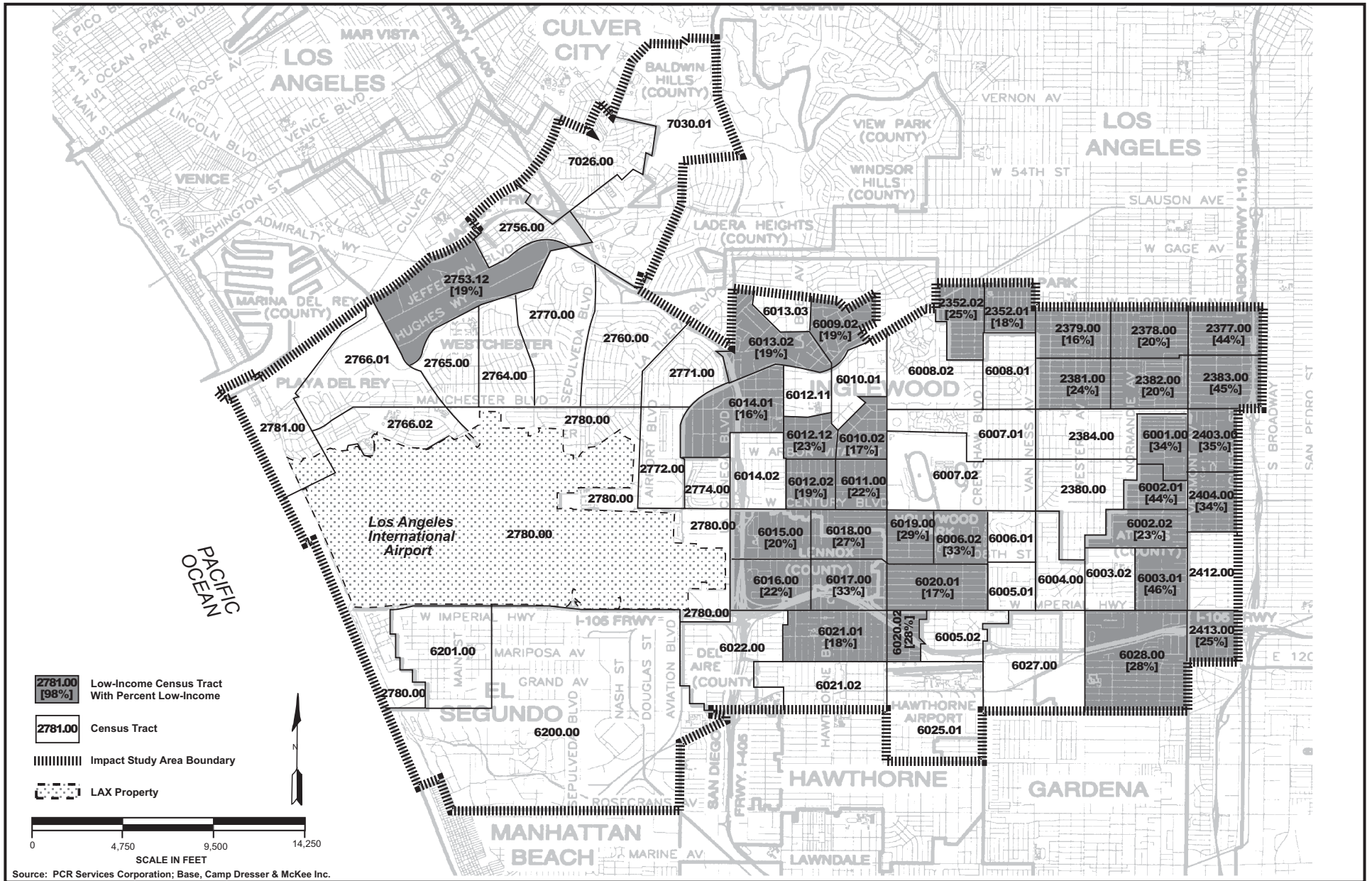
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**Minority and/or Low-Income Census Tracts-  
2000 Census Changes**

Figure  
F4.4.3-3

### **4.4.3 Environmental Justice**

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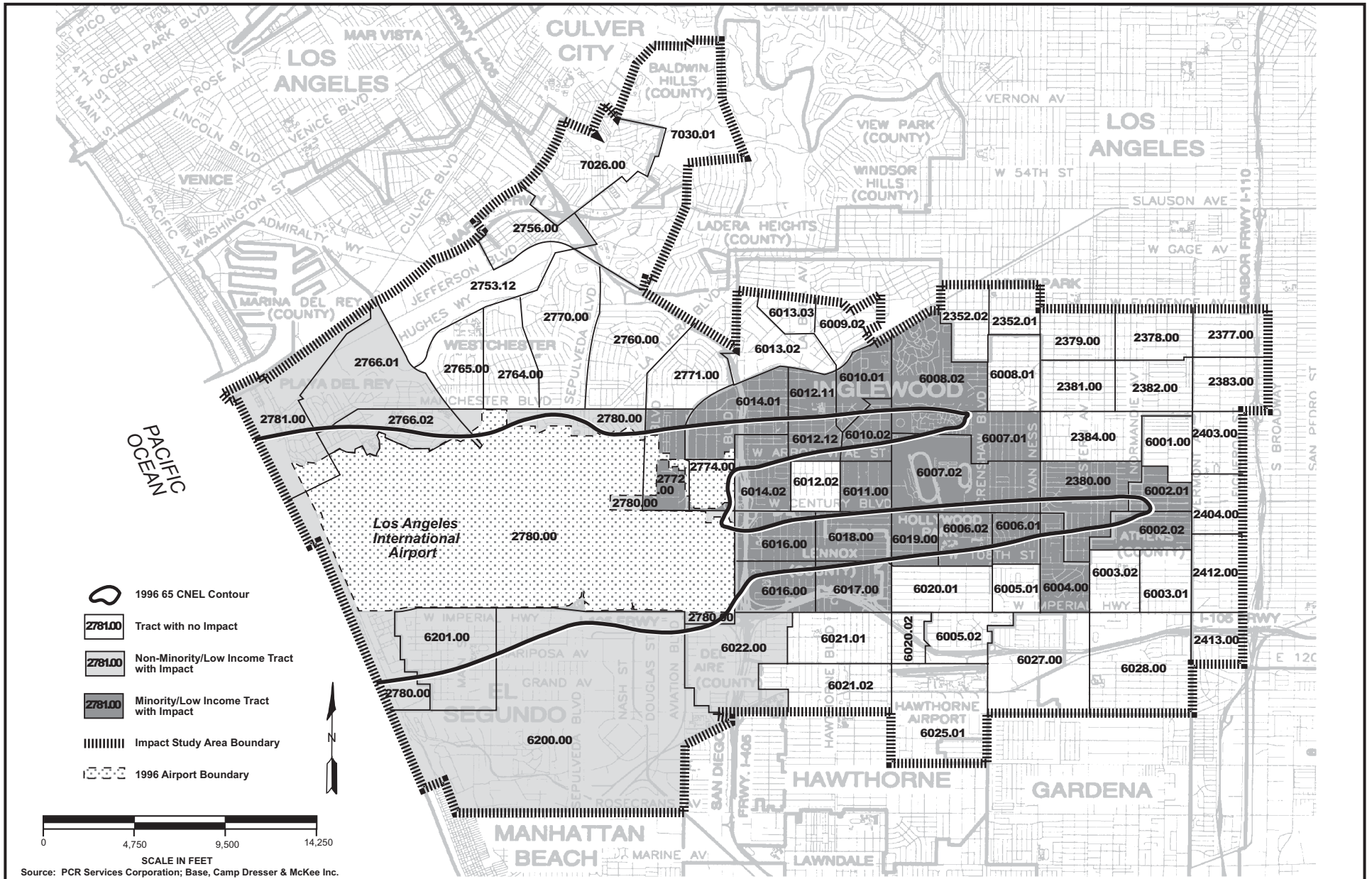
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**Low-Income Census Tracts Within Study Area  
(1990 Census)**

Figure  
F4.4.3-4

### **4.4.3 Environmental Justice**

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**1996 Baseline 65 CNEL Noise Contour**

Figure  
F4.4.3-5

### **4.4.3 Environmental Justice**

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**Alternatives A, B, and C**

**Comparison to 1996 Environmental Baseline**

As shown in **Figure F4.4.3-6**, Alternative A 2015 vs. 1996 Baseline 65 CNEL Noise Contours (1990 Census), **Figure F4.4.3-7**, Alternative B 2015 vs. 1996 Baseline 65 CNEL Noise Contours (1990 Census), **Figure F4.4.3-8**, Alternative C 2015 vs. 1996 Baseline 65 CNEL Noise Contours (1990 Census), and summarized in **Table F4.4.3-4**, Aircraft Noise Effects on Minority and Low-Income Communities 2015 No Action/No Project and Alternatives A, B, C, and D (Compared to 1996 Baseline), exposure to high levels of aircraft noise by 2015 would fall predominantly on minority and low-income communities under Alternatives A, B, and C. As indicated in the table, there would be significant disproportionate levels of noise exposure in minority and/or low-income areas under Alternatives A, B, and C when compared to 1996 baseline conditions. This is considered to be an adverse effect.

**Table F4.4.3-4**

**Aircraft Noise Effects on Minority and Low-Income Communities 2015 No Action/No Project and Alternatives A, B, C, and D (Compared to 1996 Baseline)**

	Alternative				
	NA/NP	A	B	C	D
<b>Exposure to 65+ CNEL</b>					
Percent of Overall Exposure in Minority/Low-Income areas	76 percent	80 percent	75 percent	80 percent	74 percent
Change in Overall Population Exposed in Minority/Low-income areas	-3,069	525	10,816	771	-4,907
Percent of Newly Exposed population in Minority/Low-Income areas	91 percent	90 percent	90 percent	83 percent	87 percent
Population Newly Exposed in Minority/Low-Income areas	4,300	9,280	21,930	5,940	4,430
Total Parks Newly Exposed	1	6	6	4	0
Parks Newly Exposed in Minority/Low-income areas	1	5	5	3	0
Total Public Schools Newly Exposed	3	4	10	3	3
Public Schools Newly Exposed in Minority/Low-income areas	3	4	9	3	3
Libraries	0	1	1	1	0
<b>Exposure to 94+ SEL</b>					
Percent of Newly Exposed population in Minority/Low-income areas	87 percent	88 percent	88 percent	86 percent	85 percent
Population Newly Exposed in Minority/Low-Income areas	15,760	19,270	21,000	16,540	15,340

Source: PCR Services Corporation, 2003.

Of the overall area exposed to 65 CNEL and higher noise levels by 2015, approximately 75 percent (Alternative B) to 80 percent (Alternatives A and C) would fall on minority and low-income communities. Most of the residential area encompassed by the 65 CNEL noise contour is also minority and/or low-income, and the entire residential area subjected to noise levels of 70 CNEL or higher is classified as minority. Compared to 1996 baseline conditions, Alternatives A, B, and C would see increases in overall exposure to high noise levels. Alternatives A and C would have the least increase with 525 and 771 residents, respectively. This would be in contrast to Alternative B, which would see an estimated increase in exposure of about 10,816 residents.

For Alternatives A, B, and C, there would be significant numbers of residents newly exposed to high noise levels, mostly within minority and/or low-income communities. Under Alternative A by 2015, approximately 90 percent of the newly noise impacted population of 9,280 residents is estimated to be minority and/or low-income. Under Alternative B, 90 percent of the newly noise-impacted population of approximately 21,930 residents is estimated to be minority and/or low income. Under Alternative C, 83 percent of the newly noise-impacted population of 5,940 is estimated to be minority and/or low-income. Alternative C, thus, has fewer new noise impacts and a smaller relative impact on minority and low-income communities than Alternatives A and B.

As shown in **Figure F4.4.3-9**, No Action/No Project Alternative 2015 vs. 1996 Baseline 65 CNEL Noise Contours (1990 Census), the No Action/No Project Alternative would result in a decrease in the overall population exposed to high noise levels by 2015 in contrast to Alternatives A, B, and C, which would see an increase. The areas affected and the demographics within the 2015 65 CNEL noise contour under the

### 4.4.3 Environmental Justice

No Action/No Project Alternative would be similar to Alternatives A, B, and C with an estimated 76 percent of the area within minority and/or low-income communities. Compared to Alternatives A, B, and C, the No Action/No Project Alternative would have the lowest estimated minority and/or low-income population newly exposed to high noise levels (4,300 residents), with about 91 percent of the population newly exposed to high noise levels estimated to be minority and/or low-income.

As shown in Appendix S-D, *Supplemental Environmental Justice Technical Report*, Figure S3, Alternative A 2015 vs. Year 2000 Conditions 65 CNEL (2000 Census) through Figure S5, Alternative C 2015 vs. Year 2000 Conditions 65 CNEL (2000 Census), the comparison of changes from Year 2000 conditions to 2015 also shows significant numbers of residents newly exposed to high noise levels. As shown in **Table F4.4.3-5**, Aircraft Noise Effects on Minority and Low-Income Communities 2015 No Action/No Project and Alternatives A, B, C, and D (Compared to Year 2000 Conditions), under Alternative A, 89 percent of the newly exposed population, or 8,100 residents would be minority and/or low-income. For Alternative B, 86 percent of the newly exposed population, or 21,090 residents would be minority and/or low-income, and for Alternative C, 85 percent of the newly exposed population, or 5,810 would be minority and/or low-income. Comparing conditions in 2015 under the No Action/No Project Alternative against Year 2000 conditions, an estimated 82 percent of the newly exposed population, or 2,780 residents, would be minority and/or low-income. The difference between the 1996 baseline and Year 2000 comparisons does not represent a material change in the findings of the analysis. Both comparisons show significant disproportionate levels of noise exposure in minority and/or low-income areas, with little change in the number of newly exposed residents.

**Table F4.4.3-5**

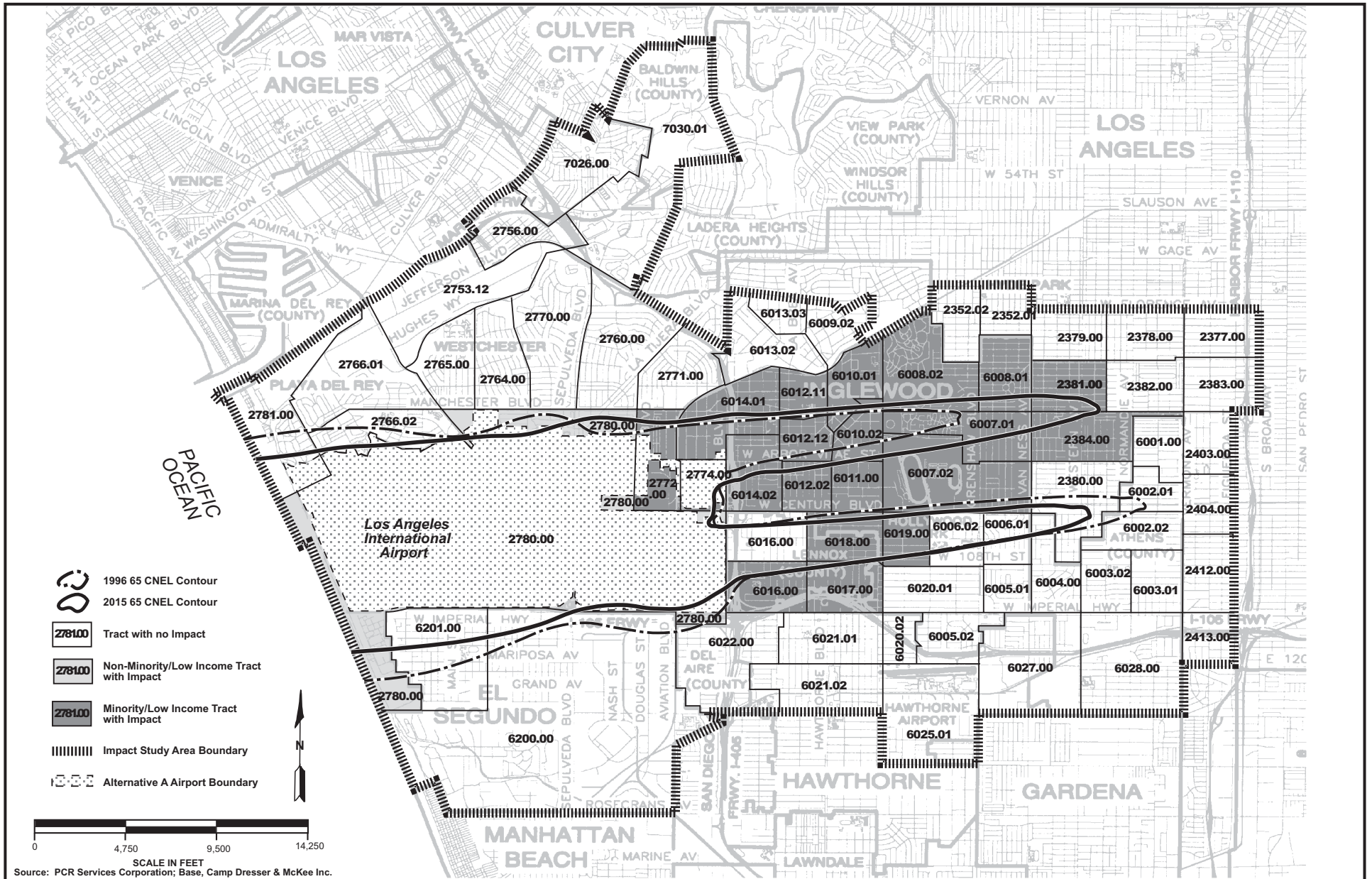
**Aircraft Noise Effects on Minority and Low-Income Communities 2015  
No Action/No Project and Alternatives A, B, C, and D  
(Compared to Year 2000 Conditions)**

	Alternative				
	NA/NP	A	B	C	D
<b>Exposure to 65+ CNEL</b>					
Percent of Overall Exposure in Minority/Low-Income areas	85 percent	85 percent	84 percent	85 percent	85 percent
Change in Overall Population Exposure in Minority/Low-Income areas	-249	-363	13,120	-248	-2,547
Percent of Newly Exposed Population in Minority/Low-Income areas	82 percent	89 percent	86 percent	85 percent	93 percent
Population Newly Exposed in Minority/Low-Income areas	2,780	8,100	21,090	5,810	4,030
Total Parks Newly Exposed	1	4	7	4	0
Parks Newly Exposed in Minority/Low-Income areas	0	4	5	2	0
Total Public Schools Newly Exposed	2	3	11	4	1
Public Schools Newly Exposed in Minority/Low-Income areas	1	3	8	2	1
Libraries	0	0	0	0	0
<b>Exposure to 94+ SEL</b>					
Percent of Newly Exposed Population in Minority/Low-Income areas	87 percent	94 percent	87 percent	87 percent	92 percent
Population Newly Exposed in Minority/Low-Income areas	16,080	19,510	18,660	15,430	14,340

Source: PCR Services Corporation, 2003.

Mitigation is proposed in Section 4.2, *Land Use* (subsection 4.2.8), to address residential areas that are newly exposed to 65 CNEL or higher noise levels. Key aspects of the mitigation focus on: 1) increasing annual funding for land use mitigation; 2) accelerating the fulfillment of existing commitments within the current ANMP boundaries prior to proceeding with newly eligible properties; and, 3) incorporating newly exposed areas into the ANMP. Despite the comprehensive mitigation proposed, the analysis concludes that, after mitigation, certain areas affected by noise would still be faced with adverse effects due to constraints that apply most directly to minority and/or low-income communities. These include residential areas ineligible for mitigation due to inconsistent zoning or land use designations and substandard housing which may be infeasible to insulate. Furthermore, interior effects prior to mitigation would be unavoidable, and high outdoor noise levels remaining after residential sound insulation may interfere with cultural and recreational uses of outdoor community areas. Noise impacts and related mitigation measures are further described in Section 4.1, *Noise*, and Section 4.2, *Land Use*.





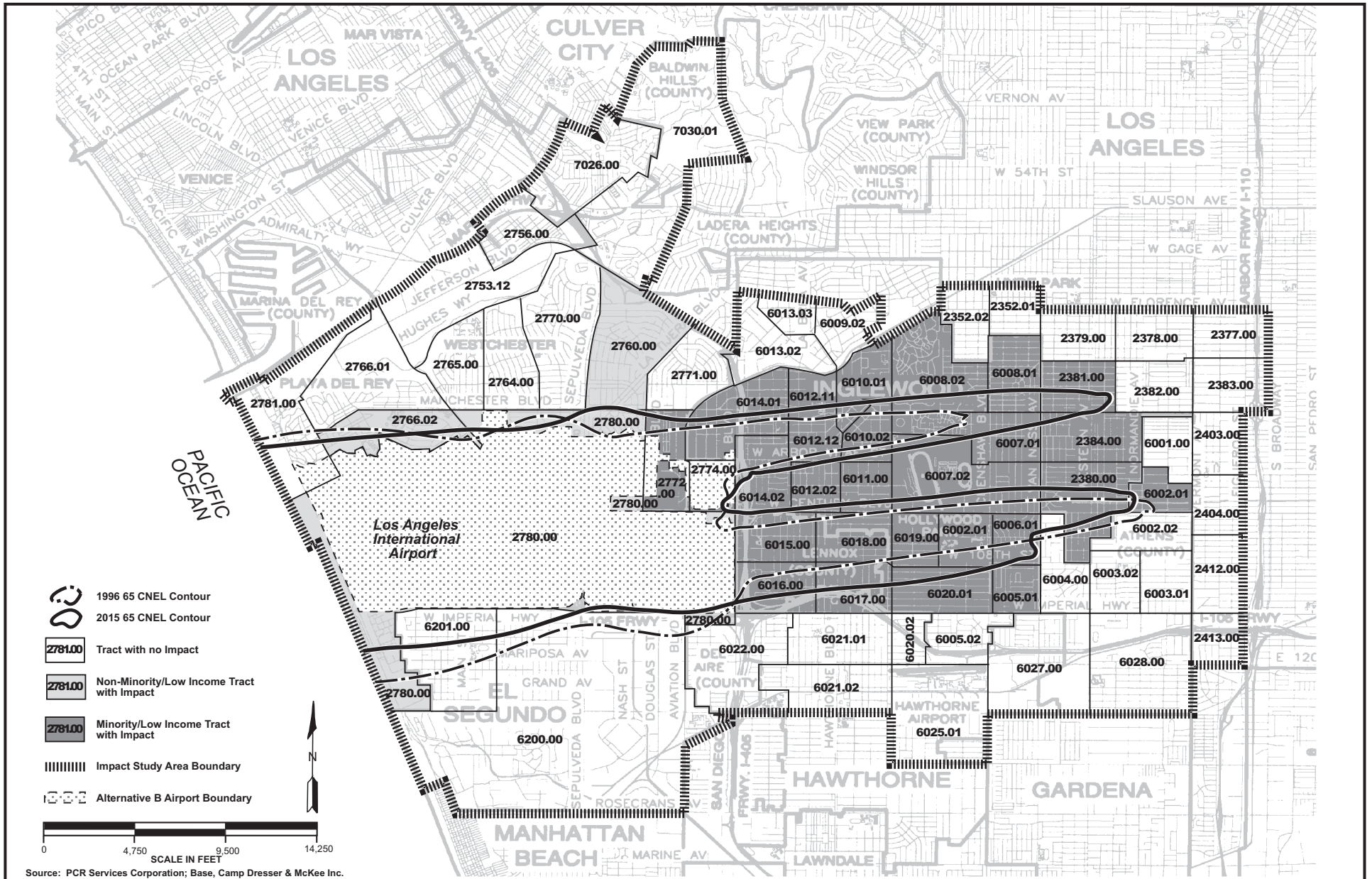
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**Alternative A 2015 vs. 1996 Baseline 65 CNEL  
Noise Contours (1990 Census)**

Figure  
F4.4.3-6

### **4.4.3 Environmental Justice**

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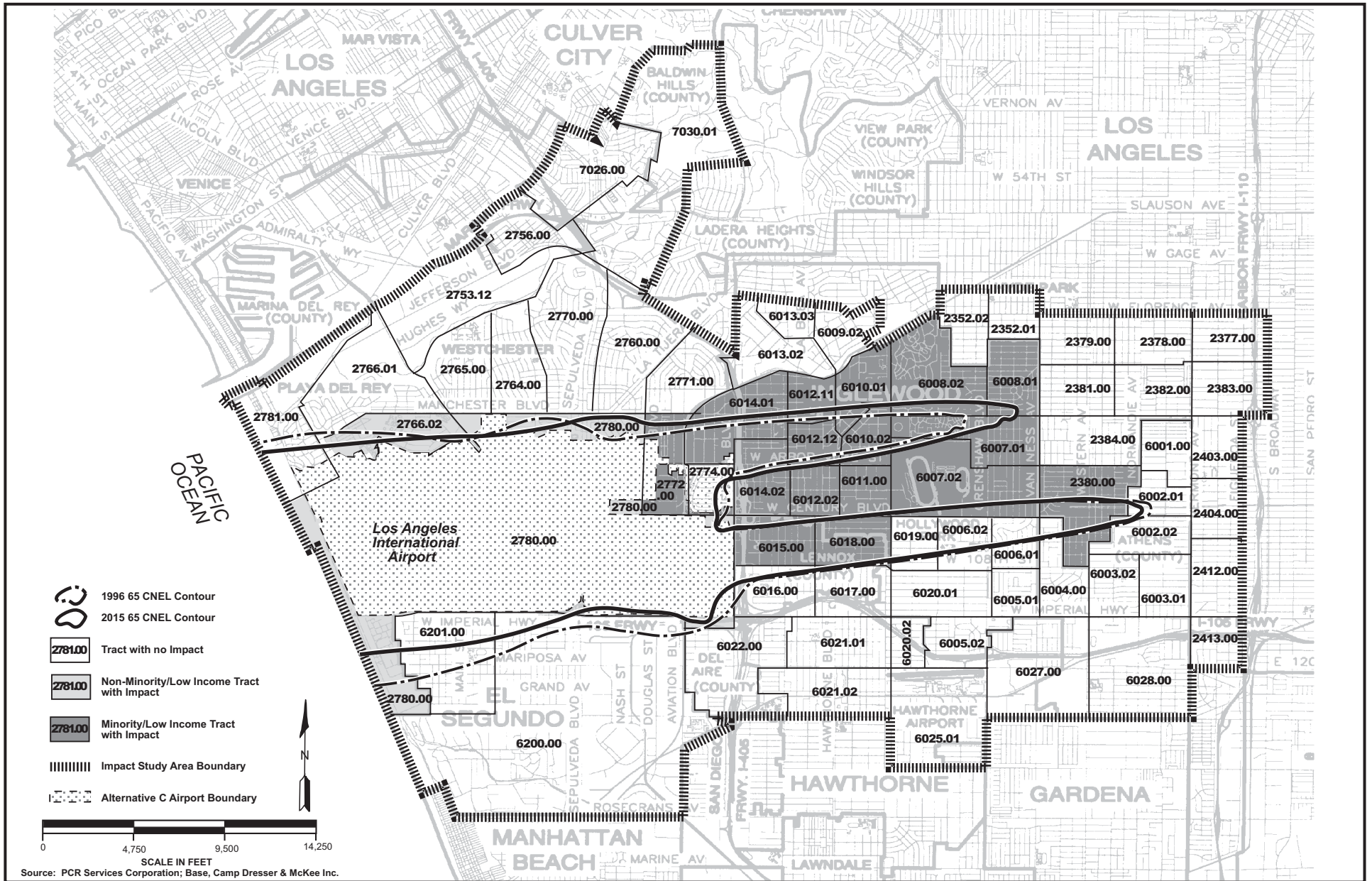
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**Alternative B 2015 vs. 1996 Baseline 65 CNEL  
Noise Contours (1990 Census)**

Figure  
F4.4.3-7

### **4.4.3 Environmental Justice**

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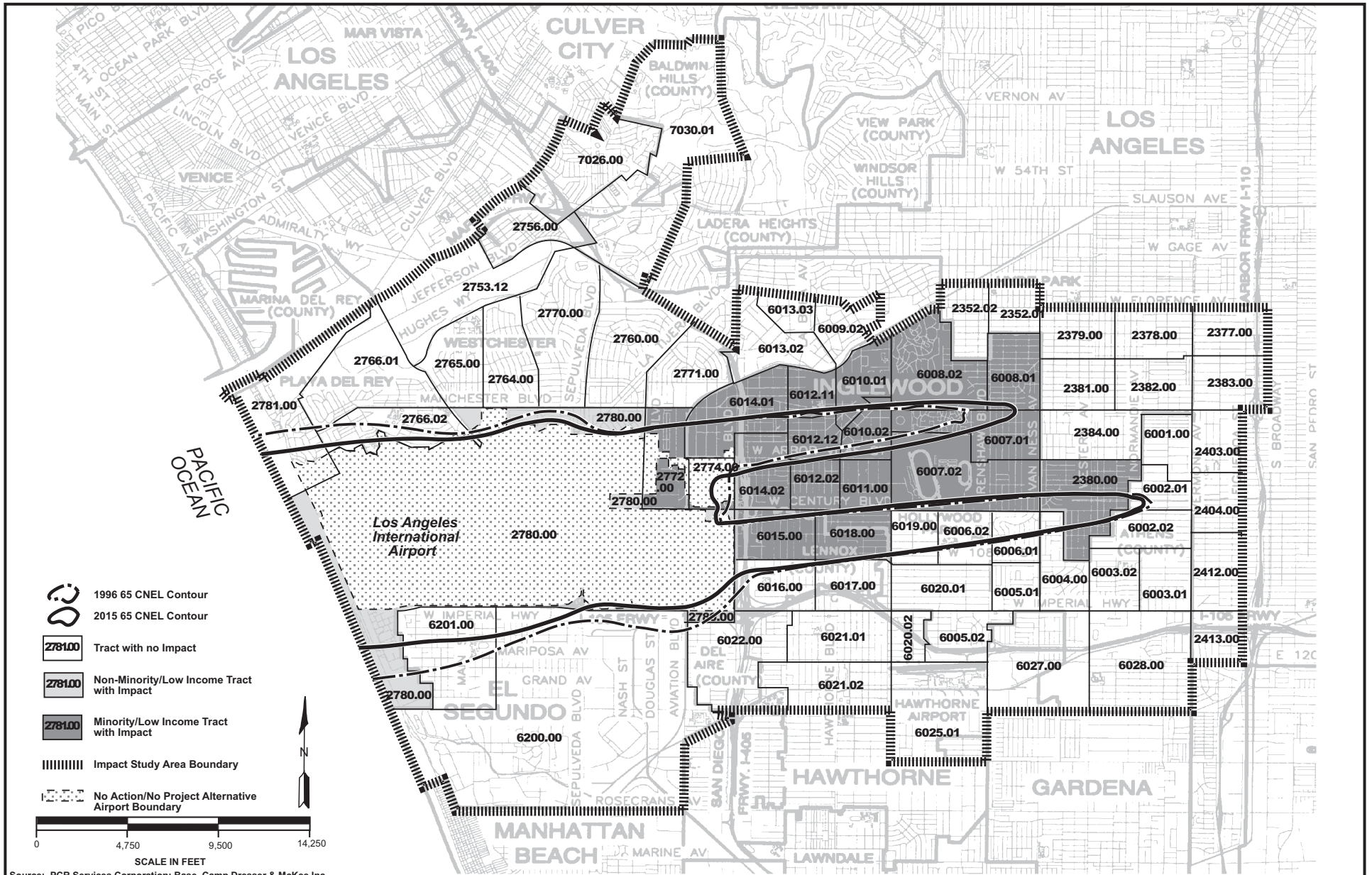
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**Alternative C 2015 vs. 1996 Baseline 65 CNEL  
Noise Contours (1990 Census)**

Figure  
F4.4.3-8

### **4.4.3 Environmental Justice**

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**No Action/No Project Alternative 2015 vs. 1996 Baseline  
65 CNEL Noise Contours (1990 Census)**

Figure  
F4.4.3-9





This Final EIS/EIR provides an assessment of the potential for single event aircraft noise to result in nighttime awakenings. Similar to the 65 CNEL exposure pattern, the effects of nighttime awakenings predominantly fall on minority and/or low-income communities. As shown in **Table F4.4.3-4**, under Alternative A compared to the environmental baseline, of those newly exposed to single event noise awakenings, 88 percent, or a population of 19,270 would be located within minority and/or low-income communities. For Alternative B, 88 percent or a population of 21,000 of those newly exposed to noise awakenings would be located within minority and/or low-income communities. For Alternative C, 86 percent, or a population of 16,540 of those newly exposed to noise awakenings would be located within minority and/or low-income communities. Alternatives A, B, and C would result in a disproportionate and adverse effect with regard to single event noise levels on minority and/or low-income communities.

Compared to Year 2000 conditions, as shown in **Table F4.4.3-5**, nighttime awakenings would be as follows: Alternative A, 94 percent or a population of 19,510 exposed to awakenings would be located within minority and/or low-income communities; Alternative B, a population of 18,660 or 87 percent exposed to awakenings would be in minority and/or low-income communities; and, Alternative C, a population of 15,430 or 87 percent of those exposed to awakenings would be in minority and/or low-income communities. These findings for nighttime awakenings with a Year 2000 comparison generally parallel the results of the 1996 baseline comparison, with disproportionate and adverse noise effects in minority and/or low-income areas and no significant order of magnitude change in populations affected.

Under Alternatives A, B, and C, parks within minority communities to the east of LAX would be newly exposed to high noise levels to a substantially greater extent than communities to the north and south of LAX. As shown in **Table F4.4.3-4**, by 2015 under Alternative A, compared to 1996 baseline conditions, six parks would be newly exposed to noise levels of 65 CNEL or higher, with five of the parks located within minority communities, including areas within the City of Inglewood (3), City of Los Angeles (1) and County of Los Angeles (1). Under Alternative B, impacts would be similar with five of six parks exposed to high noise levels located within minority communities. Under Alternative C, three out of four parks exposed to high noise levels would be located in minority communities. Compared to Year 2000 conditions, as shown in **Table F4.4.3-5**, parks newly exposed would be as follows: Alternative A, all four parks newly exposed would be located within minority and/or low-income communities; Alternative B, five of the seven parks newly exposed would be located within minority and/or low-income communities; and, Alternative C, two of the four parks newly exposed would be located within minority and/or low-income communities. However, noise impacts on parks would not reach thresholds of significance under CEQA or under FAA guidelines, as further discussed in Section 4.2, *Land Use*, and Section 4.8, *Department of Transportation Act, Section 4(f)*. However, as concluded in Section 4.2, *Land Use*, impacts on the quality of outdoor activities would occur in areas newly exposed to noise levels in the 65 to 75 CNEL range.

Impacts on public schools associated with aircraft noise exposure would fall on schools that are located predominantly within minority and/or low-income communities. By 2015 under Alternative A, as shown in **Table F4.4.3-4**, four public schools would be newly exposed to noise levels of 65 CNEL or higher, with all four schools located in minority/low-income communities. Under Alternative B, nine of ten public schools that would be exposed to high noise levels are in minority communities. Under Alternative C, all three of the public schools that would be exposed to high noise levels are in minority/low-income communities. Compared to Year 2000 conditions, as shown in **Table F4.4.3-5**, public schools newly exposed would be as follows: Alternative A, all three public schools newly exposed would be located within minority and/or low-income communities; Alternative B, eight of the eleven public schools newly exposed would be located within minority and/or low-income communities; and, Alternative C, two of the four public schools newly exposed would be located within minority and/or low-income communities.

As further discussed in Section 4.2, *Land Use*, and Section 4.27, *Schools*, under Alternative A, compared to 1996 baseline conditions, six public schools within the Inglewood Unified School District and Lennox School District would be newly exposed to 65 CNEL or greater aircraft noise levels or exposed to an increase of 1.5 dBA or greater within the 65 CNEL contour by 2015. Under Alternative B, 15 schools within the Inglewood Unified School District, the Lennox School District, and the Los Angeles Unified School District would be newly exposed to 65 CNEL or greater aircraft noise levels or exposed to an increase of 1.5 dBA or greater within the 65 CNEL contour by 2015. Under Alternative C, three schools, all within the Inglewood Unified School district would be newly exposed to 65 CNEL or greater aircraft noise levels or exposed to an increase of 1.5 dBA or greater within the 65 CNEL contour by 2015. For those impacted schools not already subject to an existing aviation easement, mitigation in the form of sound insulation would be provided. Many of these schools have aviation easements due to an

### 4.4.3 Environmental Justice

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Amended Judgment and Final Order that settled a lawsuit over high noise levels at the airport. As further described in Section 4.2, *Land Use* (subsection 4.2.3), each of the school districts covered by the Amended Judgment and Final Order received funds stipulated to be used for noise insulation of affected schools exposed to high noise levels from LAX operations. A total of 64 schools within the LAX 65 CNEL noise contour were covered under the Amended Judgment and Final Order. Although mitigation is expected to address the majority of aircraft noise effects on schools that are not subject to an existing aviation easement, effects for these schools may remain adverse for an interim period until mitigation is completed. Additionally, under Alternative B one public school within the Lennox School District would be subject to outdoor noise levels that cannot be mitigated.

Furthermore, based on the analysis of classroom disruption provided in Section 4.1, *Noise*, and Section 4.2 *Land Use*, for Alternatives A, B, and C, 7, 9, and 4 public schools, respectively, would be newly exposed to single event noise levels that could be disruptive to classroom activity.

In evaluating impacts on libraries due to high noise levels of 65 CNEL or greater, compared to 1996 baseline conditions, one library, located in the predominantly minority community of Inglewood, would be significantly impacted by Alternatives A, B, and C. Compared to Year 2000 conditions, as shown in **Table F4.4.3-5**, no libraries would be exposed to high noise levels under Alternatives A, B, and C. For the one library in Inglewood adversely affected by aircraft noise, mitigation in the form of sound insulation would be provided as described in Section 4.2, *Land Use* (subsection 4.2.8), Mitigation Measure MM-LU-1, Implement Revised Aircraft Noise Mitigation Program (Alternatives A, B, C, and D). Until such mitigation is implemented, interim effects on this library would be unavoidable.

#### Alternative D - Enhanced Safety and Security Plan

As shown in **Figure F4.4.3-10**, Alternative D 2015 vs. 1996 Baseline 65 CNEL Noise Contours (1990 Census), exposure to high levels of aircraft noise by 2015 would fall predominantly on minority and low-income communities. Of the overall area exposed to 65 CNEL and higher noise levels by 2015, approximately 74 percent would fall on minority and low-income communities. Most of the residential area encompassed by the 65 CNEL noise contour is also minority and/or low-income, and the entire residential area subjected to noise levels of 70 CNEL or higher is classified as minority. Compared to 1996 noise levels, the estimated minority and/or low-income percentage of the overall noise-impacted population would decrease by 2 percent.

As with the other build alternatives, Alternative D would have residents in some areas newly exposed to high noise levels, mostly within minority and/or low-income communities. As shown in **Table F4.4.3-4**, under Alternative D by 2015, approximately 87 percent of the population newly exposed to high noise levels, or 4,430 residents, is estimated to be minority and/or low-income. While this represents a large proportion of the residents who would be newly exposed to high noise levels, Alternative D has the fewest minority and low-income residents newly exposed of the build alternatives. However, Alternative D would have a disproportionate and adverse effect on minority and/or low-income communities with regard to the population newly exposed to high noise levels.

As shown in **Figure F4.4.3-9**, the areas affected and the demographics within the 2015 65 CNEL noise contour under the No Action/No Project Alternative compared to 1996 baseline conditions would be similar to Alternative D with an estimated 76 percent of the area within minority communities, and 77 percent of the population expected to be minority and/or low income. As shown in **Table F4.4.3-4**, compared to Alternative D, the No Action/No Project Alternative would have a slightly lower estimated population newly exposed to high noise levels (a difference of 130 residents), with about 91 percent or a population of 4,300 residents estimated to be minority and/or low-income. As shown in Appendix S-D, *Supplemental Environmental Justice Technical Report* (Figure S15), Alternative D 2015 vs. Year 2000 Conditions 65 CNEL (2000 Census), the comparison of changes from Year 2000 conditions to 2015 shows similar results to the 1996 baseline with impacts mostly falling within minority and/or low-income areas. As shown in **Table F4.4.3-5**, comparing conditions in 2015 under the No Action/No Project Alternative against Year 2000 conditions, an estimated 82 percent of the population newly exposed to high noise levels, or 2,780 residents, would be minority and/or low-income. This compares to 93 percent of the population newly exposed, or 4,030 minority and/or low-income residents, under Alternative D.

As described above, the Master Plan alternatives have the potential for single event aircraft noise to result in nighttime awakenings. As shown in **Figure F4.4.3-11**, Alternative D 2015 vs. 1996 Baseline 94 dBA SEL (1990 Census), similar to the 65 CNEL exposure, the effects of nighttime awakenings

predominantly fall on minority and/or low-income communities. As shown in **Table F4.4.3-4**, under Alternative D compared to the 1996 baseline, 85 percent or a population of 15,340 of those newly exposed to single event noise awakenings would be located within minority and/or low-income communities. Therefore, Alternative D would have a disproportionate and adverse effect on minority and/or low-income communities that would be exposed to high single event noise levels. As shown in **Table F4.4.3-5**, findings would be somewhat similar when compared to Year 2000 conditions, with 92 percent, or a population of 14,340 of those exposed to nighttime awakenings located within minority and/or low-income communities.

As shown in **Table F4.4.3-4**, there would also be effects from aircraft noise on public schools with implementation of Alternative D. Effects on public schools associated with aircraft noise exposure would fall on schools that are located predominantly within minority and/or low-income communities. As further discussed in Section 4.2, *Land Use*, and Section 4.27, *Schools*, under Alternative D, compared to 1996 baseline conditions, three public schools would be newly exposed to 65 CNEL or greater aircraft noise levels or exposed to an increase of 1.5 dBA or greater within the 65 CNEL contour by 2015. These schools (Beulah Payne Elementary School, Hillcrest Continuation School, and Inglewood High School) are all within minority and/or low-income areas and are within the Inglewood Unified School District. Furthermore, based on the analysis of classroom disruption provided in Section 4.1, *Noise*, and Section 4.2, *Land Use*, three public schools (Beulah Payne Elementary School, Inglewood High School, and Morningside High School) would be newly exposed to high single event noise levels that could be disruptive to classroom activities which are similarly located within minority and/or low-income areas and within the Inglewood School District. Therefore, Alternative D would have a disproportionate effect on minority and/or low-income communities with regard to public schools that are newly exposed to aircraft noise and public schools that are exposed to high single event noise levels. However, Alternative D would not have a disproportionately high and adverse effect on minority and/or low-income communities with regard to noise impacts on parks and libraries.

Mitigation is proposed in Section 4.2, *Land Use* (subsection 4.2.8), to address areas that are newly exposed to 65 CNEL or higher noise levels. The key aspects of the mitigation are the same as those described for Alternatives A, B, and C above. Despite the comprehensive mitigation proposed, the analysis concludes that, after mitigation, certain areas affected by noise would still be faced with adverse effects due to constraints that apply most directly to minority and/or low-income communities. Furthermore, interim effects prior to mitigation would be unavoidable and high outdoor noise levels remaining after residential sound insulation may interfere with cultural and recreational uses of outdoor community areas. Noise impacts and related mitigation measures are further described Section 4.1, *Noise*, and Section 4.2, *Land Use*.

For those impacted schools not already subject to an existing aviation easement, mitigation in the form of sound insulation or acquisition would be provided. Mitigation through sound insulation or acquisition is expected to address aircraft noise effects on schools under Alternative D; however adverse effects may be unavoidable for an interim period until mitigation is implemented for those impacted schools not subject to an existing aviation easement.

### **Air Quality**

LAX is located in the South Coast Air Basin, an area with some of the most severe air quality problems in the nation. The South Coast Air Basin currently fails to attain national and state standards for ozone (O<sub>3</sub>) and particulate matter (PM<sub>10</sub>) and only recently has been designated as being in attainment of national standards for carbon monoxide (CO) and nitrogen dioxide (NO<sub>2</sub>). These pollutants, along with lead and sulfur dioxide (SO<sub>2</sub>), are known as "criteria pollutants." Some pollutants, such as ozone, are more regional in the nature of their impacts and affect the entire South Coast Air Basin, while others, like CO, typically have more localized impacts. The South Coast Air Quality Management District (SCAQMD) has prepared a revised CO attainment demonstration that indicates the standard was attained in 2002 and will be maintained into the future.

The air quality analysis conducted for the LAX Master Plan has identified existing pollutant concentrations on and around the airport that exceed national and state standards for O<sub>3</sub>, and state standards for PM<sub>10</sub>. Many stationary sources of emissions contribute to these air pollution concentrations, including the Chevron El Segundo Refinery, Los Angeles Department of Water and Power Scattergood Generating Station, Southern California Edison El Segundo Generating Station, and Hyperion Treatment Plant.

### 4.4.3 Environmental Justice

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Furthermore, over 60 percent of total criteria pollutant emissions in the South Coast Air Basin originate from on-road motor vehicles. LAX is located near two major freeways (I-405 and I-105) and a number of major arterial roadways, which carry a substantial amount of non-airport traffic. Aircrafts operating at LAX contribute less than one percent of the basin-wide emissions of CO, Oxides of Nitrogen (NO<sub>x</sub>), Volatile Organic Compounds (VOC), SO<sub>2</sub>, and PM<sub>10</sub>; however the overall poor air quality in the South Coast Air Basin makes even incremental increases in emissions a cause for public concern.<sup>223</sup>

#### Alternatives A, B, and C

Under Alternatives A, B, and C, unmitigated emissions of CO, VOC, NO<sub>x</sub>, SO<sub>2</sub>, and PM<sub>10</sub> from on-airport sources in the interim year (other than construction) are estimated to be lower than emissions associated with the No Action/No Project Alternative, due to reduced congestion on the airfield and airport roadways. By 2015, the unmitigated emissions of all of these pollutants under Alternatives A, B, and C would, with the exception of PM<sub>10</sub> under Alternative C, increase over No Action/No Project levels, corresponding to an increase in aircraft operations and passengers. Unmitigated emissions in the Interim Year from off-airport sources under Alternatives A, B, and C would be less than those of the No Action/No Project Alternative for all pollutants except PM<sub>10</sub>, which would be comparatively greater under all three build alternatives, and SO<sub>2</sub>, which would be the same between Alternative B and the No Action/No Project Alternative. Unmitigated emissions associated with off-airport traffic from Alternatives A, B, and C in 2015, would increase for all pollutants, except VOC, to levels greater than those of the No Action/No Project Alternative due to an increase in vehicle miles traveled. Significant impacts on air quality from combined operational and construction emissions are predicted to occur. Concentrations of NO<sub>2</sub> and PM<sub>10</sub> from combined operational and construction sources, when added to future background concentrations, are predicted to exceed the state and/or national standard for Alternatives A, B, and C, in the Interim Year. In addition, CO concentrations for Alternative A would exceed the state and federal standards in the interim year. Concentrations of PM<sub>10</sub> for Alternatives A, B, and C are predicted to exceed the state standard in 2015. In general, concentrations of all pollutants in the Interim Year for Alternatives A, B, and C would be greater than those of the No Action/No Project of CO under Alternative C. In 2015, concentrations under Alternatives A, B, and C would, in general, be greater than those of the No Action/No Project Alternative for all pollutants, except for PM<sub>10</sub> under Alternative B.

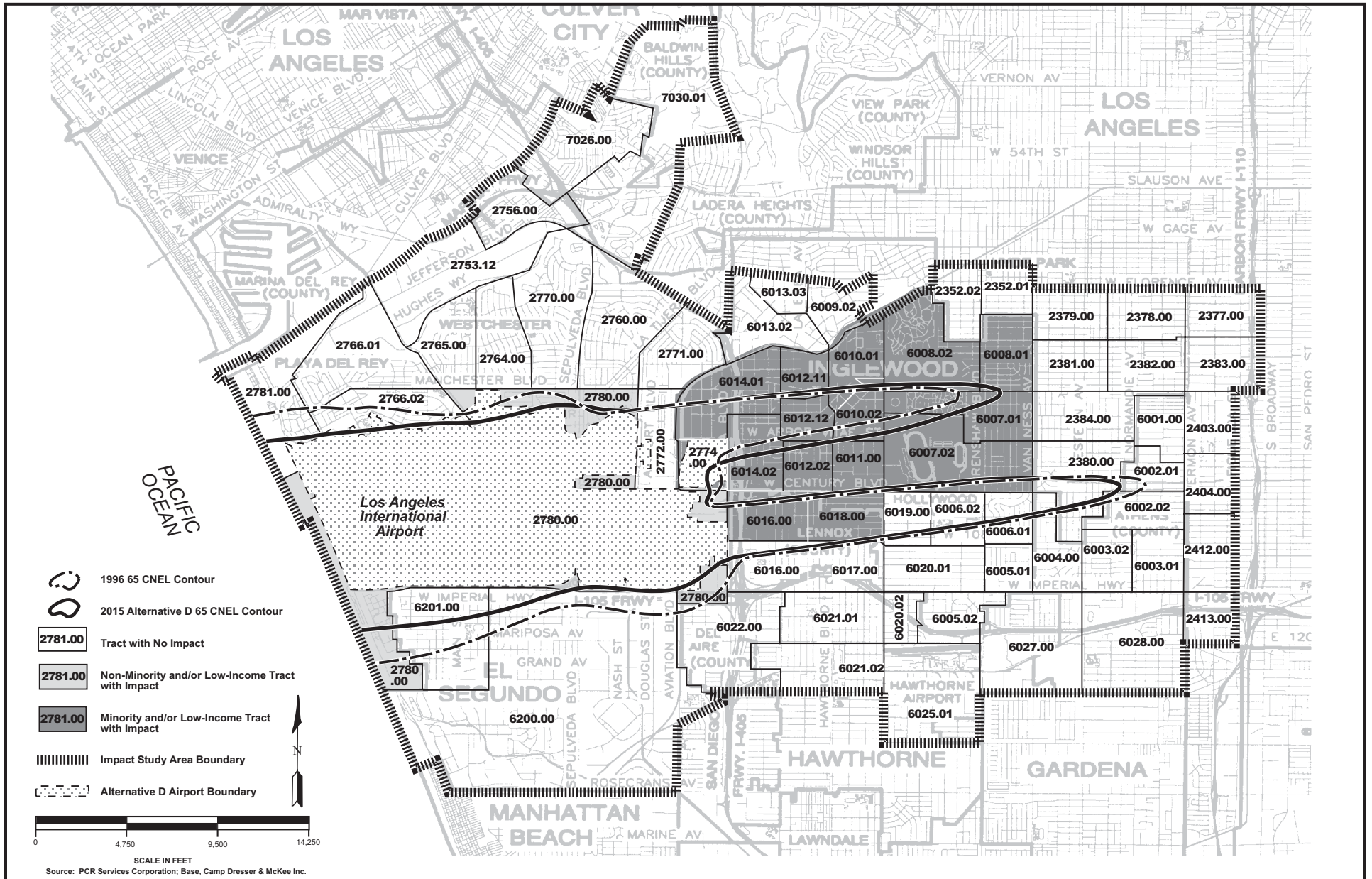
As further described in Section 4.6, *Air Quality*, Mitigation Measure MM-AQ-1, LAX Master Plan-Mitigation Plan for Air Quality, in combination with Mitigation Measures MM-AQ-2, Construction-Related Measure, MM-AQ-3, Transportation-Related Measure, and MM-AQ-4, Operations-Related Measure, proposed mitigation would reduce the amounts and concentrations of pollutants associated with each build alternative. After mitigation, on-airport emissions of NO<sub>x</sub> and SO<sub>2</sub> would remain significant, and off-airport emissions of all criteria pollutants except SO<sub>2</sub> would remain significant with related health effects from certain pollutants potentially more severe for minority and low-income populations, particularly those susceptible to asthma and other chronic respiratory illnesses. After mitigation, construction emissions would remain significant for all criteria pollutants.

Under Alternatives A, B, and C, higher ozone levels could result from increased NO<sub>x</sub> emissions associated with aircraft operations. Although the region must be in compliance with national O<sub>3</sub> standards by 2010, any increase in O<sub>3</sub> precursors could interfere with attainment of those health-based standards.<sup>224</sup> While O<sub>3</sub> is a region-wide problem, minority and low-income populations may be more severely affected because they may be more susceptible to asthma and other chronic respiratory

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<sup>223</sup> For example, because the South Coast Air Basin is classified as an "extreme" nonattainment area for ozone, federally-supported projects with emissions of 10 tons per year of ozone precursors must undertake a "general conformity" analysis, while in other parts of the country, emissions of less than 100 tons per year are considered *de minimis*.

<sup>224</sup> Because O<sub>3</sub> is formed through a photochemical reaction in the atmosphere, modeling O<sub>3</sub> concentrations is more complex than modeling concentrations of other criteria pollutants. Therefore, impacts of a particular project on ozone levels usually are analyzed based on the net increase or decrease of O<sub>3</sub> precursors.



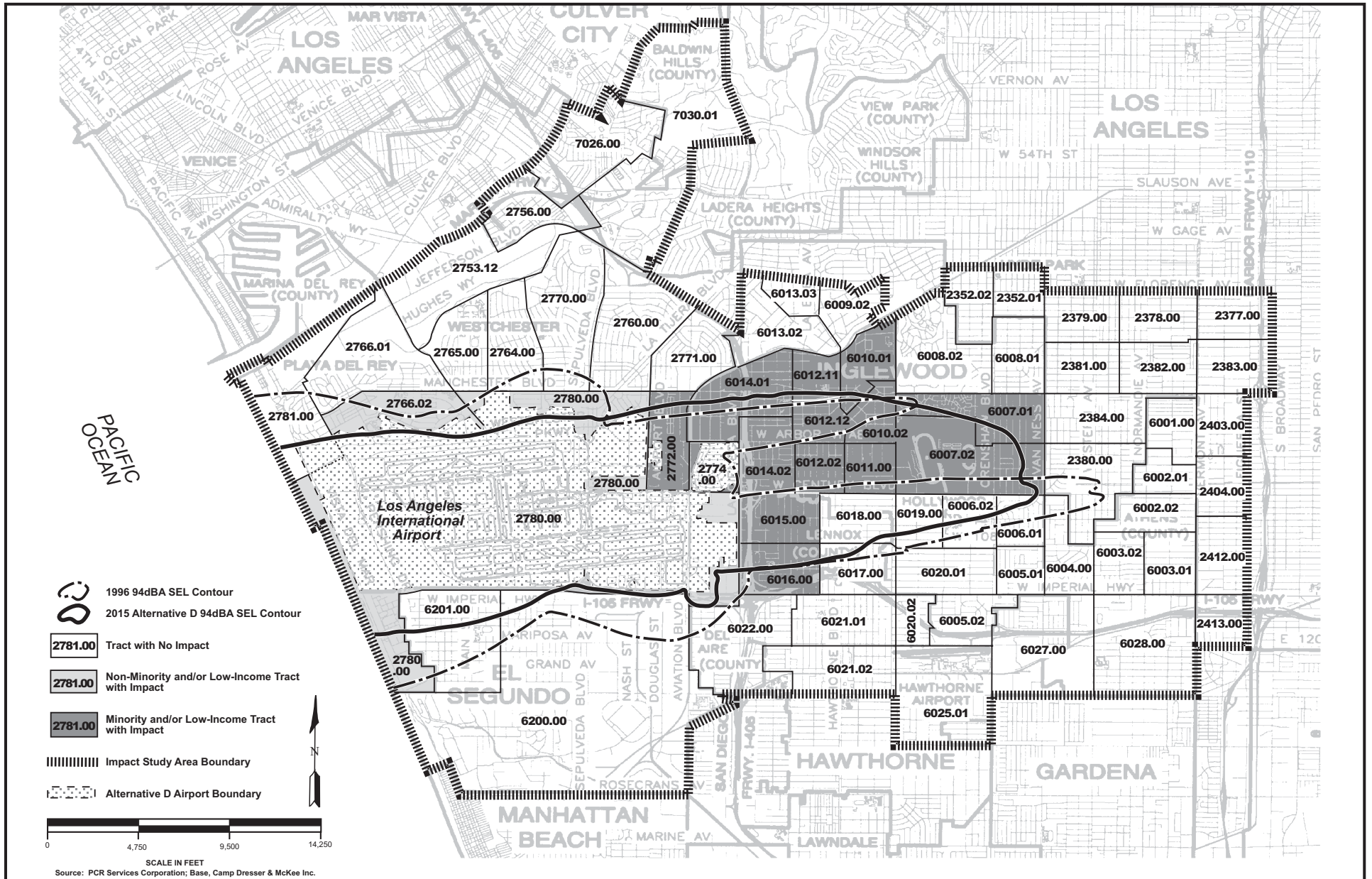
**LAX Master Plan  
Final EIS/EIR**

**Alternative D 2015 vs. 1996 Baseline  
65 CNEL Noise Contours (1990 Census)**

Figure  
F4.4.3-10

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Final EIS/EIR**

**Alternative D 2015 vs. 1996 Baseline  
94dBA SEL (1990 Census)**

Figure  
F4.4.3-11





illnesses triggered by high O<sub>3</sub> levels.<sup>225</sup> Children may be particularly susceptible to health effects of PM<sub>10</sub>, ozone and NO<sub>2</sub>.<sup>226</sup> Minority communities with a high percentage of children may thus be more severely affected than other communities exposed to equivalent levels of pollutants, while children living in poverty who lack access to adequate health care may be especially at risk.

In addition, cumulative exposure to O<sub>3</sub> and other air pollutants that are also linked to chronic respiratory illnesses may result in adverse health effects in certain populations even where the national ozone standard is met.<sup>227</sup> However, available data on the health effects of air pollutants does not allow a quantitative analysis of this type of cumulative impact. Obtaining the data necessary to conduct such an analysis and evaluate the potential for disproportionate impacts on minority and low-income individuals would require long-term health studies of a kind well outside the scope of a CEQA or NEPA document.<sup>228, 229</sup>

### Alternative D - Enhanced Safety and Security Plan

As indicated in Section 4.6, *Air Quality*, similar to Alternatives A, B, and C, the majority of increases in overall emissions for Alternative D would be attributable to increases in aircraft operations and vehicle miles traveled. Relative to the other build alternatives, Alternative D would have comparatively fewer aircraft operations, less vehicle miles traveled, and fewer on-airport emissions from aircraft taxi/idle, ground support equipment and gasoline and diesel vehicles. In terms of concentrations, some of these benefits compared to Alternatives A, B, and C would be at least partially offset, as Alternative D, without a West Terminal, would have focused activity at the CTA and in areas to the east side of the airport. These factors would therefore result in greater emissions on the east side of the airport. Compared to the No Action/No Project Alternative, Alternative D would have lower emissions for all pollutants from on-airport sources in 2015 with the exception of PM<sub>10</sub>. As with the other build alternatives, on-airport emissions from operational sources in 2015 would be significant for NO<sub>x</sub> and SO<sub>2</sub>; however, unlike the other build alternatives, NO<sub>x</sub> emissions after mitigation would be less than significant for Alternative D in 2015. Off-airport traffic emissions would be significant for CO, VOC, NO<sub>x</sub>, and PM<sub>10</sub>, with health effects from certain pollutants potentially more severe for minority and low-income populations, particularly those susceptible to asthma and other chronic respiratory illnesses. Off-airport emissions from Alternative D in 2015, would, however, be less than those of the No Action/No Project Alternative for all pollutants with the exception of PM<sub>10</sub> emissions. The combined operational and construction concentrations for Alternative D would be less than the national and state standards for all criteria pollutants, except for the PM<sub>10</sub> state standard. While the mitigation measures presented in Section 4.6, *Air Quality* (subsection 4.6.8), would reduce emissions both on and off the airport, most of these effects would remain adverse following implementation of proposed mitigation measures, with only the NO<sub>x</sub> emissions from on-airport sources being mitigated from significant to less than significant.

<sup>225</sup> See for example American Lung Association, *Minority Lung Disease Data* (1999), available at <http://www.lunusa.org/pub/minority/homepage.html>; Proceedings of the National Association of Physicians for the Environment, *National Conference on Air Pollution Impacts on Body Organs and Systems* (Nov. 18, 1994), available at [www.napenet.org/airsum.html](http://www.napenet.org/airsum.html); World Resources Institute, *Linking the Environment and Health: Why the Increase in Asthma?* (citing reports that poor, Black and Hispanic children have the highest rates of asthma prevalence), available at [www.igc.org/wri/wr-98-99/wr-98-001.htm](http://www.igc.org/wri/wr-98-99/wr-98-001.htm); Natural Resources Defense Council, *Our Children at Risk*, (citing studies that show higher rates of asthma among Black and Hispanic children).

<sup>226</sup> "Adequacy of California Ambient Air Quality Standards: Senate Bill No. 25 - Children's Environmental Health Protection" (Draft Staff Report, Sept. 12, 2000).

<sup>227</sup> See World Resources Institute, *Linking the Environment and Health: Why the Increase in Asthma?* (citing studies that indicate that ozone exposure may render people more susceptible to other pollutants or allergens), available at [www.igc.org/wri/wr-98-99/wr-98-001.htm](http://www.igc.org/wri/wr-98-99/wr-98-001.htm).

<sup>228</sup> See, for example, *Asthma Prevention Program of the National Center for Environmental Health, Centers for Disease Control and Prevention* (1999) (noting that little is currently known about patterns of asthma occurrence in state or local areas); *Pew Environmental Health Commission, Attack Asthma: Why America Needs a Public Health Defense System to Battle Environmental Threats* (1999) (calling for longer-term, nationwide "Framingham-style" environmental health studies that track all of the environmental and genetic factors that might be involved in asthma); see also descriptions of EPA's Cumulative Exposure Project (including a community-specific study in the Greenpoint/Williamsburg area of Brooklyn, NY) available at <http://www.epa.gov/oppeccumm/index.htm>; California Air Resources Board, *Children's Health Study* (10-year research study on fine particles, ozone and other air pollutants and their effect on children's respiratory systems), available [www.arb.ca.gov/research/research.htm](http://www.arb.ca.gov/research/research.htm); California Air Resources Board, *Neighborhood Assessment Program Workplan* (June 2000), at [http://www.arb.ca.gov/ch/nap\\_plan\\_7.doc](http://www.arb.ca.gov/ch/nap_plan_7.doc).

<sup>229</sup> State CEQA Guidelines Section 15151, Standards for Adequacy of an EIR, states that "An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible." This reasonableness standard is also reflected in 40 CFR 1502.22 of NEPA.

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As with the other build alternatives, Alternative D could contribute to higher ozone levels due to increased NO<sub>x</sub> emissions associated with airport traffic. While the region must be in compliance with national O<sub>3</sub> standards by 2010, any increase in O<sub>3</sub> precursors could interfere with attainment of those health-based standards. While O<sub>3</sub> is a region wide problem, minority and low-income populations may be more severely affected because they may be more susceptible to asthma and other chronic respiratory illnesses triggered by high O<sub>3</sub> levels. Children within minority communities may be particularly susceptible to health effects of PM<sub>10</sub>, ozone, and NO<sub>2</sub> and thus may be more severely affected than other communities exposed to equivalent levels of pollutants, while children living in poverty who lack access to adequate health care may be especially at risk. It should be noted, however, that unlike the other build alternatives, the criteria pollutant emissions and concentrations for Alternative D would be less than those of the No Action/No Project Alternative in 2015.

In addition, cumulative exposure to O<sub>3</sub> and other air pollutants that are also linked to chronic respiratory illnesses may result in adverse health effects in certain populations even where the national ozone standard is met. However, available data on the health effects of criteria air pollutants does not allow a quantitative analysis of this type of cumulative impact. Obtaining the data necessary to conduct such an analysis and evaluate the potential for disproportionate impacts on minority and low-income individuals would require long-term health studies of a kind well outside the scope of a CEQA or NEPA document.

#### **Human Health Risk**

Recently, concern about the levels of toxic air pollutants (TAPs) in the Los Angeles region has been growing. Human health risk associated with TAPs focuses on cancer risk and non-cancer health hazards, such as respiratory irritation and other lung disorders. As further described in Section 4.24.1, *Human Health Risk Assessment*, there are no federal standards for ambient concentrations of TAPs. Furthermore, in the absence of data that would require long-range studies of a type well outside of this scope of work, existing health risks in the area attributable to LAX sources could not be directly calculated.<sup>230</sup> Based on a recent study by SCAQMD (MATES II), the central and east central portions of Los Angeles County appear to have the greatest estimated health risk from toxic air pollutants. These areas also contain the heaviest concentrations of minority and low-income communities. Based on the SCAQMD study, the greatest contributors to risk include on-road mobile sources (70 percent), followed by other mobile sources including ships, aircraft, and off-road construction vehicles (20 percent). Screening level air dispersion modeling conducted for the LAX Master Plan environmental analysis indicates that the areas of greatest toxic air pollutant exposure associated with airport activities are confined to the airport property. Health risks associated with airport-related emissions, however may affect some residents, schools, hospitals and nursing homes in nearby areas with increased risks falling within an area running east-northeast over six miles (past the I-110 freeway). As noted above, because children typically are more sensitive to environmental hazards, greater health risks to children may exist in these areas.

In addition to being evaluated relative to 1996 baseline conditions, the impacts of the Master Plan alternatives were evaluated relative to Year 2000 conditions. While the evaluation of Year 2000 conditions did not identify any new adverse effects, if the Year 2000 were used to determine significance, several adverse effects identified when measured against the 1996 baseline would be less than significant and some less than significant effects would change to beneficial effects.

Additional information pertaining to the understanding and analysis of the affected environment/environmental baseline was used to evaluate cumulative non-cancer health effects. USEPA examined TAPs in the South Coast Air Basin independently and included many TAPs, including acrolein, that were not evaluated in MATES-II. For Los Angeles County, hazard indices might fall in the range of 3 to 10 for chronic exposure to acrolein.<sup>231</sup> A hazard index greater than 1 is the threshold of significance for acute

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<sup>230</sup> In cooperation with USEPA, SCAQMD and others, LAWA has expressed an interest in participating in a study independent of the Master Plan to gather air quality data through a monitoring and source-apportionment program in minority and low-income communities in the vicinity of LAX.

<sup>231</sup> Estimates of non-cancer health impacts are expressed in terms of a "hazard index," which quantitatively represents a relative non-cancer health risk/impact pertaining to particular target organ systems or health effects (e.g., asthma, nervous system disorders, birth defects, and developmental problems in children). A hazard index of one or less indicates that adverse health effects are not expected to result from exposure to emissions of that substance. As a hazard index increases above one, the probability of human health effects increases by an undefined amount. However, it should be noted that a hazard index above 1 is not necessarily indicative of health impacts due to the application of uncertainty factors in deriving reference exposure levels (levels of exposure that pose no significant health effects).

non-cancer health effects. USEPA did not make any predictions of possible acute hazards due to TAPs in air. Thus, no USEPA data could be used to directly assess potential for acute hazards in the South Coast Air Basin. (See Section 4.24.1, *Human Health Risk Assessment*.)

#### Alternatives A, B, and C

As described in Section 4.24.1, *Human Health Risk Assessment*, estimated potential concentrations of contaminants without mitigation would be expected to exceed standards for cancer and non-cancer risks. Cancer risks for Alternatives A, B, and C are estimated to exceed thresholds of significance in the Interim Year in a small area immediately east of the north runways. The area falls on portions of Census tracts 2774, 2772, and 6014.01, all of which are considered minority/low-income tracts. Based on 1990 Census data, the estimated population affected (1,100) would be 59 percent minority and 14 percent low-income.

By 2015, Alternative A would see a reduction in cancer risk over the 1996 baseline and future No Action/No Project conditions due to more dispersed activities at the airport (spreading from east to west), an accelerated program for converting ground support equipment to alternative fuels, and less idle time for surface traffic due to transportation improvements such as the ring road. Reductions in risk would be greatest near the eastern LAX boundary, and would decrease at distances further east, with some beneficial effects realized as far east as the I-110. Alternative C would not exceed thresholds of significance for incremental cancer risks in 2015 compared to the 1996 baseline and the incremental cancer risks under Alternative C would be less than that under the No Action/No Project Alternative. However, as shown in Appendix S-D, *Supplemental Environmental Justice Technical Report*, Figure S22, Alternative B 2015 vs. 1996 Baseline Cancer Health Risk (1990 Census), Alternative B would exceed the threshold of significance for incremental cancer risks in 2015 compared to the 1996 baseline without mitigation, although this level of incremental cancer risks would be less than that of the No Action/No Project Alternative. Based on 1990 U.S. Census data, the estimated population affected (2,623) would be 82 percent minority and 15 percent low-income. The extent of the affected area would be greater with a 70-year exposure period. With the incorporation of mitigation measures, the incremental cancer risks in 2015 for Alternative B would not exceed the threshold of significance for the 30 or 70-year exposure scenario.

As shown in Table F4.24.1-4, Summary of Incremental Cancer Risks and Incremental Non-Cancer Chronic Human Health Hazards for LAX Master Plan Pre-Mitigation Assessment (Measured Against Year 2000), in Section 4.24.1, *Human Health Risk Assessment*, the comparison of changes from Year 2000 conditions to Interim Year and Year 2015 shows that Alternatives A, B, and C would have reduced incremental cancer risks. The incremental cancer risks for Alternatives A, B, and C would be less than those of the No Action/No Project Alternative for Interim Year and 2015 conditions.

As indicated in Section 4.24.1, *Human Health Risk Assessment*, non-cancer health hazards for child residents for Alternatives A, B, and C would reach but not exceed thresholds of significance in the Interim Year. Although impacts do not exceed the thresholds of significance, geographically, the predominantly minority areas extending east-northeast from LAX for about two miles would be exposed to sufficient concentrations of TAPs to produce incremental hazards with ranges approaching the thresholds of significance. In 2015, Alternatives B and C would exceed thresholds of significance for non-cancer health risks, with the areas of adverse effect falling on minority communities east/northeast of the north runway and largely west of I-405. The estimated minority composition of the affected population ranges from 59 to 61 percent minority with about 14 percent of the population being low-income. As previously stated for the Interim Year, exposures at times reaching but not exceeding thresholds would still affect minority areas extending east-northeast from LAX past the I-110.

As shown in Table F4.24.1-4, Summary of Incremental Cancer Risks and Incremental Non-Cancer Chronic Human Health Hazards for LAX Master Plan Pre-Mitigation Assessment (Measured Against Year 2000), in Section 4.24.1, *Human Health Risk Assessment*, Alternatives A, B, and C would not exceed thresholds of significance for non-cancer chronic health hazards in the Interim Year compared to Year 2000 conditions. In 2015, Alternatives B and C would exceed thresholds for non-cancer chronic health hazards compared to Year 2000 conditions prior to the implementation of mitigation measures. Alternative A would not result in non-cancer chronic health hazards in 2015 compared to Year 2000 conditions. As shown in Appendix S-D, *Supplemental Environmental Justice Technical Report*, Figure S26, Alternative B 2015 vs. Year 2000 Conditions Non-Cancer Health Hazards and Figure S27, Alternative C 2015 vs. Year 2000 Conditions Non-Cancer Health Hazards, the comparison of changes

### 4.4.3 Environmental Justice

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from Year 2000 conditions to 2015, the areas where thresholds would be exceeded are located primarily on the airport, but also extend east/northeast of the airport property beyond I-405. Non-cancer hazards are dominated by releases of acrolein from jet engines. The increase in hazards is therefore due to the increase in passengers and associated jet activity between 1996 to 2000 conditions. Based on the 2000 census, the estimated minority composition of the potentially affected population ranges from 78 to 80 percent minority with about 21 percent of the population being low-income. The incremental non-cancer chronic hazards under Alternatives A, B, and C would be less than those under the No Action/No Project Alternative, with the exception of risks for the school child and adult resident in 2015.

In 2015, Alternatives B and C would exceed thresholds of significance for non-cancer chronic hazard impacts compared to the 1996 baseline and Year 2000 conditions with implementation of the mitigation measures described in Section 4.6, *Air Quality* (subsection 4.6.8), and Section 4.24.1, *Human Health Risk Assessment* (subsection 4.24.1.8). With mitigation, the incremental cancer risks of Alternatives A, B, and C would be substantially less than those of the No Action/No Project Alternative in the Interim Year and 2015. This would also be the case for incremental non-cancer chronic hazards in the Interim Year and, for Alternative A, 2015.

The acute non-cancer analysis assesses impacts from short-term exposure to maximum concentrations of acrolein at 50 locations. As discussed in Section 4.24.1, *Human Health Risk Assessment* (subsection 4.24.1.6), the acute non-cancer impacts for Alternatives A, B, and C, would exceed thresholds of significance compared to the 1996 baseline conditions. The incremental hazards due to acute exposure to acrolein would also exceed thresholds of significance compared to Year 2000 conditions for Alternatives A, B, and C.

The analysis suggests that LAX operations would cause an increase in cumulative cancer risk at some locations near the airport under Alternatives B and C, but that implementation of Alternative A would reduce cumulative risks at all locations. Nonetheless, because many sources of TAPs in the South Coast Air Basin are not related to LAX, potential cancer risks for all populations within the Basin, especially those at special risk, would remain high. With regard to non-cancer risks, Alternatives A, B, and C could add to total average acrolein concentrations in the Basin, and therefore, to possible chronic non-cancer hazards and acute human health hazards associated with exposure to acrolein.

If airport-related emissions of TAPs can be reduced below baseline levels through mitigation implemented under the LAX Master Plan, LAX's contribution to cumulative cancer risk under Alternatives A, B, and C would also be reduced. Nonetheless, because many sources of TAPs in the South Coast Air Basin are not related to LAX, potential cancer risks for all populations within the Basin, especially those at special risk, would remain high.

Furthermore, recent information<sup>232</sup> suggests that certain environmental factors, such as tobacco smoke, diesel exhaust, respirable particles, and irritant gases (e.g., acrolein) could contribute to cumulative health risks in some urban areas in the U.S.<sup>233</sup> However, comprehensive data on environmental hazards and other risk factors unrelated to LAX has not been collected for populations in the airport environs, although several agencies, including SCAQMD, California Air Resources Board, California Office of Environmental Health Hazard Assessment, and U.S. EPA have expressed interest in initiating studies that might allow a better understanding of cumulative health risks. Due to the lack of available background data, the cumulative or synergistic health effects of TAP emissions associated with Alternatives A, B, and C and other environmental hazards could not be quantitatively analyzed within the scope and timeframe of this EIS/EIR.

### Alternative D - Enhanced Safety and Security Plan

As described in Section 4.24.1, *Human Health Risk Assessment*, under Alternative D, estimated potential concentrations of contaminants would not exceed thresholds of significance for incremental cancer risks in the Interim Year and in 2015 compared to the 1996 baseline and Year 2000 conditions. Non-cancer chronic hazards in the Interim Year and in 2015 under Alternative D would also be less than significant compared to the 1996 baseline and Year 2000 conditions. Implementation of Alternative D could result in

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<sup>232</sup> See for example C. G. Plopper and M. V. Fanucchi, (2000) "Do Urban Environmental Pollutants Exacerbate Childhood Lung Diseases?" *Environmental Health Perspectives*, p. 108(6).

<sup>233</sup> See for example, J Schwartz, (2000) "Assessing Confounding, Effect Modification, and Thresholds in the Association between Ambient Particles and Daily Deaths," *Environmental Health Perspectives*, p. 108(6).

a beneficial effect with regard to acute non-cancer hazards. Health risk impacts associated with Alternative D are relatively small compared to those for Alternatives A, B, and C because of the smaller number of aircraft operations under Alternative D. Health risks for nearby residents (cancer, non-cancer chronic and non-cancer acute) would be substantially lower under Alternative D than under the No Action/No Project Alternative.

Alternative D would have a small beneficial effect on cumulative cancer health risks. Results of the analyses suggest that implementation of Alternative D might reduce cumulative impacts with regard to non-cancer chronic and acute non-cancer health hazards and would result in a beneficial effect. Nonetheless, because many sources of TAPs in the South Coast Basin are not related to LAX, potential cancer risks for all populations within the Basin, especially those at special risk, would remain high.

#### **Surface Transportation**

Under current conditions, as evaluated at the time of the Draft EIS/EIR and Supplement to the Draft EIS/EIR, surface transportation systems in the vicinity of LAX are operating poorly during many periods of the day. A substantial amount of traffic off-loads from the freeway system to local and arterial streets for airport access, adding to congested conditions in the immediate LAX vicinity. Traffic congestion on arterial streets is most concentrated in areas to the north of LAX. Although LAX traffic moves throughout the local road network, this traffic is most concentrated on roadways in the immediate LAX vicinity, and is not expected to significantly affect local roadways in minority and low-income communities east of I-405. A full presentation of existing traffic conditions is provided in Section 4.3.2, *Off-Airport Surface Transportation*.

Although specific data on the transportation modes used by minority and/or low-income populations to access the airport as passengers or employees is not available, it can be inferred from overall statistics that a high percentage of these populations depend on public transportation. It has been estimated that 80 percent of public transit users in the Los Angeles area are minority, and 69 percent of bus users have incomes below the poverty line.<sup>234</sup> Currently access to the airport for public transit users is provided by Los Angeles County Metropolitan Transit Authority (MTA), Santa Monica Municipal Bus Line (SMMBL), Culver City Municipal Bus Line (CCMBL), and Torrance Transit. MTA currently operates seven regular transit routes and two express routes to LAX. CCMBL, SMMBL, and Torrance Transit each have one route serving the LAX Transit Center located near Lot C at LAX. The LAX Transit Center is an important hub for the area and serves as a point of transfer for many whose destination is not LAX. Typical weekday demand at the LAX Transit Center totals 4,599 boardings and 4,435 alightings.

Bus transit for the minority communities in the study area is primarily provided by four MTA bus lines that have direct access to the LAX Transit Center. The Florence Avenue bus line (111 and 311-Limited) begins east of the community of Florence and runs through the City of Inglewood to the LAX Transit Center. The Manchester Boulevard bus line (315-Limited) begins east of the I-110 and runs through Inglewood to the LAX Transit Center, then continues westward to Pacific Avenue. The Century Boulevard bus line (117) begins east of the I-110 and runs through South Central Los Angeles and Inglewood to the LAX Transit Center. The Imperial Highway bus line (120) begins east of the I-110 and runs through Inglewood, Lennox, Hawthorne, to the LAX Transit Center. In addition, the MTA Green Line rail line serves residents east of LAX from communities east of the I-110 and runs to Aviation Boulevard, where the Westchester Shuttle (625) transports passengers to LAX. For employees and passengers arriving at the LAX Transit Center by bus, most transfer to shuttles running to and from the Central Terminal Area. A smaller number of riders transfer to other public transit buses. With bus ridership expanding for the transit providers using the Center, by the year 2015 passenger activity at the LAX Transit Center is expected to more than double, even without the LAX Master Plan.

Based on data for employees at LAX, the largest concentrations of employees reside in Inglewood (2,304), Hawthorne (2,117), Long Beach (2,103) and Westchester (1,763).<sup>235</sup> LAWA has an Employee Commute Program that includes vanpooling, rideshare and public transit components. Participation in the program is highest for employees, approximately 400, who use vanpooling to access work from

<sup>234</sup> Garcia, Robert, "Mean Streets," August 25, 2000.

<sup>235</sup> LAWA, July 2000. These statistics are based on data for employees working at LAX with security badges, who represent the vast majority of individuals employed at the airport by LAWA and airport tenants. As of July 2000, there were approximately 59,000 employees with badges, with 31,972 residing in Los Angeles County.

### 4.4.3 Environmental Justice

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locations generally over 30 miles where use of carpool lanes to reduce commute times is a strong incentive. Participation in carpooling and public transit components is much lighter, with approximately 50 workers using each. The public transit component is intended to benefit those employees who use the bus or light rail as their primary mode of transportation (50 percent or more) to and from work. Qualifying participants have until recently received a \$15.00 monthly subsidy. In a recent effort to boost participation, this subsidy was raised by LAWA to \$50.00 a month. Although there are sizeable concentrations of workers in nearby communities, there are currently no airport-sponsored transportation programs that target employees in these areas.

#### Alternatives A, B, and C

As depicted in Appendix F, *Environmental Justice Technical Report*, Attachment 1, Figure 6 through Figure 8, under Alternatives A, B, and C there would be from 29 to 33 intersections with deficient levels of service prior to mitigation. As further described in Section 4.3.2, *Off-Airport Surface Transportation*, potential impacts at these intersections with deficient levels of service, would, by 2015, be reduced through project design features and implementation of mitigation measures. All but one of these intersections are located north and south of LAX and west of I-405, outside of minority and/or low-income communities. While Alternatives A, B, and C would add traffic to the area road system, several key components of the plan, such as a new expressway adjacent to I-405 north and a high-speed ring road around LAX, would generally improve traffic operations in the vicinity of LAX. Of particular importance to users of public transit would be direct access to the airport terminals from future HOV lanes on I-405, and the extension of the MTA Green Line to the airport. Although eight intersections would have impacts on levels of service that are still considered significant after mitigation, these intersections are located west of I-405 and would not have a disproportionate effect on minority and/or low-income residential areas or community facilities.

#### Alternative D - Enhanced Safety and Security Plan

For Alternative D, the study area for surface transportation was expanded to the east and north as airport access and development is more concentrated to the eastside of LAX. This study area includes 24 intersections in addition to those analyzed for Alternatives A and B in Section 4.3.2, *Off-Airport Surface Transportation*, 10 of which are located east of the I-405. As shown in Figure S18, *Intersections Experiencing Significant Impacts (1990 Census)*, in Appendix S-D, *Supplemental Environmental Justice Technical Report*, under Alternative D, 59 intersections would be adversely affected prior to mitigation. These intersections are located north, south, and east of LAX. The majority of the affected intersections are located in non-minority/low-income census tracts. Using the 1990 U.S. Census data, 17 intersections to the east of LAX are located in minority/low-income tracts and one intersection to the north of LAX is located in a minority/low-income tract. Using the 2000 U.S. Census data, as shown in Figure S19, *Intersections Experiencing Significant Impacts (2000 Census)*, Appendix S-D, *Supplemental Environmental Justice Technical Report*, 19 intersections to the east of LAX are located in minority/low-income tracts and five intersections to the north of LAX are located in minority/low-income tracts.

As described in Section 4.3.2, *Off-Airport Surface Transportation*, potential effects associated with all but three of the significantly affected intersections would, by 2015, be reduced to less than significant levels through project design features and implementation of mitigation measures. The three intersections where effects would remain adverse after mitigation are all located west of I-405 at: 1) Century Boulevard at La Cienega Boulevard; 2) Imperial Highway at La Cienega Boulevard; and, 3) Jefferson Boulevard at Lincoln Boulevard. Based on the 1990 U.S. Census, all of these intersections would be located outside of minority and/or low-income census tracts. Based on the 2000 U.S. Census, one of the intersections (Jefferson Boulevard at Lincoln Boulevard), would be located at the western boundary of a minority and/or low-income census tract. As the majority of the intersections that would be adversely affected after mitigation would be located outside non-minority and/or low-income tracts, Alternative D would not have a disproportionate effect on minority and/or low-income communities.

Regarding public transit, Alternative D would relocate the LAX Transit Center to a new facility to the northeast of the intersection of Aviation Boulevard and Imperial Highway. The LAX Transit Center's functions would be incorporated into a proposed ITC. In addition to bus transit, the ITC would provide a covered pedestrian bridge connecting the MTA Green Line to LAX. The ITC would also incorporate an automated people mover with a connection to the CTA. With these features, relocation of the LAX Transit Center to the ITC would enhance public transit access to LAX.

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## **Relocation of Residences or Businesses**

### **Alternatives A, B, and C**

Under Alternatives A, B, and C, approximately 172 residents in 84 dwelling units located in census tract 2780 would be relocated.<sup>236</sup> This census tract, which covers LAX and portions of the Westchester Community, is approximately 28 percent minority and 11 percent low-income based on 1990 U.S. Census data. Based on the 2000 U.S. Census data, this tract is 37.6 percent minority and 8.6 percent low-income. The minority and/or low-income status of the individual occupants of these dwelling units has not been ascertained. As further described in Section 4.4.2, *Relocation of Residences or Businesses*, relocation of residents would be fully addressed through compliance with the Uniform Relocation Act and implementation of a LAWA relocation program. The objectives of the relocation program are set forth in Section 4.4.2, *Relocation of Residences or Businesses*, under Master Plan Commitment RBR-1, Residential and Business Relocation Program (Alternatives A, B, C, and D). These objectives include priorities that the relocation process does not result in different or separate treatment because of race, religion, national origin or other arbitrary circumstances, and that the unique needs of minority and low-income persons and businesses are addressed.

Data is not currently available regarding the number of minority owned businesses or minority employees that might be affected by proposed acquisition. Depending on the alternative, from 239 to 330 businesses would be relocated. Acquisition of businesses would be undertaken in compliance with the Uniform Relocation Act, which stipulates that fair compensation or adequate assistance be provided for displaced businesses recognizing their unique characteristics and needs. Businesses displaced would also be treated as represented in Master Plan Commitment RBR-1, with emphasis on addressing the special needs and concerns of minority business owners. Mitigation Measure MM-RBR-1, Phasing for Business Relocations (Alternatives A, B, C, and D), includes provisions for relocation on airport property, and Mitigation Measure MM-RBR-2, Relocation Opportunities through Aircraft Noise Mitigation Program (Alternatives A, B, C, and D), sets a priority for relocating displaced airport dependent businesses nearby in areas where there is a priority for achieving noise mitigation through recycling of incompatible land uses. This latter measure has the added benefit of providing jobs and economic opportunity in minority communities impacted by aircraft noise.

### **Alternative D - Enhanced Safety and Security Plan**

Under Alternative D there would be a substantial reduction in property acquisition compared to the other build alternatives. No residential acquisition is proposed, and the number of businesses that would need to be acquired and relocated would be reduced to 38. While it is possible that certain of these businesses may be minority owned, they are mostly airport related uses or uses that serve the largely non-minority/non-low-income community of Westchester-Playa del Rey. As described for the other alternatives, acquisition would be undertaken in compliance with the Uniform Relocation Act, which stipulates that fair compensation or adequate assistance be provided for displaced businesses recognizing their unique characteristics and needs. Businesses displaced would also be treated as represented in Master Plan Commitment RBR-1, Residential and Business Relocation Program (Alternatives A, B, C, and D), with emphasis on addressing the special needs and concerns of minority business owners. Mitigation Measure MM-RBR-1, Phasing for Business Relocations (Alternatives A, B, C, and D), includes provisions for relocation on airport property, and Mitigation Measure MM-RBR-2, Relocation Opportunities through Aircraft Noise Mitigation Program (Alternatives A, B, C, and D), sets a priority for relocating displaced airport dependent businesses nearby in areas where there is a priority for achieving noise mitigation through recycling of incompatible land uses. This latter measure has the added benefit of providing jobs and economic opportunity in minority communities impacted by aircraft noise.

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<sup>236</sup> This number does not include residents of Manchester Square and the Airport/Belford area who are eligible for relocation under the existing ANMP.

## **Construction Impacts**

### **Alternatives A, B, and C**

Construction associated with the LAX Master Plan would occur through 2015 with multiple projects at multiple locations occurring throughout the Master Plan area. Major components of the project under construction would include runway and airfield modifications, the new West Terminal, cargo facilities, the Westchester Southside project and a large number of roadway improvements including but not limited to the ring road, the Green Line extension, and the LAX Expressway. A variety of activities would occur within these construction areas, including demolition, excavation and grading, utility installation, and construction of foundations, buildings and other facilities. Further details regarding the construction process are provided in Section 4.20, *Construction Impacts*.

As further described in Section 4.20, *Construction Impacts*, combined construction effects associated with noise, air emissions, surface transportation disruption and other issues would impact land uses surrounding the Master Plan boundaries. Although most construction impacts would be intermittent and temporary, and would be reduced to less than significant levels through mitigation measures presented throughout this Final EIS/EIR, there would be significant unavoidable noise and air quality impacts from construction.

As further described in Section 4.1, *Noise*, even with all feasible mitigation measures imposed, there would be significant unavoidable impacts in noise sensitive areas located within 600 feet of construction sites under Alternatives A, B, and C. Areas affected would be primarily located to the south of the airport in El Segundo, to the north of the airport in Westchester, and uses located along the LAX Expressway. Construction noise and its relationship to minority and low-income populations is shown in Attachment 1 of Appendix F, *Environmental Justice Technical Report*, in Figure 1, Construction Noise Exposure.

Within the City of El Segundo, it is estimated that approximately 810 dwelling units would have the potential to be periodically exposed to significant construction noise levels of 5 dBA above the lower ambient noise levels or higher during certain phases depending on the location of construction activities. One public school, the Imperial Avenue School Special Educational Facility, and one park, would also be affected in El Segundo. To the north of the airport in the City of Los Angeles, 1,600 dwelling units would have similar potential to be periodically exposed to significant construction noise levels. Within this area, two churches and the following schools would also be affected: Saint Bernard High School, Visitation Center Catholic School, Westchester High School, Westchester-Emerson Community Adult School, Paseo del Rey Magnet School, Escuela de Montessori, Imperial Avenue Special Education Facility, and one private school.

Overall, construction noise impacts would fall predominantly on non-minority/non-low-income communities, with approximately 90 percent of the area exposed to high levels of noise falling within these communities. Of the approximately 2,580 residents within the area adversely affected by construction noise, an estimated 39.8 percent are minority, based on 1990 U.S. Census data for the affected census tracts. Based on the 2000 U.S. Census, of the approximately 2,565 residents within the area adversely affected by construction noise, an estimated 49.5 percent are minority. These figures are well below Los Angeles County community of comparison average of 59 percent minority. Due to the magnitude of construction activities, all criteria pollutant emissions from construction would remain significant after mitigation, as would predicted ambient concentrations of NO<sub>2</sub> and PM<sub>10</sub>. Based on the characteristics of pollutant dispersion from construction activities, the populations adversely affected would be those in close proximity to the airport boundaries; generally, the same non-minority/non low-income communities exposed to adverse levels of construction noise.

### **Alternative D - Enhanced Safety and Security Plan**

A complete description of the facilities associated with Alternative D is provided in Chapter 3, *Alternatives*. Although most construction effects would be reduced to less than significant levels through the Master Plan commitments and mitigation measures included in Section 4.20, *Construction Impacts*, there would be adverse noise and air quality effects from construction that could not be fully mitigated. Construction noise and its relationship to minority and low-income populations is shown in Appendix S-D, *Supplemental Environmental Justice Technical Report*, in Figure S20, Alternative D Construction Noise Exposure. Overall, construction noise effects would fall almost entirely on non-minority/non-low-income communities, with nearly 99 percent of the area exposed to high levels of construction noise located



within Westchester/Playa del Rey and to a lesser extent El Segundo. Of the approximately 3,000 residents within the area adversely affected by construction noise, an estimated 23 percent would be minority and/or low-income based on 1990 U.S. Census data and approximately 38 percent based on 2000 U.S. Census data. These figures associated with construction noise exposure do not constitute disproportionate effects as the minority composition of the affected tracts is well below that of Los Angeles County. In addition, the two churches and the five schools (Saint Bernard High School, Visitation Center Catholic School, Westchester High School, Paseo del Rey Magnet School, and Westchester-Emerson Community Adult School) that would be affected are not located within minority or low-income areas.

Due to the magnitude of construction activities, CO, VOC, NO<sub>x</sub>, and PM<sub>10</sub> emissions from construction would exceed thresholds of significance after mitigation, as would predicted ambient concentrations of NO<sub>2</sub> and PM<sub>10</sub>. Based on the characteristics of pollutant dispersion from construction activities, the populations adversely affected would be those in close proximity to the airport boundaries, generally, the same non-minority/non-low-income communities exposed to adverse levels of construction noise.

#### **Historic and Cultural Resources**

Potential impacts on historic resources are largely concentrated on airport property or within industrial areas west of the I-405 Freeway. Two of the historic properties potentially affected by Alternatives A, B, and C are located within minority and/or low-income communities: Morningside Park Neighborhood and the Academy Theater. Alternative D would have no direct effects on historic residential resources within minority communities, but would have the potential to indirectly affect historic properties located within the Morningside Park Neighborhood, a minority community. As described in Section 4.9.1, *Historic/Architectural, Archaeological/Cultural Resources*, potential effects would be associated with possible alterations to these properties if sound insulation was undertaken pursuant to the ANMP. However, potential effects would be avoided through Master Plan Commitment HR-1, Preservation of Historic Resources (Alternatives A, B, C, and D), that would require any alternations to be carried out in compliance with the Secretary of the Interior's Standards for Rehabilitation of Historic Properties. Therefore, no disproportionate impacts on these communities would occur.

Because of the potential for effects on archaeological resources of concern to the Native American Community, the Native American Heritage Commission was contacted directly for assistance in reviewing the Sacred Lands File for the presence of cultural resources and/or materials within the area of potential effect for the project. Based on this review, no known resources were identified. The Commission also forwarded a most likely Descendent contact list for further coordination during the environmental process. Mitigation Measure MM-HA-5, Monitoring (Alternatives A, B, C, and D), provided in Section 4.9.1, *Historic/Architectural, Archaeological/Cultural Resources*, includes the involvement of Native Americans in the archaeological monitoring process for construction and in the event any human remains are encountered.

#### **Light Emissions**

Impacts associated with light emissions, which are considered significant under CEQA, occur in immediate proximity to LAX and along the proposed LAX Expressway. Under Alternative B, the ring road proposal does not provide adequate setbacks in proximity to residential uses located within Census Tract 2772, which based on the 1990 U.S. Census data has an estimated population that is 59 percent minority, and is therefore classified as a minority community. Based on the 2000 U.S. Census data, Census Tract 2772 remained a minority community with an estimated 83.9 percent minority population. The minority and/or low-income status of the residents of multifamily housing in the area potentially affected by this light spillover has not been ascertained. However, as described in Section 4.18, *Light Emissions*, mitigation would be provided to address this situation and eliminate significant impacts. Potential light emission impacts identified along the LAX Expressway right-of-way would also affect minority/low-income census tracts, however, mitigation has been provided which would reduce these impacts to less than significant levels.

Under Alternative D, there would be no adverse lighting effects, such as those identified for the ring-road and LAX Expressway, as these facilities are not proposed under Alternative D. Areas that would experience some increase in illumination due to new development or construction at LAX would be in largely non-minority/non-low-income areas west of the I-405 freeway. Therefore, Alternative D would not

### **4.4.3 Environmental Justice**

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result in a disproportionate adverse effect on minority and/or low-income communities with regard to light emissions.

#### **Design, Art and Architecture Application/Aesthetics**

Changes in visual conditions associated with the Master Plan build alternatives are concentrated at LAX and affect those residential areas and communities in immediate proximity, primarily El Segundo, and Playa del Rey/Westchester. Although the overall visual change expected with the alternatives is considered beneficial, with significant upgrading of LAX facilities, there would be isolated areas where impacts considered significant under CEQA would affect minority census tracts. Under Alternative B, the ring road proposal does not provide adequate setbacks in proximity to the same residential uses identified above under light emissions. Along the LAX Expressway, visual impacts would affect both minority/low income and non-minority/non-low-income census tracts. These aesthetic impacts associated with the ring road and the LAX Expressway would however be reduced to less than significant levels through mitigation that would ensure that setbacks and landscaped buffers are provided to screen unsightly views.

The only significant visual effects associated with Alternative D are temporary effects associated with construction activities. These effects would occur almost entirely in non-minority and non-low income areas in proximity to LAX, would be mitigated to a less than significant level, and would not have a meaningful effect on minority and/or low-income communities.

#### **Public Services**

As discussed in Section 4.26, *Public Services*, public services evaluated include law enforcement, fire protection, libraries and parks and recreation. Under Alternatives A, B, and C, no significant impacts were identified with regard to public services, although as previously noted, there would be a significant noise impact on one library in the City of Inglewood. As a result, no disproportionate public service impacts on minority and/or low-income communities would occur.

As discussed in Section 4.26, *Public Services*, no significant effects were identified for law enforcement, fire protection, libraries, and parks under Alternative D. Those less than significant effects that would occur would largely relate to changes in services in the predominantly non-minority and non-low-income communities to the north and south of LAX.

### **4.4.3.6 Findings**

#### **Alternatives A, B, and C**

Based on this environmental justice analysis, it appears that minority and low-income communities to the east of LAX would suffer disproportionately high and adverse human health or environmental effects from aircraft noise under Alternatives A, B, and C. This is due to two primary factors: 1) the existing pattern of noise impacts based on runway orientation and operational procedures where impacts are predominantly borne by minority and low-income communities, which would be perpetuated under these three alternatives and exacerbated by increased operations; and 2) traditional noise mitigation programs may be inadequate to fully mitigate these noise impacts.

Under future 2015 conditions, as shown in **Table F4.4.3-4**, the overall area exposed to noise levels of 65 CNEL and above, and the population newly exposed to these noise levels, would continue to fall disproportionately on minority and/or low-income communities. Relative to single event noise exposure and nighttime awakenings, noise effects would similarly fall disproportionately on the minority and/or low-income communities to the east of LAX. Noise effects on public schools would also fall disproportionately, and almost exclusively, on minority and/or low-income communities. Even with implementation of the noise mitigation measures summarized below and described in Section 4.2, *Land Use*, noise effects would remain adverse due to interim impacts prior to completion of noise insulation or acquisition; exposure to 75 CNEL or greater noise levels in outdoor residential areas and schools; and constraints preventing installation of noise insulation due to inconsistent zoning/land use; or substandard housing units that are out of compliance with building code requirements.

Under Alternatives A, B, and C, parks newly exposed to noise levels of 65 CNEL or higher would be predominantly located within minority communities. However, these noise impacts would not reach the thresholds of significance under CEQA and under FAA guidelines would not be expected to interfere with

normal use of the parks. Similar to the impacts described for parks, public schools newly exposed to noise levels of 65 CNEL or higher would be predominantly located within minority communities. While these impacts are considered significant under CEQA, a number of these schools are already subject to existing aviation easements provided through an Amended Judgment and Final Order. For those that are not subject to existing aviation easements, mitigation would be provided to reduce most, but not all impacts, to less than significant levels. Specifically, there may be significant and unavoidable impacts if certain schools experience interim impacts for substantial periods of time before mitigation is implemented. Also, outdoor noise effects for one school, located in the Lennox School District, would be infeasible to mitigate. In evaluating impacts on libraries due to high noise levels, one library, located in the predominantly minority community of Inglewood, would be significantly impacted by Alternatives A, B, and C. This library would qualify for sound insulation, as described in Section 4.2, *Land Use*, Mitigation Measure MM-LU-1, Implement Revised Aircraft Noise Mitigation Program (Alternatives A, B, C, and D), but could be subject to significant unavoidable impacts if the time frame for implementing mitigation is substantial.

Alternatives A, B, and C would each result in significant air quality impacts. After mitigation on-airport emissions of NO<sub>x</sub> and SO<sub>2</sub> would remain significant, and off-airport emissions of all criteria pollutants except SO<sub>2</sub> would remain significant with related health effects from certain pollutants potentially more severe for minority and low-income populations, particularly those susceptible to asthma and other chronic respiratory illnesses. Also, off-airport emissions under Alternatives A, B, and C would cause an incremental increase over No Action/No Project Alternative emissions of NO<sub>x</sub>, a precursor to ozone. In addition, the combined operational and construction-related concentrations of NO<sub>2</sub> are projected to exceed the state and national air quality standard under Alternatives A, B, and C in the Interim Year, and concentrations of PM<sub>10</sub> are projected to exceed state air quality standards in 2015 for Alternatives A and B, and state and national standards in 2015 for Alternative C.

While the air quality impacts of increased NO<sub>x</sub> emissions associated with aircraft operations, and cumulative exposure to O<sub>3</sub> and other air pollutants would be felt throughout the South Coast Air Basin, the health effects may be more severe for populations particularly susceptible to asthma and other chronic respiratory illnesses. However, in the absence of background health data, it is unknown and cannot be quantified whether such cumulative air quality impacts associated with the LAX Master Plan would have a disproportionately severe human health effect on minority or low-income populations.

In 2015 Alternatives B and C would exceed thresholds of significance for incremental non-cancer chronic health hazards with the incorporation of mitigation measures. In addition, in 2015 Alternatives A, B, and C would exceed thresholds of significance for acute non-cancer health hazards with the incorporation of mitigation measures. These chronic and acute non-cancer health hazards would fall disproportionately on minority and low-income populations.<sup>237</sup> Alternatives A, B, and C may also contribute to cumulative health risks associated with air pollution in some areas to the east/northeast adjacent to the airport, although beneficial impacts (i.e., reduction in cancer risks) are predicted for other areas as a result of implementation of Alternatives A, B, or C. The cumulative health risks would affect minority and low-income individuals more severely than the general population. Because emissions associated with these alternatives represent only a small portion of total emissions in this area, it is expected that any such cumulative health risks would occur with or without improvements under Alternative A, B, or C. Furthermore, disproportionately high and adverse human health effects, if any, would be attributable primarily to factors such as heightened vulnerability to health effects, inadequate access to health care, and synergistic effects of multiple environmental hazards rather than higher levels of pollutants in minority and low-income communities. However, due to the lack of available background data and limited information on the cumulative effect of multiple air pollutants, it is impossible to quantify with any accuracy the incremental contribution of Alternatives A, B, and C to cumulative health risks among minority and low-income populations.

The potential impacts of the Master Plan build alternatives regarding surface transportation and relocation of residents and businesses do not appear to create a disproportionately high and adverse human health or environmental effect on minority or low-income populations. In order to ensure that measures proposed to mitigate impacts from surface transportation and relocation on the general population would

<sup>237</sup> As further described in Section 4.24.1, *Human Health Risk Assessment* (subsection 4.24.1.2), estimates of non-cancer hazards relative to acrolein emissions are very uncertain, therefore estimates of non-cancer hazards associated with each of the alternatives may not represent absolute estimates of potential health impacts.

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be equally effective for minority and low-income populations, LAWA should take into consideration the special needs of minority and low-income individuals and communities. Specifically, because minorities and low-income individuals in the Los Angeles area use public transportation significantly more than Whites and upper-income individuals, they may be more likely to be affected by changes in bus routes or other transit services even if such changes are temporary. Relocation of low-income and/or minority residents may raise similar issues if available housing is not readily accessible to public transportation. Minority-owned businesses or businesses with a high proportion of minority employees or minority/low-income customers may also face special challenges in relocating that need to be considered in developing a Business Relocation Plan.

Construction impacts, impacts to cultural resources, light emission and visual impacts (design, art and architecture application/aesthetics) do not appear to have the potential to disproportionately affect minority or low-income communities. Impacts to public services in minority or low-income communities do not appear to be disproportionately high or severe.

Based on the finding of a disproportionately high and adverse noise impact on minority and low-income populations, and the potential for other disproportionate impacts relating to air quality and health effects, LAWA has determined that the Environmental Justice Program, described below, would be implemented to avoid, eliminate, reduce, or offset such impacts.

#### **Alternative D - Enhanced Safety and Security Plan**

In contrast to the other Master Plan build alternatives, Alternative D shows a decrease in the overall population within minority and/or low-income communities that would be exposed to 65 CNEL and higher noise levels compared to 1996 baseline, Year 2000, and No Action/No Project conditions. Nonetheless, high levels of noise would continue to fall predominantly on these communities, as would noise impacts associated with populations newly exposed to high noise levels. For Alternative D, of those newly exposed to 65 CNEL or greater noise levels or to an exterior SEL of 94 decibels and greater noise levels, 87 percent and 85 percent, respectively, would be located within minority or low-income communities. Similar to Alternatives A, B, and C, noise effects on schools would fall predominantly within these communities. As described above, certain noise effects would remain adverse after implementation of mitigation measures.

Air quality effects under Alternative D would be reduced when compared to Alternatives A, B, and C, and for certain pollutants compared to the No Action/No Project Alternative. However, effects would remain adverse after mitigation with related health effects potentially more severe for minority and low-income populations to the north/northeast of the airport, particularly those susceptible to asthma and other chronic respiratory illnesses. As previously indicated, in the absence of background health data, and without established scientific criteria and protocols, it is unknown and cannot be quantified whether air quality impacts associated with NO<sub>x</sub> emissions from aircraft operations, and cumulative exposure to O<sub>3</sub> and other air pollutants, would have a disproportionately severe human health effect on minority or low-income populations. Obtaining the data necessary to conduct such a quantitative analysis would require long-term health studies of a kind well outside the scope of a CEQA or NEPA document.

Incremental cancer risks and non-cancer chronic health hazards under Alternative D would be reduced when compared to the No Action/No Project Alternative and Alternatives A, B, and C. In addition, Alternative D could result in a beneficial effect with regard to acute non-cancer hazards. Alternative D would result in a small beneficial effect on cumulative risks associated with cumulative cancer health risks. Results of the analyses suggest that implementation of Alternative D might reduce cumulative effects with regard to non-cancer chronic and acute non-cancer health hazards which would be a beneficial effect. Nonetheless, because many sources of TAPs in the South Coast Basin are not related to LAX, potential cancer risks for all populations within the Basin, especially those at special risk, would remain high.

Surface transportation effects would be significant with the majority of impacted intersections located in non-minority/non low-income areas. These effects from Alternative D would be fully mitigated at all but three intersections, only one of which is located in a minority/low-income census tract, (based on 2000 U.S. Census data). As with the other build alternatives, these effects would not disproportionately and adversely effect minority or low-income communities. Furthermore, public transit improvements with a new ITC connecting to the MTA Green Line, would constitute an important benefit to minority and low-income areas east of LAX.

Proposed acquisition would be limited to businesses, most of which serve the airport and communities to the west of I-405. To the extent that minority owned businesses are affected, LAWA's business relocation program would include provisions to assist those with special needs.

Under Alternative D, construction effects, effects on cultural resources, light emissions and visual impacts would not disproportionately effect minority or low-income communities. Impacts to public services in minority or low-income communities do not appear to be adverse or disproportionately high.

Based on findings of disproportionately high and adverse noise impacts on minority and low-income populations, and the potential for other disproportionate effects relating to air quality and health effects, LAWA has determined that an Environmental Justice Program be carried out as described below, to avoid, eliminate, reduce, or offset such impacts.

After accounting for the mitigation measures and off-setting benefits provided below, and in recognition of the DOT Order and applicable state law, LAWA finds that the disproportionately high aircraft noise impacts and potentially disproportionate air quality impacts of Alternative D would remain adverse. The Final EIS to be approved by the FAA subsequent to the City of Los Angeles decision-making process will present the environmental justice conclusions reached by the FAA.

#### **4.4.3.7 Environmental Justice Program**

##### **Environmental Justice Community Outreach Program**

The environmental justice community outreach process was developed to assure an effective dialogue with minority and low-income communities affected by LAX in order to best respond to the needs of the various communities as environmental justice benefits and mitigation measures associated with the LAX Master Plan are developed and implemented.

Following from the commitment in the Draft EIS/EIR and subsequent to its public release, LAWA held a series of community workshops on environmental justice beginning in May 2001. Four workshops were held in the communities of Inglewood, Lennox, and South Los Angeles. The workshops were widely noticed to residents within a 10-mile radius of each meeting site through newspapers, posted notices, and door-to-door distribution of notices. Approximately 1,500 letters of invitation to the workshops were also mailed to organizations and leaders in the affected communities. The combined attendance at these meetings totaled approximately 275 persons. The format of the workshops included a number of stations staffed by LAWA employees and/or technical consultants where graphic illustrations and/or written materials were provided to inform attendees about the concept of environmental justice and potential environmental impacts associated with the proposed LAX Master Plan alternatives. Information was also provided regarding ongoing LAWA programs, such as the Aircraft Noise Mitigation Program. Materials were provided in both English and Spanish and Spanish translators (including bi-lingual LAWA staff), assisted at each workshop. Those staffing the stations interacted with the public, explaining information, answering questions, and documenting comments and suggestions. The format at the last two workshops was revised based on public input to include group briefings on environmental justice with a question and answer session. Comments were received orally and in written form to gain an understanding of community concerns and needs and potential environmental justice mitigation programs.

While the workshops described above were focused on environmental justice, important community input on the issue was also received during the more than 9-month public circulation period for the Draft EIS/EIR. During this period, comments addressing environmental justice concerns were received in writing and at nine public hearings focused on the Draft EIS/EIR. Three of these hearings included workshops with information booths on environmental justice, where materials were provided and technical staff were available to answer questions and receive comments.

In addition to these efforts directly related to the proposed Master Plan and gaining community input for the environmental justice program, LAWA continued to make progress in adjacent communities addressing environmental issues associated with LAX operations. Subsequent to publication of the Draft EIS/EIR, an MOU between the City of Los Angeles and the City of Inglewood began a new level of cooperation to pursue, study and implement such measures as suspension of requirements for aviation easements; a pilot program for noise insulation in areas that do not currently qualify for assistance; provision of air conditioning for residences to be insulated; as well as conducting studies to improve compliance with over-the-ocean takeoff and night-time over-ocean requirements and policies.

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Additionally, in response to the current environment of heightened security needs and pursuant to the Aviation and Transportation Security Act enacted by Congress on November 19, 2001, LAWA, in cooperation with the Transportation Security Administration (TSA) and tenant airlines, met a series of mandated deadlines for implementing new federal security requirements. Fulfillment of these requirements included deployment by TSA of a federal workforce of about 2,900 to conduct baggage and passenger screening and fulfill associated security needs. In forwarding their commitment to a diverse workforce, and through outreach to organizations representing a variety of minority, faith based and ethnic groups, TSA's workforce at LAX is about 76 percent minority.

In association with public circulation of the Supplement to the Draft EIS/EIR, three additional environmental justice workshops, using outreach methods and a format similar to the earlier workshops, were held in Inglewood, Lennox, and South Los Angeles during July and August of 2003. Further input was also obtained during the public circulation period at twelve public hearings conducted for the Supplement to the Draft EIS/EIR. More recently, a LAWA environmental justice working group in conjunction with the Mayor's office conducted additional outreach to local organizations, environmental groups, civic, religious and business leaders in adjacent communities.

Overall, LAWA received a substantial number of recommendations for mitigation measures and other benefits relating to environmental justice concerns from the environmental justice workshops, comments received on the Draft EIS/EIR and the Supplement to the Draft EIS/EIR, and more recent community outreach. All recommendations for mitigation measures and other benefits relating to environmental justice were thoroughly evaluated. A consolidated list of recommendations was compiled that screened out those recommendations that either: a) were already incorporated into the Master Plan, b) were already included in the EIS/EIR as Mitigation Measures or Master Plan commitments, c) did not relate to the disproportionate adverse environmental effects of the project, or, d) were determined to be infeasible to fund or implement. Appendix F-A of this Final EIS/EIR provides a summary of the recommendations received through the environmental justice community outreach program in a matrix format that also shows how the referenced screening criteria was applied. The public input received throughout the environmental justice community outreach process was instrumental in defining the benefit and mitigation proposals presented below. With community input received, the Environmental Justice Program is still continuing, and coordination with representatives in the affected communities will proceed as these proposals are implemented.

#### **Mitigation Measures**

Under CEQA, agencies must adopt feasible mitigation measures in order to substantially lessen or avoid otherwise significant adverse environmental impacts.<sup>238</sup> In formulating appropriate mitigation measures to lessen or avoid such significant impacts, agencies may consider other state or federal laws and they may use discretionary powers, such as environmental justice policies to seek to avoid disproportionate impacts on minorities and lower income households.<sup>239</sup> NEPA similarly requires federal agencies to identify measures that would mitigate the adverse effects of a federally funded, licensed, or approved project. Other federal laws, such as the Uniform Relocation Assistance and Real Property Acquisition Act and Title VI of the Civil Rights Act, require federal agencies to take steps to alleviate impacts from federally-funded projects. LAWA's Environmental Justice Program builds on existing policies and programs being implemented in accordance with these laws in order to mitigate various potential significant impacts that the LAX Master Plan build alternatives may otherwise have. LAWA will strive to further develop, and monitor implementation of these mitigation measures in ways that are consistent with its Environmental Justice Program.

The mitigation measures summarized below address disproportionately high and adverse effects on minority and low-income communities associated with the significant environmental impacts identified in Section 4.1, *Noise* (subsection 4.1.8), Section 4.2, *Land Use* (subsection 4.2.8), Section 4.4.2, *Relocation* (subsection 4.4.2.8), and Section 4.6, *Air Quality* (subsection 4.6.8). The listed mitigation measures are not a complete set from the referenced sections, but those that are most directly relevant to addressing environmental justice concerns. The complete text of the measures and other mitigation measures addressing the environmental issues of concern is included in Chapter 5, *Environmental Action Plan*.

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<sup>238</sup> Pub. Res. Code §§ 21002, 21081(a); State CEQA Guidelines §§ 15002(a)(3), 15021(a)(2), 15091(a)(1), 15092(B)(2).  
<sup>239</sup> State CEQA Guidelines §§ 15040(a), 15041(a).

## Aircraft Noise/Land Use Mitigation Measures

- ◆ **MM-LU-1. Implement Revised Aircraft Noise Mitigation Program (Alternatives A, B, C, and D).**

This comprehensive noise measure commits additional resources to, and builds on, current provisions of LAWA's ANMP. As presented in full in Section 4.2, *Land Use*, key aspects of the measure focus on increasing annual funding and accelerating the fulfillment of existing commitments within the current ANMP boundaries prior to proceeding with newly eligible properties, and incorporating residential uses newly exposed to 65 CNEL and above noise levels into the program. Aspects that are particularly relevant to addressing the unique issues and conditions in minority and low-income areas include provision by LAWA of additional technical assistance to local jurisdictions to support more rapid and efficient mitigation, and the reduction and elimination of structural and building code compliance constraints to mitigation of substandard housing.

- ◆ **MM-LU-2. Incorporate Residential Dwelling Units Exposed to Single Event Awakenings Threshold into Aircraft Noise Mitigation Program (Alternatives A, B, C, and D).**

Based in part on comments received during circulation of the Draft EIS/EIR and during the EJ Workshops, additional analysis of single event noise was conducted for the Supplement to the Draft EIS/EIR. A new threshold of significance led to findings that extend mitigation of aircraft noise to dwelling units exposed to 94 SEL and above single event noise levels. This mitigation measure addresses impacts that fall almost exclusively on minority and/or low-income communities.

- ◆ **MM-LU-3. Conduct Study of the Relationship Between Aircraft Noise Levels and the Ability of Children to Learn (Alternatives A, B, C, and D).**

This measure requires that LAWA conduct a comprehensive study to determine the relationship between learning and the disruptions caused by aircraft noise with the intent to set a threshold of significance for classroom disruption due to aircraft noise events.

- ◆ **MM-LU-4. Provide Additional Sound Insulation for Schools Shown by MM-LU-3 to be Significantly Impacted by Aircraft Noise (Alternatives A, B, C, and D).**

Based on the study referenced above in MM-LU-3 and acceptance of its results, schools found to exceed a newly established threshold of significance for classroom disruption will be incorporated into the ANMP administered by LAWA.

- ◆ **MM-LU-5. Upgrade and Expand Noise Monitoring Program (Alternatives A, B, C, and D).**

Input received at the EJ Workshops and during circulation of the Draft EIS/EIR included numerous comments from residents specifying areas located outside of the ANMP that were subject to high levels of noise. This measure requires that LAWA expand its noise monitoring program through new system procurement, noise monitor siting and equipment installation, including monitors located in surrounding communities, to record data 24 hours per day, seven days per week. It is expected that the upgraded system will support LAWA and other jurisdictional ANMP's through more accurate and up-to-date data for considering adjustments to airport noise mitigation boundaries.

- ◆ **MM-N-5. Conduct Part 161 Study to Make Over-Ocean Procedures Mandatory (Alternatives A, B, C, and D).**

This measure would initiate a FAR Part 161 Study to seek federal approval of a locally-imposed restriction on departures to and approaches from the east when over-ocean procedures are in effect. The benefits of such restrictions would be of particular benefit to minority communities located east of LAX.

## Air Quality Mitigation Measures

Mitigation Measure MM-AQ-1, LAX Master Plan-Mitigation Plan for Air Quality (Alternatives A, B, C, and D), in conjunction with Mitigation Measures MM-AQ-2, Construction-Related Measure (Alternatives A, B, C and D), MM-AQ-3, Transportation-Related Measure, (Alternatives A, B, C, and D), and MM-AQ-4, Operations-Related Measure (Alternatives A, B, C, and D), provide a wide array of actions to reduce airport-related air quality impacts. Most of the components of this mitigation measure focus on actions that will be taken at LAX to address impacts both in and around the airport, with additional actions providing benefits that will accrue more broadly to the South Coast Air Basin.

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#### Human Health Risk Mitigation Measures

Mitigation Measure MM-AQ-1, LAX Master Plan-Mitigation Plan for Air Quality (Alternatives A, B, C, and D), would also serve to reduce emissions of TAPs, thereby addressing adverse health impacts.

#### Relocation Mitigation Measure

◆ **MM-RBR-2. Relocation Opportunities through Aircraft Noise Mitigation Program (Alternatives A, B, C, and D).**

This measure would initiate a special project under the ANMP for LAX, where LAWA would coordinate with the City of Inglewood and the County of Los Angeles to identify residential land uses that are subject to high levels of aircraft noise where land acquisition and conversion to compatible land uses is contemplated under applicable plans or is otherwise deemed appropriate. LAWA would work with the jurisdictions to identify airport-related businesses subject to relocation under the LAX Master Plan business relocation assistance program who are interested in these sites. LAWA would also promote the sites with other businesses and organizations such as Gateway to L.A. that interact with LAWA. The multiple objectives of the effort will be to mitigate noise impacted land uses, retain and promote local businesses dependent on airport proximity, and support local employment and economic growth. Areas under the City of Inglewood General Plan and redevelopment plan that are proposed for land use recycling along Century Boulevard would be given high priority.

#### **Benefits**

In assessing whether a project has disproportionately high and adverse human health or environmental effects on minority and low-income populations, certain benefits of the project may be taken into account. In some respects, the design and operation of each build alternative (Alternatives A, B, C, and D) would offer certain environmental benefits to minority and low-income populations compared to what would otherwise occur under the No Action/No Project Alternative. In particular, improved aircraft operations, such as reduced taxi/idle times for aircraft on the ground, and improved surface transportation characteristics at and around the airport, resulting in reduced local vehicle traffic congestion, would occur with implementation of the build alternatives. As summarized above and described in detail within Sections 4.6, Air Quality, and 4.24.1, Human Health Risk Assessment, these types of improvements provide for reductions in air pollutant and air toxic emissions at LAX, than would otherwise occur in the future (2015) under the No Action/No Project Alternative (i.e., without the proposed improvements, existing congestion and delays for aircraft and vehicles would only worsen and result in increased air pollution and air toxics emissions). Given that the prevailing winds at LAX are towards the east, which includes many areas with minority and low-income populations, the ability of the build alternatives to reduce future emissions at LAX, compared to emissions under the No Action/No Project Alternative, can be considered to be a benefit within the context of environmental justice. This is particularly true relative to Alternative D, whereby the mitigated operational emissions from on-airport and off-airport sources in 2015 would be less than those of the No Action/No Project Alternative, with the exception of PM10 for on-airport sources (see Tables F4.6-21 and F4.6-22 of this Final EIS/EIR). This would also be the case for the combined operational and construction air pollutant concentrations in 2015 (see Table F4.6-24).

Other specific benefits are proposed and intended to go beyond the comprehensive mitigation measures provided throughout this Final EIS/EIR to address the disproportionately high and adverse effects on minority and low-income communities associated with the proposed LAX Master Plan, particularly those that would remain significant after implementation of mitigation measures. In addition, it is part of LAWA's policy to ensure that no portion of the population and no community is denied access to benefits flowing from the LAX Master Plan. In furthering this policy, LAWA has undertaken to identify impediments to enjoying the economic benefits generated by LAX that are faced by minorities and low-income individuals, and has committed to removing or reducing these impediments wherever possible.

Jobs are one of the economic benefits directly and indirectly attributable to LAX. Airport-related employment is expected to generate large concentrations of jobs within manufacturing, restaurant, and hotel sectors under all of the Master Plan build alternatives. As further described in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)* (subsection 4.5.6), for Alternatives A, B, and C, an estimated 7,000 to 16,000 new jobs would be created within a ten-mile radius of LAX by 2015. As indicated in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement)*, Alternative D would result in a net decrease of approximately 23,000 jobs within a ten-mile radius of LAX by 2015. Currently,



a relatively small proportion of LAX jobs are held by residents of neighboring minority and low-income communities.<sup>240</sup> In order to ensure that minority and low-income individuals would benefit from these employment opportunities, LAWA is working with airport tenants, airport related employers and local businesses to create programs that will enable local youths, adults and local businesses to more easily access job and business opportunities available at and around LAX now and in the future. LAWA efforts will include, but not be limited to, job recruitment, job training, job placement, small business assistance, and small business development. LAWA will also explore airport procurement and vending opportunities for Disadvantaged Business Enterprises (DBEs). In addition, LAWA will make every effort to recruit DBEs for construction opportunities associated with airport modernization. LAWA will also recruit local high school and community college students for internships associated with airport operations.

In order to reach these goals, LAWA will develop and administer benefit programs that go beyond implementation of proposed mitigation measures, to improve conditions in minority or low-income communities that have experienced disproportionately high and adverse effects from LAX operations. Although adoption of these programs may be influenced by funding constraints, such as legal limitations placed on the use of airport revenue, LAWA will investigate, pursue, and implement environmental justice benefits as feasible and allowable by law. These programs proposed for implementation include the following:

#### **Air Quality**

- ◆ Air Toxics Study - Includes monitoring runway emissions and comparing those emissions with levels determined to be present in the local neighborhoods. This year-long study was initiated then put on hold. It is slated to cost \$3 million and is been proposed to be completed independent of the LAX Master Plan.
- ◆ Health Risks Assessments - Utilizing data collected from the Air Toxics Study as a comparison against existing toxics data from the Southern California Air Quality Management District (SCAQMD) to calculate theoretical excess cancer cases as well as other chronic diseases and/or ailments near LAX.
- ◆ School Air Filters - This measure assumes that an air filtration system may be required at existing schools and public buildings located in the immediate vicinity of the Airport. Up to 126 schools from five different districts could be involved.

#### **Aviation Curriculum**

This measure involves offering aviation-related curriculum at high schools near the Los Angeles International Airport. Potential pilot schools include: Inglewood, Morningside, and Washington High Schools.

#### **Aviation Academy**

The purpose of this measure is to provide comprehensive educational and trade training for a multitude of aviation-related careers, targeting students in the affected communities to provide them increased exposure and career opportunities.

#### **Expanded Gateway LAX Improvements/Greening of Impacted Communities**

This measure would expand Gateway LAX improvements to the east along Century Blvd through the City of Inglewood.

- ◆ Roadway Improvements - Construct roadway improvements on streets heavily trafficked for LAX
- ◆ Special Landscaping - Build business and/or industrial parks near the 405 and 105 freeways
- ◆ Street Signage - Install aesthetically pleasing branding, signage and way finding in impacted communities to attract tourists and consumers to those areas
- ◆ Neighborhood Cultural/Artistic Projects - Fund artistic and educational projects and/or cultural events within impacted communities to inspire residents, encourage visitors and combat blight.

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<sup>240</sup> For example, of 59,000 badged employees at LAX, only 2,304 reside in Inglewood.

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#### Job Outreach Center

- ◆ **Construction and Other LAX-Related Job Outreach** - With a goal to create a resource to assist historically underrepresented and at-risk local residents to find construction and other substantive jobs with LAWA and surrounding airport-related businesses through training and comprehensive outreach. Written materials regarding job training and placements should be compiled and disseminated from the existing LAWA Job Outreach Center.
  - ◆ Fund sufficient outreach and advertising efforts
  - ◆ Set-aside a substantive percentage of contracts for minority firms, with specific set-asides for businesses within the affected communities for each phase of the plan and to include design phase
  - ◆ Coordination with local organizations' (including The Urban League, NAACP, SCLC, WLCAC, Brotherhood Crusade, FAME Renaissance, CRP, CCSCLA, BBA, and GLAAACC) existing job training, outreach and incubator programs to ensure most expansive outreach
  - ◆ Establish a specific outreach and/or training program for local ex-offenders
  - ◆ Hold workshops and training classes for professional development across disciplines that may provide service to LAX - pre and post employment
  - ◆ Establish educational/training/internship programs for local students
  - ◆ The creation of manufacturing (assembly line) opportunities in impacted communities, especially South Los Angeles, to produce materials and/or devices used by the airport. This would help to revitalize the community through the provision of long-term work for existing industrial businesses.
- ◆ **Community Job Database** - This measure is for data gathering, outreach and counseling purposes.
  - ◆ Research and assess existing specialties and current capabilities of local work force to assist with targeted training and outreach efforts
  - ◆ Development and management of a complete database of minority contractors
  - ◆ Produce a database of potential jobs and specialties needed, per Master Plan phase, and disseminate the information throughout the communities and to local Minority Business Enterprises/Disadvantaged Business Enterprises (MBE/DBE) companies
- ◆ **MBE/DBE Business Outreach** - This measure is designed to further State and local initiatives by implementing proactive measures that ensure meaningful contract participation of DBE/MBE firms.
  - ◆ Research and assess existing specialties and current capabilities of local MBE/DBE firms to assist with targeted training and outreach efforts
  - ◆ Good Faith Effort (GFE) Outreach Training - assist prime contractors with their outreach to local and MBE/DBE firms. Provide them use of relevant databases and refer them to other local organizations that may be able to assist them in their efforts
  - ◆ Establish MBE/DBE and local subcontractor percentage goals
  - ◆ Institute incentives to prime contractors that meet or exceed MBE/DBE and local hiring goals
  - ◆ Monitor and enforce specific Good Faith Effort (GFE) guidelines for outreach to MBE/DBE firms.
- ◆ **Small Business Outreach** - The resources obtained herein should be compiled in a user-friendly brochure or report and disseminated from the existing LAWA job outreach center. Contacts and loan conditions will be included where available. Counselors will be available to provide one-on-one assistance.
  - ◆ Fund and institute sub-contractor training/apprentice programs to be instituted pre-construction and during construction
  - ◆ Sensitivity Training - educate prime contractors of the concerns and needs of the local business owners and MBE/DBE contractors
  - ◆ Develop special work packages to provide small businesses prime contracting opportunities

- ◆ Loan assistance information programs that would provide counseling to small businesses in need of loans and, through potential partnerships with local banks, facilitate relationships with lenders.
- ◆ Establish incentives to large businesses for mentorship of, or partnering with local, small businesses
- ◆ Provide bonding assistance
- ◆ Provide various licensing assistance
- ◆ Ensure prime and sub-contracting opportunities for local small businesses

#### **Mobile Health Clinic**

The goal of this measure is to ensure that residents in the communities surrounding LAX have access to proper health care. Mobile health clinics are used for a number of different reasons. They can provide health care access to portions of the community where it is now limited and allow expensive medical equipment and professional staff to be allocated across numerous needy sites. The mobile health units can also be used as predictors to determine appropriate sites for future medical clinics.

#### **Community Mitigation Monitoring**

This measure involves the creation of an Agency/Community cooperative that monitors the implementation of all final Mitigation Measures, Master Plan Commitments and Benefits, to ensure Agency compliancy and accountability, as well as encourage community involvement in the program management. The "board" will include a diverse group of residents, stakeholders, environmental specialists and community leaders that will convene on a regular basis and be empowered to submit recommendations of program modifications.

#### **Nature Center**

This measure involves the conversion of a vacant parcel of land adjacent to the El Segundo Blue Butterfly Preserve into a Nature Center and green space for community recreational use. The center would be managed like a park and also provide educational opportunities for adjacent communities through tours and interactive learning presentations conducted by the Center's staff.

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