CITY OF CARSON
PUBLIC REVIEW DRAFT

GENERAL PLAN
ENVIRONMENTAL IMPACT REPORT
(VOLUME II)

SCH NO. 2001091120

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1.0 INTRODUCTION AND PURPOSE

1.1 PURPOSE

The California Environmental Quality Act (CEQA) requires that all state and local agencies consider the environmental consequences of projects over which they have discretionary authority. The Environmental Impact Report (EIR) is intended to provide decision-makers and the public with information concerning at a minimum the environmental effects of a proposed project, possible ways to reduce or avoid the possible environmental damage, and identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth inducing impacts; effects not found to be significant; as well as significant cumulative impacts of all past, present and reasonably anticipated future projects.

The purpose of this Program EIR is to review the existing conditions, analyze potential environmental impacts, identify General Plan policies that serve as mitigation, and identify additional mitigation measures to reduce potentially significant effects of the proposed General Plan.

In addition, the EIR documents background information for the General Plan. Each jurisdiction must prepare supporting environmental documentation for goals and policies contained in the General Plan. This information will be adopted as part of the General Plan.

1.2 AUTHORITY

The City of Carson is the Lead Agency under the California Environmental Quality Act (CEQA), and is responsible for preparing the Program Environmental Impact Report (EIR) for the Carson General Plan (State Clearinghouse No. 2001091120). This Program EIR has been prepared in conformance with CEQA (California Public Resources Code Section 21000 et seq.), California CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.), and the rules, regulations, and procedures for implementation of CEQA, as adopted by the City of Carson. The principal CEQA Guidelines sections governing content of this document are Sections 15120 through 15132 (Content of an EIR), and Section 15168 (Program EIR).

1.3 APPROACH

State law specifies the basic contents of the General Plan, however, it permits each jurisdiction to use any format deemed appropriate or convenient. General Plans are traditionally organized into a collection of required and optional elements. These elements contain a policy component, and supporting documentation. The City of Carson intends for this General Plan to be used primarily as a policy document, and has elected to include supporting documentation for the General Plan both in the Program EIR and the Technical Appendices.

1.3.1 GENERAL PLAN (VOLUME I)

The State of California requires that each jurisdiction prepare and adopt a comprehensive General Plan. The role of the General Plan is to act as a "constitution" for development, the foundation upon which all land use decisions are based. The General Plan is required to address several state mandated issues, more commonly referred to as "elements." Each local jurisdiction has the right to include additional elements if the issue is important to the long-term development of the community. The proposed Carson General Plan includes the following elements: Land Use; Economic Development; Transportation and Infrastructure; Housing; Safety; Noise; Open Space and Conservation; Parks, Recreation and Human Services; and Air Quality.

1.3.2 PROGRAM ENVIRONMENTAL IMPACT REPORT AND APPENDICES (VOLUME II AND III)

Volumes II and III include the General Plan Program EIR and Appendices, environmental analysis, background data and technical reports on traffic, air quality and noise.

Both the Public Resources Code and the CEQA Guidelines discuss the use of "tiering" environmental impact reports by lead agencies. Public Resources Code Section 21068.5 defines "tiering" as:

> *"The coverage of general matters and environmental effects in an environmental impact report prepared for a policy, plan, program or ordinance followed by narrower or site-specific environmental impact reports which incorporate by reference the discussion in any prior environmental impact report and which concentrate on the environmental effects which: (a) are capable of being mitigated, or (b) were not analyzed as significant effects on the environment in the prior environmental impact report."*

The Carson General Plan Program EIR is intended to serve as a Program EIR or "first tier EIR." CEQA Guidelines Section 15168 states that a Program EIR can be prepared in connection with *"the issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program."* In this case, the Program EIR has been prepared for the City's proposed General Plan.

The approach of a Program EIR is appropriate for evaluating "a series of actions that can be characterized as one large project and can be related either: (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with the issuance of rules, regulations, plans or other criteria to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways" (CEQA Guidelines Section 15168).

A Program EIR has the following advantages: "It provides an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action; it ensures consideration of cumulative impacts that might be slighted in a case-by-case analysis; it avoids duplicative reconsideration of basic policy considerations; it allows the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems of cumulative impacts; and it allows reduction in paperwork" (CEQA Guidelines Section 15168).

Subsequent development projects proposed within the City must be reviewed in the context of this Program EIR to determine if additional environmental documentation is required. If the subsequent project would have environmental effects not addressed in the Program EIR, additional environmental review would be required. Where no new effects and no new mitigation measures are involved, the subsequent project can be approved without additional environmental documentation. Where an EIR is required for a subsequent project, the EIR should implement the applicable mitigation measures developed in the Program EIR, and focus its analysis on site-specific issues not previously addressed.

1.3.3 EXISTING CONDITIONS REPORT (VOLUME IV)

Volume IV consists of the Existing Conditions Report, which was completed in April 2000. The Existing Conditions Report is one of four components prepared as part of the proposed General Plan. The other three components include the General Plan, General Plan EIR and the Technical Appendices.

The Existing Conditions Report identified existing conditions in the City of Carson. It provided the most current available data as of 1999/2000 on all elements influencing the planning of the City and is intended to provide the baseline information for the proposed General Plan and General Plan EIR.

Information contained in the Existing Conditions Report is based on available sources of information such as EIRs, technical reports, existing data bases, field reconnaissance, subconsultant and in-house data collection, as well as interviews with City Staff and representatives from agencies/organizations having jurisdiction within the City boundaries.

1.4 COMPLIANCE WITH CEQA

The Program EIR is subject to a 45-day review period by responsible and trustee agencies and interested parties. In accordance with the provision of Sections 15085(a) and 15087(a)(1) of the CEQA Guidelines, the City of Carson acting as Lead Agency: 1) will publish a notice of availability of a Draft EIR in the Daily Breeze, a newspaper of general circulation; and, 2) will prepare and transmit a Notice of Completion (NOC) to the State Clearinghouse. Proof of publication is available at the City of Carson Development Services Group, Planning Division.

Any public agency or members of the public desiring to comment on the Draft EIR must submit their comments in writing to the individual identified on the document's NOC prior to the end of the public review period. Upon the close of the public review period, the Lead Agency will then proceed to evaluate and prepare responses to all relevant oral and written comments received from both citizens and public agencies during the review period.

The Final EIR will consist of the Draft EIR, revisions to the Draft EIR and responses to comments addressing concerns raised by responsible agencies or reviewing parties. After the Final EIR is completed and at least 10 days prior to its certification, a copy of the response to comments made by public agencies on the Draft EIR will be provided to the respective agency.

1.5 INTENDED USES OF THIS EIR

The City of Carson, as the Lead Agency for this project, will use this Program EIR in consideration of the proposed General Plan. This document will provide environmental information to several other agencies affected by the project, or which are likely to have an interest in the project. Various State and Federal agencies exercise control over certain aspects of the study area. The various public, private and political agencies and jurisdictions with a particular interest in the proposed project, include, but are not limited to the following:

- California Air Resources Board (CARB)
- California Department of Conservation
- California Department of Fish and Game
- California Department of Toxic Substances Control
- California Department of Transportation (Caltrans)
- California Environmental Protection Agency (CalEPA)
- California Office of Emergency Services
- California Regional Water Quality Control Board (CRWQB)
- California Reclamation Board (CRB)
- City of Carson
- City of Compton
- City of Long Beach
- City of Los Angeles
- Compton Unified School District
- County of Los Angeles Library
- County of Los Angeles Public Works
- County Sanitation Districts of Los Angeles County
- Los Angeles County Fire Department
- Los Angeles County Health Department
- Los Angeles County Sheriff Department
- Los Angeles County Metropolitan Transit Authority
- Los Angeles Unified School District (LAUSD)
- South Bay Cities Council of Governments (SBCCOG)
- South Coast Air Quality Management District (SCAQMD)

- Southern California Association of Governments (SCAG)
- U.S. Environmental Protection Agency

1.6 EIR SCOPING PROCESS

In compliance with the CEQA Guidelines, the City of Carson has taken steps to maximize opportunities for individuals, parties, and agencies to participate in the environmental process. During the preparation of the General Plan Program EIR, an effort was made to contact various Federal, State, regional, and local government agencies and other interested parties to solicit comments and inform the public of the proposed project. This included the distribution of an Initial Study and Notice of Preparation (NOP) on September 24, 2001.

1.6.1 INITIAL STUDY

In accordance with Section 15063(a) of the CEQA Guidelines, as amended, the City of Carson undertook the preparation of an Initial Study. The Initial Study determined that a number of environmental issue areas may be impacted. As a result, the Initial Study determined that the Program EIR should address the project's significant impacts on the following environmental issue areas:

- Aesthetics;
- Air Quality;
- Cultural Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Mineral Resources;
- Noise;
- Population and Housing;
- Public Services;
- Recreation;
- Transportation/Traffic; and
- Utilities and Service Systems.

1.6.2 NOTICE OF PREPARATION (NOP)

Pursuant to the provision of Section 15082 of the CEQA Guidelines, as amended, the City of Carson circulated a NOP to public agencies, special districts, and members of the public requesting such notice. The required public review period commenced on September 24, 2001 with the 30-day review concluding on October 23, 2001. The purpose of the NOP was to formally convey that the City is preparing a Program EIR for the proposed City of Carson General Plan, and that as Lead Agency, was soliciting input regarding the scope and content of the environmental information to be included in the General Plan Program EIR. The Initial Study was circulated with the NOP. The NOP, Initial Study, and comments on the NOP are provided in Appendix E.

1.6.3 NOP AND SCOPING RESULTS

The following specific environmental concerns were raised by responses to the NOP and in comments expressed during the scoping process. The NOP responses and written comments received are contained in Appendix E.

The City of Carson received NOP comments from the following agencies:

- County Sanitation Districts of Los Angeles County;
- County of Los Angeles, Department of Health Services, Bureau of Environmental Protection, Solid Waste Management Program;
- County of Los Angeles, Department of Public Works;
- County of Los Angeles, Fire Department;
- South Coast Air Quality Management District;
- State of California, Department of Conservation, Division of Oil, Gas & Geothermal;
- State of California, Department of Transportation;
- State of California, Department of Fish and Game;
- State of California, Department of Toxic Substances Control; and
- State of California, Native American Heritage Commission.

Below is a summary of the issues raised in the NOP comment letters and the EIR section where the comments are addressed.

- Changes to land use designations and their effect on the Sanitary District's sewer system (refer to Section 4.1, *Land Use,* and Section 4.8, *Public Services and Utilities*);

- Project impacts to local archeological resources (refer to Section 4.11, *Historic and Cultural Resources);*

- Impacts to wetlands, wildlife or habitat (refer to Section 7.0, *Effects Found Not To Be Significant);*

- Impacts to air quality (refer to Section 4.4, *Air Quality);*

- Impacts and mitigation for affected intersections (refer to Section 4.3, *Transportation/Circulation);*

- Identification of adverse impacts resulting from modification to the Circulation Element (refer to Section 4.3, *Transportation/Circulation*);

- Land use changes and how they will create trip reductions in some areas and increased trips in others (refer to Section 4.3, *Transportation/Circulation*);

- Impacts on State transportation facilities (refer to Section 4.3, *Transportation/ Circulation*);

- Impacts on downstream drainage areas (refer to Section 4.7, *Hydrology and Drainage*);
- Drainage pattern, and discharge into systems under state highway facilities (refer to Section 4.3, *Transportation/Circulation*, and Section 4.7, *Hydrology and Drainage*);
- Potential liquefaction impacts on future development in the City (refer to Section 4.6, *Geologic and Seismic Hazards*);
- Rainfall and runoff impacts on the storm drain system (refer to Section 4.7, *Hydrology and Drainage*);
- Impacts on fire department facilities (refer to Section 4.8, *Public Services and Utilities*);
- Development impacts near plugged or abandoned oil wells, refer to Section 4.10, *Public Health and Safety*); and
- Potential hazardous waste impacts on future development (refer to Section 4.10, *Public Health and Safety*).

1.7 INCORPORATION BY REFERENCE

Pertinent documents relating to this EIR have been cited in accordance with Section 15148 of the CEQA Guidelines, which encourages "incorporation by reference" as a means of reducing redundancy and length of environmental reports. The following documents, which are available for public review at the City of Carson Development Services Group, Planning Division are hereby incorporated by reference into this EIR. Information contained within these documents has been utilized in the preparation of this EIR. A brief synopsis of the scope and content of these documents is provided below.

CITY OF CARSON PROPOSED REDEVELOPMENT PROJECT AREA NO. 4 FINAL ENVIRONMENTAL IMPACT REPORT (SCH#2001111113), JULY 2002

This EIR analyzed the potential environmental effects of the proposed Redevelopment Project Area No. 4. The Project Area encompasses approximately 1,034 acres in 11 non-contiguous sub-areas located throughout the City. Significant and unavoidable impacts were identified for aesthetics/light and glare, air quality, public services and utilities, and transportation and traffic.

ENVIRONMENTAL IMPACT REPORT FOR THE ALAMEDA CORRIDOR (SCH#90011169), CERTIFIED JANUARY 1993

This EIR addresses the environmental impacts associated with the proposed Alameda Corridor project. The project area is located in southern Los Angeles County and

extends from the Ports of Long Beach and Los Angeles 20 miles north to downtown Los Angeles, primarily along Alameda Street and the Southern Pacific's San Pedro branch right-of-way. The project extends through or borders the Cities of Vernon, Huntington Park, South Gate, Lynwood, Compton, Carson, Los Angeles, and the County of Los Angeles.

For purposes of developing alternatives to implement a consolidated corridor, the limits of the study area for roadway improvements were from Alameda Street at the Interstate 10 (I-10) interchange on the north to the intersection of State Route 47/State Route 103 (SR-47/SR-103), Terminal Island Freeway, and Henry Ford Avenue on the south. For railroad improvements, the corridor would extend from the East Los Angeles Yard/Pasadena junction on the east and north, connect with the Southern Pacific (SP) trackage in Alameda Street in the vicinity of 25th Street and continue southward along Alameda Street to the Badger Avenue Bridge access onto Terminal Island. Two alternative trainway sections were considered: an at-grade section and a depressed (below grade) section. In addition to transverse grade separations, a longitudinal roadway with elevated overcrossings along Alameda Street was also suggested.

The Alameda Corridor Transportation Authority (ACTA) selected Alternative 2.1A as the environmentally superior alternative. Alternative 2.1A is a derivative of Alternative 2.1, which proposed street and drill track overhangs over the depressed trainway. Alternative 2.1A has no such overhangs. It consists of a depressed trainway providing for two main line consolidated freight rail tracks, together with an at-grade drill track to provide for local industrial service. Accompanying the depressed trainway would be a six-lane roadway facility, configured as a one-way couplet of three lanes in each direction. Grade separations would be provided for at grade with bridges crossing over the trainway.

From Redondo junction, the trainway would extend through J Yard in an alignment that would traverse the yard area further north than under Alternative 1.0, in order to allow a fully depressed trainway to be achieved by the time Alameda Street is reached at 25th Street. The trainway would then proceed south in a depressed configuration along Alameda Street until south of Compton Boulevard, where it would swing to the east side of the corridor. The trainway would then continue in depressed configuration until south of Greenleaf Avenue, where it would begin to ascend to an at-grade section south of State Route 91 (SR-91). The trainway would be at-grade at the crossing of Compton Creek. South of this point, the alignment of both the trainway and roadway improvements would be the same as Alternative 1.0.

Roadway improvements for this alternative would consist of a one-way couplet straddling the trainway from Interstate 10 (I-10) to Compton Boulevard. A frontage road would be provided on the east side of the corridor between 92nd Street and El Segundo Boulevard. From Compton Boulevard until the vicinity of Del Amo Boulevard, the roadway would be on the west side of the trainway. An eastside frontage road would be provided between Compton Boulevard and south of Greenleaf Avenue. Grade crossings in these alternatives are provided in the form of at-grade bridges over the depressed trainway, with six lanes of traffic.

The EIR identified unavoidable adverse impacts for both construction and operation of the Corridor.

CONSTRUCTION IMPACTS

Impacts that could be encountered during the construction of the Alameda Corridor project include soil and groundwater contamination, air emissions, fugitive dust, noise and vibration, property acquisition and disruption of the local traffic circulation system. These effects would be temporary.

The discovery of contaminated soil or groundwater is likely, due to the fact that land use in much of the corridor has historically been industrial in nature and only in the recent past have laws been enacted that would prevent the inadvertent or deliberate misuse of hazardous materials. The extent of contamination cannot be ascertained without an analysis of actual soil and water samples. The concept study identifies all known documented hazardous materials sites along the Corridor. Discovering areas of existing contamination is possible with all alternatives under consideration in the EIR.

Equipment and vehicles used during construction would be a source of emissions and potentially toxic pollutants, and some construction activities would release fugitive dust. Although such emissions are expected to be localized and transitory in nature, an adverse effect is unavoidable. The same can be said of noise and vibration. Most construction activity would be confined to daytime hours, and local noise ordinances would be adhered to; however, increases in noise levels, and to a lesser extent, vibration, would occur. Most locations would be exposed between two and three years during the 10 to 12 years of construction.

Construction of the Alameda Corridor would require complete reconstruction of the combined highway facilities in Alameda Street and the San Pedro Branch of the Southern Pacific rail line. All alternatives would require the acquisition of private property. Extensive disruption to the local traffic circulatory system would occur, creating detours and affecting accessibility to businesses and residences. The effects would be temporary, but in some instances they could be severe.

OPERATION IMPACTS

The Alameda Corridor would result in a regionwide reduction in emissions from train and vehicular traffic, as compared with the No Project condition; however, some locations which currently display local concentrations of carbon monoxide that exceed state or national standards would experience unavoidable increased emissions, once the project is completed.

Noise would increase along the Corridor because of the high volume of vehicular and train traffic. In some sensitive locations noise attenuation walls would be necessary to mitigate the severe effects of increased noise. Because residual impacts would be felt by some residences even after mitigation, noise impacts must be considered adverse and unavoidable.

Alternative 2.2 would require the taking of several dwelling units in the Pueblo Del Rio public housing project, along Long Beach Avenue. In addition, a day care center located south of the Pueblo Del Rio public housing project, next to the basketball court, would need to be relocated. All alternatives would require the acquisition of private property and a significant number of houses and businesses would be required to relocate. Some alternatives require less acquisition and displacement than others. Some displaced businesses may not be able to resume business for a variety of reasons. While all displaced residents and businesses would be compensated in accordance with State law, a residual hardship may still be felt by some for which compensation would not be available. The extent to which this may occur is not known, although it should be limited. This adverse effect would be unavoidable.

Despite the roadway improvements proposed under the various project alternatives, there would be residual adverse effects at intersections, due to background growth in regional traffic and the fact that the improved facility would be an attractor. The project provides mitigation; however, additional needed improvements should be provided to local streets beyond the limits of the project by local jurisdictions in order to avoid adverse effects.

Soundwalls required under all alternatives would attenuate project-related noise; however, they would also be visually intrusive, subject to graffiti and be perceived by adjacent neighborhoods as social barriers. Soundwalls required by the recommended alternative (Alternative 2.1A) would be far less extensive than those required under the at-grade trainway option (Alternative 1.0).

ALAMEDA CORRIDOR FINAL ENVIRONMENTAL IMPACT STATEMENT, FEBRUARY 1996

Subsequent to the ACTA Governing Board certification of the Final EIR for the Alameda Corridor in January 1993, it was determined that federal funding should be pursued for the project. Pursuant to that objective and the National Environmental Policy Act (NEPA), an Environmental Impact Statement (EIS) was prepared. The EIS concluded substantial environmental impacts would occur for regional air quality criteria emissions, construction noise, noise effects in the year 2020, traffic disruption during construction, effects on law enforcement, effects on schools, train derailment and spills, and economic impacts during construction for businesses.

1.8 FORMAT OF THE PROGRAM EIR

Section 1.0, *Introduction*, provides an overview of the proposed Carson General Plan and the scope, use and approach of the Program EIR.

Section 2.0, *Executive Summary*, provides a summary of the project, environmental analysis and alternatives.

Section 3.0, *Project Description*, includes a detailed description of the proposed General Plan. This section describes the environmental setting and defines the project. Assumptions used during the preparation of this document are also identified.

Section 4.0, *Environmental Analysis*, evaluates the impacts associated with the proposed General Plan goals and policies. This section is organized by issue area. Each area includes a description of the environmental setting relative to that issue; the environmental effects of the proposed project; mitigation measures; and determinance of significance after mitigation. Mitigation measures that are incorporated into the proposed General Plan in the form of goals and policies are described in the Environmental Impacts and Mitigation Measures subsection and additional mitigation measures, which may be required to mitigate project impacts, are recommended.

Impacts and mitigation measures are generally organized under the issue topics. However, an impact or mitigation measure's location within the document should not restrict it from being considered under another issue topic, even though omitted from that section. Many of the impacts relating to a General Plan, such as Carson's, are multi-faceted. Similarly, the goals and policies and actions that serve as mitigation measures and additional mitigation measures recommended, may accomplish several objectives and mitigate more than one impact. It is important that decision-makers be cognizant of this fact in their consideration and use of this document. If mitigation measures are altered, the affect that would have on other issues should be evaluated.

Cumulative impacts are discussed in Section 4.13.

Section 5.0, *Alternatives to the Proposed Action*, is a discussion of the alternatives to the proposed project and related impacts and evaluation. An environmentally superior option is discussed in this section.

Sections 6.0, *Growth Inducing Impacts of the Proposed Action*; 7.0, *Effects Found Not To Be Significant*; 8.0, *Significant Environmental Effects Which Cannot Be Avoided If The Proposed Action Is Implemented*; and 9.0, *Significant Irreversible Environmental Changes Which Would Occur If The Proposed Action Is Implemented*; address the remainder of CEQA mandated issue areas.

Section 10.0, *References*, lists the organizations and individuals contacted during the preparation of the General Plan Program EIR, report preparation personnel and a list of reference materials.

Section 11.0, *Responses to Comments*, provides both the comment letters and responses to comments, as well as a comprehensive list of errata and changes incorporated into the Final General Plan and EIR.

2.0 EXECUTIVE SUMMARY

2.1 PROJECT LOCATION

The City of Carson is located in the South Bay/Harbor area of Los Angeles County, California and is part of the larger Southern California region. The City encompasses approximately 19.2 square miles and is bordered by the Cities of Long Beach, Compton, Torrance and Los Angeles. Unincorporated areas of Los Angeles County also border Carson.

2.2 PROJECT SUMMARY

The Carson General Plan was last comprehensively updated in the early 1980s through the late 1990s. The current General Plan Update supersedes the previous General Plan and includes a reorganization of the General Plan into the following elements: Land Use, Economic Development, Transportation and Infrastructure, Housing, Safety, Noise, Open Space and Conservation, Parks, Recreation and Human Services and Air Quality.

Existing development in Carson generally corresponds with the current General Plan. The General Plan proposes two new land use designations: Business Park/Limited Industrial and Mixed Use. In addition, the General Plan proposes the City's open space uses receive land use designations separate and apart from "Public Facilities", which will now be referred to as Public and Institutional Uses. The proposed open space designations are General Open Space and Recreational Open Space.

The Program EIR shall evaluate potential environmental impacts resulting from the following revisions to the City's General Plan, including but not limited to:

- Update of existing conditions, with year 2000/2001 serving as the baseline year.
- Update the General Plan development projections to the year 2020. Projections for population, employment, residential development and non-residential development have been updated for the year 2020.
- Amendment of the Land Use Element, including:
    - Establishment of building intensities for all commercial, industrial and institutional land use categories.
    - Refinement of uses within the Public Facilities designation, which includes separating the uses into three land use designations:
        - Public and Institutional Uses;
        - General Open Space (new designation); and
        - Recreational Open Space (new designation).
    - Creation of two new land use designations: Business Park/Limited Industrial and Mixed Use.
    - Creation of a new Land Use Map.
- Amendment of the remaining General Plan elements to reflect items 1 and 2, above.

- Additions, Deletions or Modification to the General Plan Goals, Policies and Implementation Programs.

PROJECTED LAND USE GROWTH

The City of Carson is approximately 83 percent built out. As such, the proposed General Plan will focus on preserving and enhancing residential neighborhoods, guiding remaining development activities and encouraging revitalization and redevelopment of selected areas. In total, the land use growth anticipated within the planning horizon of the proposed General Plan would result in the following scenario:

- 26,669 dwelling units;
- 2,180,891 square feet of general commercial;
- 1,632,608 square feet of regional commercial;
- 3,920,074 square feet of mixed use;
- 1,825,108 square feet of business park;
- 31,042,634 square feet of light industrial; and
- 18,846,223 square feet of heavy industrial.

For the non-residential categories, these numbers represent a total of 59,447,538 square feet of development. The 26,669 dwelling units will result in a City population of 98,602 in 2020.

In addition to the General Plan 2020 estimates, the City has developed estimates for growth over existing conditions. The anticipated growth in residential, commercial, industrial and business parks over year 2000 conditions is:

- 1,839 dwelling units; and
- 14,943,068 square feet of commercial, mixed use, business park and industrial related uses.

2.3 PROJECT OBJECTIVES

The City of Carson's objectives for the General Plan and General Plan EIR are as follows:

- Update the City's environmental baseline conditions to the year 2000/2001.

- Update the General Plan development projections for the year 2020, including projections for dwelling units, non-residential square footage, population and employment.

- Conform with Section 21000 et. seq. of CEQA, which requires that environmental impacts be addressed and mitigated.

- Prepare and certify a General Plan EIR (Program EIR) that will serve as a first tier environmental document, consistent with the requirements of Section 15152 of the CEQA Guidelines.

- Provide a basis for informative decisions when considering the 2020 development associated with implementation of the General Plan Update in the City of Carson.

- Provide a legally defensible environmental foundation upon which decisions may be evaluated and justified.

Through implementation of the goals and policies in the General Plan Update, the City will work toward providing a pleasant living and working environment for City residents and workers.

2.4 ENVIRONMENTAL IMPACT

The City of Carson determined that a Program EIR should be prepared pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The environmental issues identified by the City for assessment in this Program EIR include:

- Land Use;
- Population, Employment and Housing;
- Transportation/Circulation;
- Air Quality;
- Noise;
- Geologic Hazards;
- Hydrology and Drainage;
- Public Services and Utilities;
- Parks, Recreation and Human Services;
- Public Health and Safety;
- Cultural Resources; and
- Aesthetics.

Section 4.0 of this EIR provides a description of the potential environmental impacts of the proposed General Plan and recommends mitigation measures to reduce impacts to a less than significant level, where possible. After implementation of the recommended mitigation measures, most of the significant or potentially significant impacts associated with the proposed General Plan would be reduced to a less than significant level. However, the impacts listed below could not be feasibly mitigated and would result in a significant and unavoidable impact with implementation of the proposed General Plan.

TRANSPORTATION/CIRCULATION

New development within the City of Carson, along with regional traffic growth would create unavoidable significant impacts related to the increase in traffic volumes within the City for the planning horizon year of 2020. These impacts are primarily based on the premise that roadway impacts in the year 2020 show 17 roadway segments would operate at LOS E or F. Implementation of the proposed General Plan would result in an additional 14 roadway segments operating at unacceptable service levels over existing conditions.

In addition, development under the proposed General Plan would create unavoidable significant impacts relating to the exceedance of LOS standards established by the CMP at Carson freeway monitoring stations. These impacts are primarily based on the premise that LOS standards would be exceeded along the I-405 freeway at two monitoring locations, along the SR-91 at one monitoring location and along the I-710 freeway at one monitoring location. Although mitigation measures would be implemented on a project-by-project basis, it is anticipated that these impacts would remain significant and unavoidable.

AIR QUALITY

Development under the proposed General Plan would create unavoidable significant impacts related to construction, mobile sources and stationary sources. These impacts are primarily based on the premise that the City and pollutant sources within are widely dispersed and numerous. Although measures related to construction and stationary sources would be implemented on a project-by-project basis, and vehicular emission-reducing programs would be implemented Citywide, it is anticipated that these impacts would remain significant and unavoidable.

NOISE

Development under the proposed General Plan would create unavoidable significant impacts related to Traffic Noise and Railroad Noise. These impacts are primarily based on the premise that these noise levels could not be feasibly reduced to a less than significant level through standard mitigation practices. Although measures related to mobile source noise sources would be implemented on a project-by-project basis, it is anticipated that these impacts would remain significant and unavoidable.

HYDROLOGY

Development under the proposed General Plan would create unavoidable significant impacts related to groundwater depletion. These impacts are primarily based on the premise that the water supply for the City of Carson and the Southern California region is constrained. Implementation of the proposed General Plan would result in increased water demand. Although measures related to water conservation would be implemented, it is anticipated that these impacts would remain significant and unavoidable.

PUBLIC SERVICES AND UTILITIES

Development under the proposed General Plan would create unavoidable significant impacts related to school facilities in the City of Carson. These impacts are primarily based on the premise that the majority of schools servicing the City are currently nearing or exceeding their capacity. In addition, enrollment for the LAUSD currently exceeds capacity. Student enrollment generation factors project an increase of almost 700 students as a result of implementation of the proposed General Plan. Although both LAUSD and CUSD assess development fees against residential and commercial/industrial

development to mitigate potential school related impacts, it is anticipated that these impacts would remain significant and unavoidable.

PUBLIC HEALTH AND SAFETY

Development under the proposed General Plan would create unavoidable significant impacts related to hazardous materials releases, air toxic emissions, oil contamination and landfills. These impacts are primarily based on the premise that the pollutant sources throughout the City are numerous. Although measures related to remediation would be implemented on a project-by-project basis, it is anticipated that these impacts would remain significant and unavoidable.

CUMULATIVE IMPACTS

Implementation of the proposed General Plan in combination with regional growth would result in cumulatively significant impacts with regard to:

- Transportation/Circulation;
- Air Quality;
- Hydrology; and
- Public Health and Safety.

TRANSPORTATION/CIRCULATION

The Transportation and Infrastructure Element of the proposed General Plan considers the impacts of traffic traveling through, as well as within the City of Carson. Future cumulative travel patterns within and through the City would be directly influenced by changes to the surrounding regional transportation system. The proposed General Plan does not involve any major changes to existing land use designations. However, as stated, implementation of the proposed General Plan would result in an additional 14 roadway segments operating at unacceptable service levels over existing conditions and LOS standards would be exceeded along the I-405 freeway at two monitoring locations, along the SR-91 at one monitoring location and along the I-710 freeway at one monitoring location, affecting the regional transportation system.

Regional buildout in accordance with SCAG 2020 projections would result in future development that would increase vehicle trips and traffic congestion on County roadways. When considered in combination with increases in regional traffic congestion under buildout of the region, the proposed General Plan impacts are considered cumulatively significant.

AIR QUALITY

The proposed General Plan, in conjunction with cumulative development in the region, would contribute to increased air pollutant emissions. The General Plan proposes the development of available areas within Carson. Development would include infill construction and the development of existing Redevelopment Plan and Specific Plan areas. The proposed General Plan includes measures intended to minimize the

necessity and length of vehicular trips. Additionally, the proposed General Plan includes measures to minimize stationary source emissions. On a regional basis, the South Coast Air Quality Management District has addressed mitigation of air quality impacts. However, with mitigation, air quality impacts would remain cumulatively significant.

HYDROLOGY

The proposed General Plan would result in significant unavoidable impacts regarding groundwater depletion. Water resources are of concern throughout the entire Southern California region. Growth and development resulting from implementation of the proposed General Plan would further constrain water resources. Future development projects in the Los Angeles County area or in the City of Carson would be required to mitigate specific hydrologic impacts on a project-by-project basis. However impacts associated with groundwater depletion would contribute to cumulative impacts.

PUBLIC HEALTH AND SAFETY

Implementation of the proposed General Plan would create unavoidable significant impacts related to hazardous materials releases, air toxic emissions, oil contamination and landfills. The City of Carson contains various pollutant sources, including oil wells and 15 inactive sanitary landfills. Development of these areas may result in ground water contamination and air toxic emissions, adversely affecting the surrounding region.

Regional projects and projects resulting from implementation of the proposed General Plan would be required to evaluate their respective public health and safety impacts on a project-by-project basis. Although measures related to remediation would be implemented on a project-by-project basis, implementation of the proposed General Plan would result in cumulatively significant impacts in regards to public health and safety.

2.5 SUMMARY OF PROJECT ALTERNATIVES

Section 5.0, *Alternatives to the Proposed Action*, analyzes a range of reasonable alternatives to the proposed project that could feasibly attain the basic objectives of the proposed project, while evaluating the comparative merits of each alternative. Potential environmental impacts associated with four alternatives are compared to the impacts from the proposed project. The alternatives include: 1) No Project/No Development, 2) Existing General Plan, 3) Modified Plan 1- Alternative C and 4) Modified Plan 2- Alternative D.

The **No Project/No Development Alternative** would maintain the status quo of existing land use conditions and levels of development in the City of Carson, with no additional development permitted. Land use designations under the No Project/No Development Alternative would be identical to those under the existing General Plan. Any development that would occur as part of implementation of the proposed General Plan would not occur under this Alternative. By definition, this alternative prohibits issuance of building permits for new residential units or additional non-residential square footage.

The **Existing General Plan Alternative** assumes that ultimate buildout of the Existing General Plan would occur. The Existing General Plan encompasses the same geographic area as that in the proposed General Plan. However, the proposed General Plan recommends revisions to the Existing General Plan. The proposed General Plan would update existing conditions with year 2000/2001 serving as the baseline year and would provide projections for population, employment, residential development and non-residential development for the year 2020. The proposed General Plan would establish building intensities for commercial, industrial and institutional land use categories in addition to creating a new Land Use Policy Map. In addition, the proposed General Plan would separate Public Facility uses into three land use designations: 1) Public and Institutional Uses, 2) General Open Space (new designation) and 3) Recreational Open Space (new designation). Business Park/Limited Industrial and Mixed Use land use designations would be created. The proposed General Plan would make necessary additions, deletions or modifications to the existing General Plan Goals, Policies and Implementation Programs. This Alternative assumes that the Existing General Plan would continue to provide outdated information regarding several issues, such as City traffic conditions, land use database, community noise levels and air quality data. In addition, the Existing General Plan would not include the changes or modifications noted above or detailed in Section 3.0, *Project Description*, of this EIR.

Modified Plan 1- Alternative C proposes a different development scenario for the amount of acreage dedicated to residential, commercial, and industrial land uses (refer to Table 3-3, in Section 3.0, *Project Description*, of this EIR and Exhibit 5-1, *Alternative C Land Use Plan*). However, the addition of two new land use designations including Business Park/Limited Industrial and Mixed Use and the refinement of uses within the Public Facilities designation, which includes separating the uses into three land use designations, remains the same under this Alternative. Additionally, the amount of acres dedicated to the three new Public Facilities designations would be the same as in the proposed General Plan.

Alternative C provides for additional Low Density Residential (12 acres), but reduces the amount of acreage dedicated to Medium Density (13.1 acres) and High Density (1.7 acres) residential uses. Alternative C does provide for an increase in total commercial land uses by 26.6 acres. General Commercial uses would increase by 139 acres and Regional Commercial Uses would increase by 118.4 acres when compared to the proposed General Plan. However, the amount of acres designated Mixed Use would total 16.2 acres, which is 230.8 acres less than that in the proposed General Plan. Finally, acreage designated for industrial land uses would be lower than that in the proposed General Plan. Business Park uses would be equivalent to that designated in the proposed General Plan at 153.2 acres. Specifically, the Business Park designation is recommended for Carson Town Center, located in Study Area No. 6. However, there would be 16.7 more acres of Light Industrial uses and 40.5 fewer acres of Heavy Industrial uses proposed in Alternative C as compared to the proposed General Plan. As mentioned earlier, the amount of acres designated Recreational Open Space (316.5 acres), General Open Space (284.5 acres) and Public Facilities (587.4 acres) are the same as that in the proposed General Plan.

As with Alternative C and the proposed General Plan, the development scenario for **Modified Plan 2- Alternative D** would include the addition of two new land use designations including Business Park/Limited Industrial and Mixed Use and the refinement of uses within the Public Facilities designation, which includes separating the uses into three land use designations.

Alternative D designates a total of 38.4 less acres for residential use. This Alternative provides for a decrease of 19.6 acres for Low Density Residential, a decrease of 14.9 acres for Medium Density Residential and a decrease of 3.9 acres of High Density Residential compared to the proposed General Plan. There would be an increase of 49.8 acres for Regional Commercial uses and an increase of General Commercial by 63.9 acres, resulting in a total decrease of 34.3 acres for commercial uses. The decrease in acres designated for residential uses and commercial uses would result in a higher amount of acres designated for industrial uses. While there would be a decrease of 10.7 acres for Business Park uses and a decrease of 298.7 acres designated for Light Industrial Uses, there would be an increase of 382.1 acres designated for Heavy Industrial. The Business Park designation is recommended for the Village Center located in Study Area No. 2. The amount of acres dedicated for Recreational Open Space, General Open Space and Public Facilities would remain the same as that in the proposed General Plan. Refer to Exhibit 5-2, *Alternative D Land Use Plan*.

Section 5.6 identifies the environmentally superior alternative as the proposed General Plan.

2.6 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The summary includes impact statements, level of significance before policies/mitigation, policies proposed in the General Plan, mitigation measures and level of significance after policies/mitigation.

LAND USE

CONSISTENCY WITH RELEVANT FEDERAL AND STATE PLANS AND POLICIES

Environmental Impact: Implementation of the proposed General Plan may result in potential consistency impacts with Federal and State plans and policies.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

TI-6.2 Ensure that the City remains in compliance with the County, Regional and State Congestion Management Program (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

OSC-2.1 Maintain and improve water quality.

OSC-2.2 Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

OSC-2.4 Conserve the water supply available to the City and promote water conservation in the management of public properties.

OSC-4.1 Reduce the generation of solid waste from sources in the City in accordance with the Source Reduction and Recycling Element for Carson (separate from this General Plan) and state regulations.

AQ-1.1 Continue to enforce ordinances which address dust generation and mandate the use of dust control measures to minimize this nuisance.

AQ-1.2 Promote the landscaping of undeveloped and abandoned properties to prevent soil erosion and reduce dust generation.

AQ-1.3 Adopt incentives, regulations, and/or procedures to minimize particulate emissions.

AQ-2.1 Coordinate with other agencies in the region, particularly the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG), to implement provisions of the regions' Air Quality Management Plan (AQMP), as amended.

AQ-2.2 Utilize incentives, regulations and implement the Transportation Demand Management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.

AQ-2.3 Cooperate and participate in regional air quality management plans, programs and enforcement measures.

AQ-2.4 Continue to work to relieve congestion on major arterials and thereby reduce emissions.

AQ-2.5 Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

AQ-2.6 Encourage in-fill development near activity centers and along transportation routes.

AQ-2.7 Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.

AQ-3.1 Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric or other non-polluting fuels for Carson Circuit buses and other City vehicles.

AQ-3.2 Continue to promote ridership on the Carson Circuit and Los Angeles County Metropolitan Transportation Authority (MTA) bus and metro rail lines.

AQ-5.1 Through the City's Planning processes, monitor air pollutant emissions by mitigating air quality impacts, to the greatest extent possible, associated with facilities/industries in Carson.

AQ-5.2 Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

CONSISTENCY WITH RELEVANT REGIONAL PLANS AND POLICIES

Environmental Impact: Implementation of the proposed General Plan may result in potential consistency impacts with policies in SCAG's Regional Comprehensive Plan and Guide.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan: The policies are identified in Table 4.1-4.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

CONSISTENCY WITH RELEVANT LOCAL PLANS AND POLICIES

Environmental Impact: Implementation of the proposed General Plan may result in potential consistency impacts with local plans and policies.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

LU-3.2 Through the zoning ordinance, control uses such as salvage yards, automobile dismantling, and scrap metal recycling operations which are not compatible with existing and anticipated development.

LU-4.1 Direct Redevelopment Agency investments to those economic activities and locations with the greatest potential economic return.

LU-4.2 Consider amending the boundaries of the Redevelopment Project Areas to take full advantage of redevelopment tools.

LU-4.3 Bring the site assembly tools and marketing efforts of redevelopment to bear in the revitalization of the Carson Street Corridor and the Northwest Industrial Corridor, as well as other areas which are appropriate.

LU-4.4 Use redevelopment financing in conjunction with code enforcement activities to assist in the rehabilitation of non-residential and residential developments.

LU-4.5 Prioritize and coordinate redevelopment area public improvements with those in the City's Capital Improvement Program.

LU-6.4 Coordinate Redevelopment and Planning activities and resources to balance land uses, amenities, and civic facilities to improve the quality of life.

LU-6.7 Implement and monitor the development intensities identified earlier in this Element. Periodically review these intensities and densities based on market demand and other conditions to confirm their appropriateness.

LU-6.8 Evaluate land use intensities in conjunction with the review of any zone change and/or General Plan Amendment to permit development or modify intensity.

LU-7.2 Periodically review, and amend if necessary, the City's Zoning Ordinance to ensure the compatibility of uses allowed within each zoning district.

LU-8.1 Amend the Zoning Ordinance to include those Mixed Use areas identified on the General Plan Land Use Plan.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

LAND USE COMPATIBILITY

Environmental Impact: Development associated with implementation of the proposed General Plan may result in direct impacts regarding land use compatibilities.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

LU-3.1 Continue to aggressively enforce the Non-Conforming Use Ordinance in order to eliminate non-conforming and/or incompatible land uses, structures and conditions.

LU-3.2 Through the zoning ordinance, control uses such as salvage yards, automobile dismantling, and scrap metal recycling operations which are not compatible with existing and anticipated development.

LU-3.3 Encourage compatible land uses to locate in appropriate areas of the City.

LU-6.2 Achieve a land use balance through a variety of methods, including: provision of incentives for desired uses; coordination of land use and circulation patterns; and promotion of a variety of housing types and affordability.

LU-6.3 Consider establishing minimum land use density requirements in certain areas such as mixed use zones to provide more efficient, consistent, and compatible development patterns while also promoting greater potential for pedestrian and transit-oriented development.

LU-6.8 Evaluate land use intensities in conjunction with the review of any zone change and/or General Plan Amendment to permit development or modify intensity.

LU-7.1 Ensure that zoning classifications are consistent with General Plan designations.

LU-7.2 Periodically review, and amend if necessary, the City's Zoning Ordinance to ensure the compatibility of uses allowed within each zoning district.

LU-7.3 Locate truck intensive uses in areas where the location and circulation pattern will provide minimal impacts to residential and commercial uses.

LU-7.4 Promote the use of buffers between more intensive industrial uses and residential uses.

LU-7.5 Through the discretionary review process, ensure that the siting of any land use which handles, generates, and/or transports hazardous

substances, as defined by state and federal regulations, will not negatively impact existing sensitive receptors/land uses.

LU-7.6 Monitor existing, and carefully review all requests to expand intensive commercial and industrial uses.

LU-7.7 Coordinate with adjacent landowners, cities and the County in developing compatible land uses for areas adjacent to the City's boundaries.

LU-7.8 Coordinate with California State University at Dominguez Hills in the planning of its property to ensure compatible land uses.

LU-8.1 Amend the Zoning Ordinance to include those Mixed Use areas identified on the General Plan Land Use Plan.

LU-8.2 Continue to monitor the success of mixed-use projects within the Carson Street Mixed Use Corridor. And as appropriate, promote mixed-use projects within this area.

LU-8.3 Locate higher density residential uses within proximity of commercial centers to encourage pedestrian traffic, and to provide a consumer base for commercial uses.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

POPULATION, EMPLOYMENT AND HOUSING

POPULATION GROWTH

Environmental Impact: Population growth associated with implementation of the proposed General Plan may increase within the City through the planning horizon year of 2020.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential impacts due to population growth.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

HOUSING GROWTH

Environmental Impact: Implementation of the proposed General Plan would result in an additional 1,839 housing units for the City of Carson.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

LU-6.2 Achieve a land use balance through a variety of methods, including: provision of incentives for desired uses; coordination of land use and circulation patterns; and promotion of a variety of housing types and affordability.

LU-6.5 Coordinate strategies with the County, Southern California Association of Governments (SCAG), South Bay Cities Council of Governments (SBCCG), and other appropriate agencies and/or organizations to meet housing and employment needs.

LU-15.1 Ensure that the City of Carson is a complete and balanced community which contains housing, shops, work places, schools, parks and civic facilities, essential to the daily lives of residents.

LU-15.2 Encourage the location of housing, jobs, shopping, services and other activities within easy walking distance of each other.

LU-15.3 Maintain a diversity of housing types to enable citizens from a wide range of economic levels and age groups to live in Carson.

H-1.5 Establish and maintain development standards that support housing development while protecting the quality of life.

H-2.3 Improve housing and assistance of low and moderate-income persons and families to obtain homeownership.

H-3.1 Promote the development of quality affordable housing.

H-3.2 Work to expand the resource of developable land by making underutilized land available for development.

H-3.3 Promote a variety of housing types, prices and tenure in order to satisfy community demand and needs.

H-3.4 Promote the availability of housing which meets the special needs of the elderly, handicapped and large families.

H-6.8 Continue to work toward increasing the number of owner-occupied units.

ED-1.1 Evaluate existing city services and programs to determine whether they are adequately meeting the needs of residents.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

EMPLOYMENT GROWTH

Environmental Impact: Employment growth associated with implementation of the proposed General Plan is anticipated to result in an increase in employment growth within the City.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

ED-3.3 Develop a comprehensive economic development program and initiate strategies to retain existing businesses, as well as markets, and attract new office, commercial and industrial activity.

ED-3.4 Continue to maintain, and expand as necessary, the City's marketing and business retention/attraction program to effectively compete with neighboring cities in attracting and retaining regional businesses. Said program to include: business outreach programs, business assistance programs, business incentives, use of public/private partnerships to promote business relations, and other programs and/or incentives.

ED-5.1 Understand employment trends and needs of local businesses and link residents and businesses together through an Employment Resources Program.

ED-5.2 Support a local labor force with training programs to provide skill requirements for current and prospective employers. Cooperate with the University and educational organizations within the City to develop job training programs and training for Carson's youth.

ED-5.3 Promote opportunities for research and development incubators within the City.

ED-6.6 Provide technical assistance to small businesses and coordinate with outside business organizations to support the specific needs of small business.

LU-6.5 Coordinate strategies with the County, Southern California Association of Governments (SCAG), South Bay Cities Council of Governments (SBCCG), and other appropriate agencies and/or organizations to meet housing and employment needs.

LU-15.1 Ensure that the City of Carson is a complete and balanced community which contains housing, shops, work places, schools, parks and civic facilities, essential to the daily lives of residents.

LU-15.2 Encourage the location of housing, jobs, shopping, services and other activities within easy walking distance of each other.

LU-15.4 Encourage businesses within the City to provide a range of job types for the community's residents.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

TRANSPORTATION

2020 TRAFFIC VOLUMES/ROADWAY CAPACITIES

Environmental Impact: Implementation of the proposed General Plan would result in an increase in traffic volumes for the planning horizon year of 2020, which would impact the capacities of roadways within the City of Carson.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

TI-1.1 Enforce the City's revised truck route system.

TI-1.2 Devise strategies to protect residential neighborhoods from truck traffic.

TI-1.3 Ensure that the City's designated truck routes provide efficient access to and from the I-405, I-110 and Route-91 Freeways, as well as the Alameda Corridor.

TI-1.4 Ensure that all new commercial projects have properly designed truck loading facilities.

TI-1.5 Require that all new construction or reconstruction of streets or corridors that are designated as truck routes, accommodate projected truck volumes and weights.

TI-2.1 Require that new projects not cause the Level of Service for intersections to drop more than one level if it is at Level A, B or C, and not drop at all if it is at D or below, except when necessary to achieve substantial City development goals.

TI-2.2 Pursue and protect adequate right-of-way to accommodate future circulation system improvements.

TI-2.3 Widen substandard streets and alleys to meet City standards wherever feasible.

TI-2.4 Provide up-to-date safety devices and lighting on City streets where appropriate.

TI-2.5 Facilitate cooperation between the City and the transportation agencies serving the region in order to provide adequate regional vehicular traffic volumes and movements on freeways, streets and through intersections.

TI-2.6 Establish a comprehensive traffic impact fee program and other programs/actions to provide for "fair-share" funding from new development for transportation improvements to accommodate growth.

TI-2.7 Provide all residential, commercial and industrial areas with efficient and safe access to major regional transportation facilities.

TI-2.8 Provide traffic calming, landscape and pedestrian improvements in all non-truck route streets and other streets as appropriate.

TI-3.1 Monitor traffic intrusion on local residential streets and establish a formalized mechanism to respond to resident complaints and requests regarding residential street traffic problems.

TI-3.2 Where feasible, create disincentives for cut-through traffic through neighborhoods, without impacting adjacent residential streets.

TI-3.3 Prioritize circulation improvements that enhance through traffic flow on Major and Secondary Highways providing parallel routes to residential streets, in order to reduce through traffic during peak commute periods.

TI-3.4 Adopt Neighborhood Traffic Control Guidelines to address all aspects of residential requests, complaints, and traffic calming alternatives.

TI-5.1 Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.

TI-6.2 Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

TI-6.3 Ensure that new roadway links are constructed as designated in the Circulation Element, and link with existing roadways in neighboring jurisdictions to allow efficient access into and out of the City.

TI-6.4 Assess local agencies' plans to ensure compatibility across jurisdictional boundaries.

TI-6.5 Encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization.

Additional Policies to be Included in the Proposed General Plan: The Transportation and Infrastructure Element of the proposed General Plan shall address the application of Intelligent Transportation Systems (ITS) and the Maximum Feasible Intersection Concept. Policies regarding these types of transportation improvements shall be formulated and incorporated into the Transportation and Infrastructure Element.

Mitigation Measures: No mitigation measures beyond the policies identified and the policies to be added in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

CONSISTENCY WITH CMP STANDARDS

Environmental Impact: Implementation of the proposed General Plan may result in the exceedance of LOS standards established by the CMP at Carson freeway monitoring locations.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

TI-6.1 Actively participate in various intergovernmental committees and other planning forums associated with County, Regional and State Congestion Management Programs.

TI-6.2 Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

TI-6.3 Ensure that new roadway links are constructed as designated in the Circulation Element, and link with existing roadways in neighboring jurisdictions to allow efficient access into and out of the City.

TI-6.4 Assess local agencies' plans to ensure compatibility across jurisdictional boundaries.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

CONSISTENCY WITH CMP, AQMP AND RMP

Environmental Impact: Implementation of the proposed General Plan may result in inconsistencies with the CMP, AQMP and RMP.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

TI-2.6 Establish a comprehensive traffic impact fee program and other programs/actions to provide for "fair-share" funding from new development for transportation improvements to accommodate growth.

TI-5.1 Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.

TI-6.2 Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

TI-6.3 Ensure that new roadway links are constructed as designated in the Circulation Element, and link with existing roadways in neighboring jurisdictions to allow efficient access into and out of the City.

TI-6.4 Assess local agencies' plans to ensure compatibility across jurisdictional boundaries.

TI-6.5 Encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization.

AQ-2.1 Coordinate with other agencies in the region, particularly the south coast air quality management district (SCAQMD) and the Southern California Association of Governments (SCAG), to implement provisions of the regions' Air Quality Management Plan (AQMP), as amended.

AQ-2.2 Utilize incentives, regulations and implement the transportation demand management requirements in cooperation with other jurisdictions to

eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.

AQ-2.3 Cooperate and participate in regional air quality management plans, programs and enforcement measures.

AQ-2.4 Continue to work to relieve congestion on major arterials and thereby reduce emissions.

AQ-2.5 Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

AQ-2.7 Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.

AQ-3.1 Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric or other non-polluting fuels for Carson circuit buses and other city vehicles.

AQ-3.2 Continue to promote ridership on the Carson circuit and Los Angeles County Metropolitan Transportation Authority (MTA) bus and metro rail lines.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

ALTERNATIVE TRANSPORTATION

Environmental Impact: Implementation of the proposed General Plan may result in an incremental increase in demand for transit service and may enhance policies supporting alternative transportation.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

TI-4.1 Promote the use of public transit.

TI-4.2 Provide appropriate pedestrian access throughout the City. Develop a system of pedestrian walkways, alleviating the conflict between pedestrians, automobiles and bicyclists where feasible.

TI-4.3 Provide appropriate bicycle access throughout the City of Carson by implementing the Bicycle Plan.

TI-5.1 Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.

TI-5.2 Encourage the provision of preferential parking for high occupancy vehicles wherever possible.

AQ-2.5 Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

AQ-3.2 Continue to promote ridership on the Carson circuit and Los Angeles County Metropolitan Transportation Authority (MTA) bus and metro rail lines.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

AIR QUALITY

CONSTRUCTION EMISSIONS

Environmental Impact: Citywide construction activity under the proposed General Plan may result in a cumulatively considerable increase of criteria pollutants, and thus, may violate air quality standards.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

AQ-1.1 Continue to enforce ordinances which address dust generation and mandate the use of dust control measures to minimize this nuisance.

AQ-1.3 Adopt incentives, regulations, and/or procedures to minimize particulate emissions.

TI-1.1 Enforce the City's revised truck route system.

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan or SCAQMD regulations are available to reduce this impact to a less than significant level.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

VEHICLE MILES TRAVELED AND STATIONARY SOURCE EMISSIONS

Environmental Impact: Development associated with implementation of the proposed General Plan would result in an overall increase in mobile and stationary source emissions within the City, which may exceed SCAQMD air quality standards.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact

Policies in the Proposed General Plan:

AQ-2.4 Continue to work to relieve congestion on major arterials and thereby reduce emissions.

AQ-2.5 Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

AQ-2.6 Encourage in-fill development near activity centers and along transportation routes.

AQ-2.7 Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.

AQ-3.1 Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric or other non-polluting fuels for Carson Circuit buses and other City vehicles.

AQ-3.2 Continue to promote ridership on the Carson Circuit and Los Angeles County Metropolitan Transportation Authority (MTA) bus and metro rail lines.

AQ-4.1 Work with the City's Public Information Office to increase public awareness regarding air quality and implementation issues.

AQ-4.2 Promote and encourage ride sharing activities within the community, including such programs as preferential parking, park-and-ride lots, alternative work week/flexible working hours and telecommuting, as well as other trip reduction strategies.

LU-6.2 Achieve a land use balance through a variety of methods, including: provision of incentives for desired uses; coordination of land use and circulation patterns; and promotion of a variety of housing types and affordability.

LU-6.3 Consider establishing minimum land use density requirements in certain areas such as mixed use zones to provide more efficient, consistent, and compatible development patterns while also promoting greater potential for pedestrian and transit-oriented development.

LU-8.3 Locate higher density residential uses within proximity of commercial centers to encourage pedestrian traffic, and to provide a consumer base for commercial uses.

LU-15.1 Ensure that the City of Carson is a complete and balanced community which contains housing, shops, work places, schools, parks and civic facilities, essential to the daily lives of residents.

LU-15.2 Encourage the location of housing, jobs, shopping, services, and other activities within easy walking distance of each other.

LU-15.5 Ensure that the character of the community and its transportation facilities are connected to a larger transit network.

LU-15.8 Ensure development of pedestrian-oriented improvements which provide better connections between and within all developments while reducing dependence on vehicle travel.

TI-4.1 Promote the use of public transit.

TI-4.2 Provide appropriate pedestrian access throughout the City. Develop a system of pedestrian walkways, alleviating the conflict between pedestrians, automobiles and bicyclists where feasible.

TI-4.3 Provide appropriate bicycle access throughout the City of Carson.

TI-5.1 Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.

TI-5.2 Encourage the provision of preferential parking for high occupancy vehicles wherever possible.

Stationary Source Emission Reduction

AQ-1.2 Promote the landscaping of undeveloped and abandoned properties to prevent soil erosion and reduce dust generation.

AQ-5.1 Through the City's Planning processes, monitor air pollutant emissions by mitigating air quality impacts, to the greatest extent possible, associated with facilities/industries in Carson.

AQ-5.2 Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.

LU-15.9 Ensure that development and building design works to conserve resources and minimize waste.

LU-15.10 Provide for the efficient use of water through the use of natural drainage, drought tolerant landscaping, and use of reclaimed water, efficient appliances and water conserving plumbing fixtures.

LU-15.11 Ensure that the street orientation, placement of buildings, and the use of shading in existing and new developments contribute to the energy efficiency of the community.

OSC-3.1 Promote incentives for the use of site planning techniques, building orientation, building materials, and other measures which reduce energy consumption.

OSC-3.2 Support the development of alternative sources of energy such as roof-mounted solar panels or energy generated from non-conventional systems outside the City.

OSC-3.3 Work with energy providers to develop and implement programs to reduce electrical demand in residential, commercial and industrial developments.

OSC-3.4 Promote incentives for the use of site planning techniques, building orientation, building materials, and other measures which reduce energy consumption.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan and SCAQMD regulations are available to reduce this impact to a less than significant level.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

CONSISTENCY WITH REGIONAL PLANS

Environmental Impact: Implementation of the proposed General Plan may conflict or obstruct implementation of the Southern California Association of Government's Regional Comprehensive Plan Guidelines (RCP) and the South Coast Air Quality Management District's Air Quality Management Plan (AQMP).

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

AQ-2.1 Coordinate with other agencies in the region, particularly the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG), to implement provisions of the regions' Air Quality Management Plan (AQMP), as amended.

AQ-2.2 Utilize incentives, regulations, and implement the Transportation Demand Management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.

TI-6.1 Actively participate in various intergovernmental committees and other planning forums associated with County, Regional and State Congestion Management Programs.

TI-6.2 Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

TI-6.5 Encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

NOISE

CONSTRUCTION NOISE

Environmental Impact: Development associated with implementation of the proposed General Plan would involve construction-related noise as future parcels are developed and/or renovated.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential

neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-2.1 Limit truck traffic to specific routes and designated hours of travel, where necessary, as defined in the Transportation and Infrastructure Element and by the City's Development Services Group. Said routes and hours shall be reviewed periodically to ensure the protection of sensitive receptors and residential neighborhoods.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

TRAFFIC NOISE

Environmental Impact: Future traffic noise levels associated with implementation of the proposed General Plan may contribute to an exceedance of the City's noise standard resulting in potential noise impacts to sensitive receptors.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-2.1 Limit truck traffic to specific routes and designated hours of travel, where necessary, as defined in the Transportation and Infrastructure Element and by the City's Development Services Group. Said routes

and hours shall be reviewed periodically to ensure the protection of sensitive receptors and residential neighborhoods.

N-2.2 Examine the feasibility of implementing sound attenuation measures along the City's arterial streets, particularly along designated truck routes. To this end, prioritize the areas in need of sound attenuation based on degree of sensitivity of uses, excess of maximum allowable standards, length of time the noise impact has existed, and number of residential units and sensitive receptors impacted.

N-2.3 Examine the feasibility of an ordinance which creates an overlay zone to be placed over residential properties along arterial streets and/or designated truck routes. This overlay zone would provide additional sound attenuation techniques to improve affected residential homes.

N-2.4 Augment the list of eligible improvements under housing programs, such as the Community Development Block Grant (CDBG) Home Improvement Loan/Rebate Program, to include remedial improvements to homes lying within the designated improvement areas and located within the overlay zone, as described above in Policy N-2.3.

N-2.5 Minimize potential transportation noise through proper design of street circulation, coordination of routing, and other traffic control measures such as enforcing the speed limit, shifting travel lanes away from impacted units or sensitive receptors, adding bike lanes.

N-2.6 Discourage through traffic in residential neighborhoods.

N-2.7 Actively advocate noise control requirements for all motor vehicles.

N-3.2 Coordinate with the businesses along the Corridor to ensure that noise attenuation measures are addressed in the selection of the vehicle technology, location of truck pick-up and loading areas, locations of mechanical and electrical equipment, exterior speaker boxes, public address systems, and similar noise sources.

N-3.3 For both transportation-related and development projects along the Corridor continue to incorporate noise assessments into the environmental review process, as needed.

N-3.4 At such a time when Alameda Street becomes a state highway:

- Encourage Caltrans to meet the City's standard for exterior noise levels of 65 dBA CNEL;
- Where appropriate and feasible, encourage Caltrans to keep interior residential noise levels below the City's standard of 45 dBA CNEL; and
- Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of improvements to the Corridor.

N-4.1 Encourage Caltrans to meet the City's standard for exterior noise levels of 65 dBA CNEL.

N-4.2 Where appropriate and feasible, encourage Caltrans to keep interior residential noise levels below the City's standard of 45 dBA CNEL.

N-4.3 Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of improvements to existing facilities, as well as any new highway projects.

N-7.2 Continue to incorporate noise assessments into the environmental review process, as needed. Said assessments shall identify potential noise sources, potential noise impacts, and appropriate sound attenuation. In non-residential projects, potential noise sources shall include truck pick-up and loading areas, locations of mechanical and electrical equipment, and similar noise sources. Require mitigation of all significant noise impacts as a condition of project approval.

N-7.3 Require all new residential construction in areas with an exterior noise level greater than 65 dBA CNEL to include sound attenuation measures that reduce interior noise levels to the standards shown in Table N-1 (refer to General Plan Update). Sound attenuation measures include:

- Sound walls,
- Double glazing,
- Building location, and/or
- Facade treatment.

N-7.4 Ensure acceptable noise levels near schools, hospitals, convalescent homes, churches, and other noise sensitive areas in accordance with Table N-1 (refer to General Plan Update). To this end, require buffers or appropriate mitigation of potential noise sources. Such sources include, but are not limited to truck pickup and loading areas, mechanical and electrical equipment, exterior speaker boxes, and public address systems.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

AIRCRAFT NOISE

Environmental Impact: Future operation of the Long Beach Airport and Compton Airport may be a significant noise source to surrounding land uses.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-6.1 Continue to monitor noise associated with airport operations at the Compton and Long Beach Airports.

N-6.2 Coordinate with the operators of the Long Beach Airport to ensure that any increase in operations will not adversely impact the residential areas on the eastern side of the City.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan and compliance with the Long Beach Airport Noise Compatibility Ordinance No. C-7320 are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

RAILROAD NOISE

Environmental Impact: Future operation of railways would be a significant noise source to land uses located in Carson.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or

maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-3.3 For both transportation-related and development projects along the Corridor continue to incorporate noise assessments into the environmental review process, as needed.

N-3.4 At such a time when Alameda Street becomes a state highway:

- Encourage Caltrans to meet the City's standard for exterior noise levels of 65 dBA CNEL;
- Where appropriate and feasible, encourage Caltrans to keep interior residential noise levels below the City's standard of 45 dBA CNEL; and
- Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of improvements to the Corridor.

N-5.1 Continue to encourage the railroad and transit operators within the City to schedule trains during the daylight hours, when possible.

N-5.2 Require noise attenuation measures for residential construction in areas affected by the 65 dBA CNEL railroad noise contour. Sound attenuation measures shall reduce interior noise to a maximum of 45 dBA CNEL. These measures shall apply to new residential construction as well as renovations, remodels, and building additions.

N-5.3 Coordinate with the railroad and transit operators to ensure that noise attenuation measures are addressed in the selection of the rail and vehicle technology for use along rail/transit lines, and the design and reconstruction of existing lines.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan or mitigation measures identified in the *Alameda Corridor Final EIR* are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

STATIONARY NOISE

Environmental Impact: Stationary noises within the City may impact adjacent land uses.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-1.5 Coordinate with the California Occupational Safety and Health Administration (Cal-OSHA) to provide information on occupational noise requirements within the City.

N-3.2 Coordinate with the businesses along the Corridor to ensure that noise attenuation measures are addressed in the selection of the vehicle technology, location of truck pick-up and loading areas, locations of mechanical and electrical equipment, exterior speaker boxes, public address systems, and similar noise sources.

N-3.3 For both transportation-related and development projects along the Corridor continue to incorporate noise assessments into the environmental review process, as needed.

N-7.1 Incorporate noise considerations into land use planning decisions by establishing acceptable limits of noise for various land uses throughout the community.

N-7.2 Continue to incorporate noise assessments into the environmental review process, as needed. Said assessments shall identify potential noise sources, potential noise impacts, and appropriate sound attenuation. In non-residential projects, potential noise sources shall include truck pick-up and loading areas, locations of mechanical and electrical equipment, and similar noise sources. Require mitigation of all significant noise impacts as a condition of project approval.

N-7.3 Require all new residential construction in areas with an exterior noise level greater than 65 dBA CNEL to include sound attenuation measures that reduce interior noise levels to the standards shown in Table N-1. Sound attenuation measures include:

- Sound walls,
- Double glazing,
- Building location, and/or
- Facade treatment.

N-7.4 Ensure acceptable noise levels near schools, hospitals, convalescent homes, churches, and other noise sensitive areas in accordance with Table N-1 (refer to General Plan Update). To this end, require buffers or appropriate mitigation of potential noise sources. Such sources include, but are not limited to truck pickup and loading areas, mechanical and electrical equipment, exterior speaker boxes, and public address systems.

N-8.1 Require the design of mixed-use structures to incorporate techniques to prevent transfer of noise and vibration from the commercial to the residential uses.

N-8.2 Encourage commercial uses in mixed-use developments, which are not noise intensive.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

GEOLOGIC AND SEISMIC HAZARDS

FAULT RUPTURE

Environmental Impact: Implementation of the proposed General Plan may result in geologic or seismic hazards with respect to rupture of a known earthquake fault.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

SAF-1.1 Continue to require all new development to comply with the most recent City Building Code seismic design standards.

SAF-1.2 Work with the City's Public Information Office and Public Safety Division to:

- Educate residents in earthquake safety at home,
- Educate the public in self-sufficiency practices necessary after a major earthquake (e.g., alternative water sources, food storage, first aid, family disaster plans, and the like), and
- Identify locations where information is available to the public for planning self-sufficiency.

SAF-1.3 Examine the potential to create a commercial loan program to subsidize the cost of retro-fitting buildings to meet seismic safety regulations. To this end, pursue all sources of State and federal funding in order to retro-fit buildings to meet seismic requirements.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance after Policies/Mitigation: Less Than Significant Impact.

SEISMIC GROUNDSHAKING

Environmental Impact: Seismic groundshaking and secondary seismic effects in the City during an earthquake on the nearby regional faults may cause damage to development resulting from implementation of the proposed General Plan.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

SAF-1.1 Continue to require all new development to comply with the most recent City Building Code seismic design standards.

SAF-1.2 Work with the City's Public Information Office and Public Safety Division to:

- Educate residents in earthquake safety at home,
- Educate the public in self-sufficiency practices necessary after a major earthquake (e.g., alternative water sources, food storage, first aid, family disaster plans, and the like), and
- Identify locations where information is available to the public for planning self-sufficiency.

SAF-1.3 Examine the potential to create a commercial loan program to subsidize the cost of retro-fitting buildings to meet seismic safety regulations. To this end, pursue all sources of State and federal funding in order to retro-fit buildings to meet seismic requirements.

SAF-3.1 Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress.

SAF-3.2 Maintain and update, as necessary, the SEMS Multihazard Functional Plan which identifies emergency response and recovery actions in the event of an incident.

Mitigation Measures: In addition to the policies listed above, the following mitigation measures are recommended to further reduce any impacts.

MM-SAF-1 Due to the potential for ground shaking in a seismic event, individual development projects shall comply with the standards set forth in the Uniform Building Code (most recent edition) to assure seismic safety to the satisfactions of the Department of Building and Safety prior to issuance of a building permit, including compliance with California Division of Mines and Geology Special Publication 117 (Guidelines for Evaluation and Mitigating Seismic Hazards in California, adopted March 13, 1997). Given the proximity of the Avalon-Compton fault within the City of Carson, more stringent measures may be warranted.

MM-SAF-2 Individual development projects shall comply with non-structural seismic mitigation measures, e.g. overhead glass treatments shall use safety glass or film; vending machines, ice machines (if used) and other types of machines and equipment shall be bolted or braced. Pictures and decorative items within common areas shall be secured for earthquake safety.

MM-SAF-3 Ensure individual development projects compliance with current seismic mitigation codes.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

LIQUEFACTION

Environmental Impact: Implementation of the proposed General Plan may result in impacts related to liquefaction.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

SAF-1.1 Continue to require all new development to comply with the most recent City Building Code seismic design standards.

SAF-1.3 Examine the potential to create a commercial loan program to subsidize the cost of retro-fitting buildings to meet seismic safety regulations. To this end, pursue all sources of State and federal funding in order to retro-fit buildings to meet seismic requirements.

Mitigation Measures: In addition to the policies listed above, the following mitigation measures is recommended to further reduce any impacts.

MM-SAF-4 Due to the potential for liquefaction within the project vicinity, individual development projects shall comply with the standards set forth in the UBC (most recent edition) for structures on-site to assure safety of the occupants to the satisfaction of the Department of Building and Safety prior to issuance of a building permit. These standards included compliance with California Division of Mines and Geology Special Publication 117 (Guidelines for Evaluating and

Mitigating Seismic Hazards in California, adopted march 13, 1997) and "Recommended Procedures for Implementation of CDMG Special Publication 117- Guidelines for analyzing and Mitigating Liquefaction in California" (Dr. Geoffrey R. Martin et al, May 1999).

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

LANDSLIDES

Environmental Impact: Implementation of the proposed General Plan may result in impacts related to landslides.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

SAF-1.1 Continue to require all new development to comply with the most recent City Building Code seismic design standards.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance after Policies/Mitigation: Less Than Significant Impact.

SOIL EROSION

Environmental Impact: Implementation of the proposed General Plan may result in impacts related to soil erosion or the loss of topsoil.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

Mitigation Measures: In addition to the policy listed above, the following mitigation measure is recommended to further reduce any impacts.

MM-SAF-5 Grading plans for development projects shall include an approved drainage and erosion control plan to minimize the impacts from erosion and sedimentation during grading. Plans should conform to all standards adopted by the City and meet the requirements of Storm Water Pollution Prevention Plans (SWPPS) required by California State Water Resources Control Board.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

UNSTABLE OR EXPANSIVE SOILS

Environmental Impact: Implementation of the proposed General Plan may result in impacts related to expansive soils or soil strength.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential impacts resulting from unstable geologic units or expansive soils.

Mitigation Measures: The following mitigation measure is recommended to further reduce any impacts.

MM-SAF-6 Future development shall comply with all recommendations contained in site-specific geologic, geotechnical, and structural design studies prepared for land development projects. These geotechnical reports shall address soil conditions, including low soil strength, shrink swell potential and other unstable soil conditions. Recommendations contained in these site-specific studies shall be reviewed and approved by the Building Official and incorporated in to final grading and structural design plans, as deemed appropriate by the Building Official.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

HYDROLOGY AND DRAINAGE

WATER QUALITY STANDARDS AND WASTE DISCHARGE REQUIREMENTS

Environmental Impact: Future construction activities and post-construction uses resulting from implementation of the proposed General Plan violate water quality standards or waste discharge requirements.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

OSC-2.1 Maintain and improve water quality.

OSC-2.2 Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

Mitigation Measures: In addition to the policies listed above, the following mitigation measures are recommended to further reduce any impacts.

MM-HYD-1 Individual development projects would be required to prepare a drainage/grading plan for approval by the Los Angeles County Department of Public Works prior to issuance of grading permits.

MM-HYD-2 Individual development projects would be required to construct any parkway drains or similar devices required by the draining/grading plan prior to issuance of a building permit.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

GROUNDWATER DEPLETION

Environmental Impact: Implementation of the proposed General Plan may result in impacts associated with depletion of groundwater supplies and interfere with groundwater recharge.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

LU-15.10 Provide for the efficient use of water through the use of natural drainage, drought tolerant landscaping, and use of reclaimed water, efficient appliances and water conserving plumbing fixtures.

OSC-2.4 Conserve the water supply available to the City and promote water conservation in the management of public properties.

OSC-2.5 Educate citizens about water conservation, encourage its practice and monitor its effectiveness.

OSC-2.6 Ensure the completion of the reclaimed water facility in the City of Carson.

OSC-2.7 Encourage the use of reclaimed water in all applications for which potable water is not necessary.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

DRAINAGE AND RUNOFF

Environmental Impact: Implementation of the proposed General Plan may result in impacts to drainage patterns in the City of Carson that may lead to erosion, siltation or surface water runoff. In addition, implementation of the proposed General Plan may create or contribute runoff water to the stormwater drainage systems in the City.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

SAF-2.1 Continue to maintain and improve levels of storm drainage service.

TI-8.2 As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of uses, as well as existing uses.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

FLOODING/DAM INUNDATION

Environmental Impact: Implementation of the proposed General Plan may result in potential flooding impacts within the City of Carson.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

SAF-2.1 Continue to maintain and improve levels of storm drainage service.

SAF-2.2 Continue to work with the appropriate local, State and Federal agencies (i.e., Los Angeles County Department of Public Works, Caltrans, Federal Emergency Management Agency, etc.) to reduce the potential for flood damage in the City of Carson.

SAF-2.3 Ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. To this end, work closely with Los Angeles County Department of Public Works and other cities in the South Bay region to ensure that facilities are adequate to accommodate storm waters.

SAF-2.4 As development intensifies and/or as redevelopment occurs in the City, ensure that storm drain systems are adequate to accommodate any intensification of uses, as well as existing uses.

SAF-2.5 Periodically review and recommend appropriate changes to the Los Angeles County Department of Public Works for the Storm Drainage Master Plan for Los Angeles County.

SAF-3.2 Maintain and update, as necessary, the SEMS Multihazard Functional Plan which identifies emergency response and recovery actions in the event of an incident.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan Update are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

PUBLIC SERVICES AND UTILITIES

FIRE PROTECTION

Environmental Impact: Implementation of the proposed General Plan may result in the need for additional fire facilities or personnel.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

SAF-5.1 Coordinate with the Fire Department to provide fire and paramedic service at standard levels of service.

SAF-5.2 Continue to involve the Fire Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes.

SAF-5.3 Continue to work with the Fire Department to ensure their capability to address fires and other emergencies at refineries, tank farms, and other heavy industrial facilities within the City.

SAF-5.4 Work with the City's Public Information Office and County Fire Department to promote and expand public education programs and seminars on safety and emergency response for those areas surrounding refineries, tank farms, and other heavy industrial facilities.

SAF-5.5 Continue to enforce current regulations which relate to safety from fire, particularly in critical and high occupancy facilities.

SAF-5.6 Work with the City's Public Information Office and the Fire Department to continue to promote and enhance public outreach programs which educate the community about the importance of fire resistant building materials, promote the use of smoke alarms/detectors, and highlight other ways to reduce the public hazard from fire emergencies.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

POLICE PROTECTION

Environmental Impact: Implementation of the proposed General Plan may result in the need for additional police facilities or personnel.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

SAF-6.1 Coordinate with the Sheriff's Department to provide sheriff service at standard levels of service.

SAF-6.2 Continue to involve the Sheriff's Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes. To this end, promote the development of defensible spaces or Crime Prevention Through Design (CPTD) through the use of site and building lighting, visual observation of open spaces, secured areas.

SAF-6.4 Maintain and improve the effectiveness of code enforcement and policing programs such as increased community policing activities, such as foot and bicycle patrols in areas where warranted, and related programs.

SAF-6.5 Continue to promote and enhance the Sheriff Department's public outreach programs.

SAF-6.6 Continue to promote the Neighborhood Watch Program.

SAF-6.7 Continue to support strict enforcement of the California Motor Vehicle Code and local speed limits, particularly in the areas near schools and off-ramps from area freeways.

SAF-7.1 Continue to take a "zero tolerance" approach to gangs and gang activity in Carson.

SAF-7.2 Continue to work with the community, and specifically involve and educate parents, to reduce criminal behavior by Carson's youth.

SAF-7.3 Continue to support immediate, positive consequences for minor criminal behavior by youth, such as graffiti removal programs, restitution programs, and other effective acceptable programs.

SAF-7.5 Working with the City's Public Information Office and the Sheriff's Department to promote community awareness regarding drug use, graffiti, gangs, and other youth related crimes.

SAF-7.6 Consider the implementation of a comprehensive Youth Violence Reduction Program. Said program to include education, intervention, and enforcement strategies.

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

TI-10.2 Require that all civic facilities be maintained and rehabilitated to ensure their continued availability and use.

Additional Policies to be Included in the Proposed General Plan: The Safety Element of the proposed General Plan shall address the need for future Sheriff facilities. In conjunction with the Los Angeles County Sheriffs Department, policies shall be formulated to meet identified facility needs and shall be incorporated into the Safety Element.

Mitigation Measures: No mitigation measures beyond the policies identified and the policies to be added in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

SCHOOL FACILITIES

Environmental Impact: Implementation of the proposed General Plan may result in the need for additional school facilities.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

LIBRARY FACILITIES

Environmental Impact: Implementation of the proposed General Plan may result in increased demand for library services and the need for additional library facilities within the City.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

Additional Policies to be Included in the Proposed General Plan: The Parks, Recreation and Human Services Element of the proposed General Plan shall address the need for additional Library facilities and materials. In conjunction with the Los

Angeles County Library, policies shall be formulated to meet identified needs and shall be incorporated into the Parks, Recreation and Human Services Element.

Mitigation Measures: No mitigation measures beyond the policies identified and the policies to be added in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

WATER

Environmental Impact: Implementation of the proposed General Plan may result in increased demand for water service within the City.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

OSC-2.1 Maintain and improve water quality.

OSC-2.2 Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

OSC-2.4 Conserve the water supply available to the City and promote water conservation in the management of public properties.

OSC-2.5 Educate citizens about water conservation encourage its practice and monitor its effectiveness.

TI-8.1 Continue to maintain, improve and replace aging water and wastewater systems to ensure the provision of these services to all areas of the community.

TI-8.2 As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of uses, as well as existing uses.

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

TI-10.3 Rehabilitate public facilities using technologies, methods, and materials which result in energy and water savings, and implement cost effective, long-term maintenance programs.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

SEWER SERVICES

Environmental Impact: Implementation of the proposed General Plan may result in increased demand for the sewer system within the City.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

TI-8.1 Continue to maintain, improve and replace aging water and wastewater systems to ensure the provision of these services to all areas of the community.

TI-8.2 As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of uses, as well as existing uses.

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

TI-10.3 Rehabilitate public facilities using technologies, methods, and materials which result in energy and water savings, and implement cost effective, long-term maintenance programs.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

SOLID WASTE

Environmental Impact: Implementation of the proposed General Plan may result in increased demand for the solid waste service provided to the City.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

OSC-4.1 Reduce the generation of solid waste from sources in the City in accordance with the Source Reduction and Recycling Element for Carson (separate from this General Plan) and state regulations.

OSC-4.2 Develop a public education program to address waste management and proper household waste sorting and handling.

OSC-4.3 Facilitate physical collection of recyclable waste.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

ELECTRICITY

Environmental Impact: Implementation of the proposed General Plan may result in increased demand in electricity service provided to the City.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

OSC-3.3 Work with energy providers to develop and implement programs to reduce electrical demand in residential, commercial and industrial developments.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

NATURAL GAS

Environmental Impact: Implementation of the proposed General Plan may result in increased demand in natural gas service provided to the City.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential impacts to gas service.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

TELEPHONE

Environmental Impact: Implementation of the proposed General Plan may result in increased demand in telephone service provided to the City.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan:

TI-9.2 As development intensifies and/or as redevelopment occurs in the City, encourage the provision of communication, fiber optic and other systems to accommodate any intensification of uses, as well as existing uses.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

PARKS, RECREATION AND HUMAN SERVICES

Environmental Impact: Implementation of the proposed General Plan may result in significant impacts to the adequate availability of parkland and recreational facilities within the City.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

LU-6.4 Coordinate Redevelopment and Planning activities and resources to balance land uses, amenities, and civic facilities to improve the quality of life.

LU-6.6 Attract land uses that generate revenue to the City of Carson, while maintaining a balance of other community needs such as housing, open space, and public facilities.

LU-9.7 Maintain and upgrade the City's parks, eliminating all evidence of vandalism, wear and deterioration.

LU-15.1 Ensure that the City of Carson is a complete and balanced community which contains housing, shops, work places, schools, parks and civic facilities, essential to the daily lives of residents.

LU-15.6 Develop a center focus within the community that combines commercial, civic, cultural and recreational uses.

OSC-1.1 Preserve and enhance the existing open space resources in Carson.

PRC-1.1 Acquire additional parkland in accordance with long-term planning efforts, such as this General Plan and the City's Capital Improvement Program.

PRC-1.2 Work with local governmental and educational agencies and departments to maintain and, wherever feasible, expand the joint use of facilities within the City of Carson.

PRC-1.3 Promote greater cooperation and coordination with other City departments and public agencies, and encourage the construction of new park and human services facilities in developed areas of Carson as infill development occurs.

PRC-1.4 Develop non-traditional approaches to providing supplementary services and programs in areas where there are facility deficiencies.

PRC-4.1 Inventory existing parks and recreational facilities to determine rehabilitation needs through a periodic monitoring program.

PRC-4.2 Plan fiscally responsible rehabilitation and maintenance strategies which enhance the amenity and usability of existing parks.

PRC-4.3 Require park improvements and facilities that are durable and economical to maintain.

PRC-5.1 Pursue innovative methods, such as the use of volunteers, grants, and private sponsorship, to improve the affordability of recreational programs for residents of the City.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

PUBLIC HEALTH AND SAFETY

HAZARDOUS MATERIALS USE, GENERATION AND TRANSPORT

Environmental Impact: New commercial or industrial development in accordance with the proposed General Plan may result in an increased risk of upset associated with the routine use, generation and transport of hazardous materials, which may pose a health or safety hazard.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

LU-7.4 Promote the use of buffers between more intensive industrial uses and residential uses.

LU-7.5 Through the discretionary review process, ensure that the siting of any land use which handles, generated, and/or transports hazardous substances, as defined by state and federal regulations, will not negatively impact existing sensitive receptors/land uses.

TI-1.1 Enforce the City's revised truck route system.

AQ-5.2 Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

SAF-4.2 Periodically review and amend the appropriate ordinances which regulate the storage and handling of hazardous materials to conform with the standards and definitions of the State and other regulatory agencies.

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

SAF-4.4 Explore the possibility of identifying specific routes for the transport of hazardous materials, to include both railroad and street systems.

SAF-4.5 As truck routes within the City are altered, inform Caltrans and transporters of hazardous materials of the changes.

SAF-4.6 Develop an educational awareness program which encourages proper residential management of hazardous materials.

SAF-4.7 Continue to implement the goals, policies and programs identified in the City's Household Hazardous Waste Element.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS

Environmental Impact: Accidental release of hazardous materials used, stored or transported in the City may result in a public health risk.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

LU-7.3 Promote the use of buffers between more intensive industrial uses and residential uses.

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

SAF-3.1 Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress.

SAF-3.2 Maintain and update, as necessary, the SEMS Multi-Hazard Functional Plan which identifies emergency response and recovery actions in the event of an incident.

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

SAF-4.2 Periodically review and amend the appropriate ordinances which regulate the storage and handling of hazardous materials to conform with the standards and definitions of the State and other regulatory agencies.

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

SAF-4.4 Explore the possibility of identifying specific routes for the transport of hazardous materials, to include both railroad and street systems.

SAF-4.5 As truck routes within the City are altered, inform Caltrans and transporters of hazardous materials of the changes.

SAF-4.6 Develop an educational awareness program which encourages proper residential management of hazardous materials.

SAF-4.7 Continue to implement the goals, policies and programs identified in the City's Household Hazardous Waste Element.

SAF-4.8 Maintain cooperative relationships with the chemical handlers, response agencies and community representatives through such organizations as South Bay Community Awareness and Emergency Response (CAER), to ensure an informed and coordinated response to chemical emergencies.

AQ-5.2 Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.

Mitigation Measures: No mitigation measures beyond the policies in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

AIR TOXIC EMISSIONS

Environmental Impact: Development of the City of Carson in accordance with the proposed General Plan may result in additional sources of air toxic emissions, potentially increasing exposure of residents and employees to air toxins.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

AQ-5.1 Through the City's Planning processes, monitor air pollutant emissions by mitigating air quality impacts, to the greatest extent possible, associated with facilities/industries in Carson.

Mitigation Measures: In addition to the policies listed above, the following mitigation measure is recommended to further reduce any impacts.

MM-PHS-1 Prior to new development, the development site should be thoroughly assessed for the possible presence of contaminated materials. The level of inquiry should be commensurate with the current and former activities of a particular site. Where site contamination is identified, an appropriate remediation strategy should be implemented prior to project approval. The remediation activities shall be performed by qualified and licensed professionals in the particular problem identified and all work shall be performed under the supervision of the appropriate regulatory oversight program.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

OIL CONTAMINATION

Environmental Impact: Development in accordance with the proposed General Plan may pose a health or safety hazard as a result of the existing oil facilities.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan: The Safety and Land Use Elements include the following policies:

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

SAF-4.2 Periodically review and amend the appropriate ordinances, which regulate the storage and handling of hazardous materials to conform with the standards and definitions of the State and other regulatory agencies.

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

LU-1.1 Consider launching a Brownfield Redevelopment Program.

LU-1.3 Continue to monitor federal, state and regional programs and funding sources designed to reclaim brownfields.

LU-1.4 As projects are proposed at brownfield sites, establish a task force to include representatives from the city and state, developer consultant team, and if necessary, county and/or federal representatives. The purpose of each task force will be to ensure appropriate and timely development of the brownfield site.

LU-1.5 Support, monitory and participate in the United States Conference of Mayors and their Brownfields Redevelopment Expanded Action Agenda.

LU-7.5 Through the discretionary review process, ensure that the siting of any land use which handles, generated, and/or transports hazardous substances, as defined by state and federal regulations, will not negatively impact existing sensitive receptors/land uses.

Mitigation Measures: In addition to the policies listed above, the following mitigation measures are recommended to further reduce any impacts.

MM-PHS-2 Prior to new development, the development site should be thoroughly assessed for the possible presence of contaminated materials. The level of inquiry should be commensurate with the current and former activities of a particular site. Where site contamination is identified, an appropriate remediation strategy should be implemented prior to project approval. The remediation activities shall be performed by qualified and licensed professionals in the particular problem identified and all work shall be performed under the supervision of the appropriate regulatory oversight program.

MM-PHS-3 If any structure is to be placed over or in close proximity to a previously plugged or abandoned oil or gas well, the well may need to be re-abandoned and the surrounding area remediated in accordance with current regulation. All activities related the abandonment or re-abandonment will need to be approved by the California Department of Conservation Division of Oil and Gas.

MM-PHS-4 If applicable, project applicants shall complete the State of California, Department of Conservation information packet entitled, Construction Project Site Review and Well Abandonment Procedure, for submittal and review by the Department.

MM-PHS-5 Unless underground utility locations are well documented, as determined by the City of Carson Engineering Services Department, the project applicant shall perform geophysical surveys prior to excavations to identify subsurface utilities and structures. Pipelines or conduits which may be encountered within the excavation and graded areas shall either be relocated or be cut and plugged according to the applicable code requirements.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

LANDFILLS

Environmental Impact: Development in accordance with the proposed General Plan may pose a health or safety hazard as a result of the existing landfills.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

SAF-4.2 Periodically review and amend the appropriate ordinances, which regulate the storage and handling of hazardous materials to conform with the standards and definitions of the State and other regulatory agencies.

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

LU-1.1 Consider launching a Brownfield Redevelopment Program.

LU-1.2 Explore the opportunities associated with the establishment of a landfill improvement district and/or like options.

LU-1.3 Continue to monitor federal, state and regional programs and funding sources designed to reclaim brownfields.

LU-1.4 As projects are proposed at brownfield sites, establish a task force to include representatives from the city and state, developer consultant team, and if necessary, county and/or federal representatives. The purpose of each task force will be to ensure appropriate and timely development of the brownfield site.

LU-1.5 Support, monitory and participate in the United States Conference of Mayors and their Brownfields Redevelopment Expanded Action Agenda.

LU-7.5 Through the discretionary review process, ensure that the siting of any land use which handles, generated, and/or transports hazardous substances, as defined by state and federal regulations, will not negatively impact existing sensitive receptors/land uses.

Mitigation Measures: In addition to the policies listed above, the following mitigation measure is recommended to further reduce any impacts.

MM-PHS-5 A landfill gas protection plan prepared by a licensed Civil Engineer will be required prior to the issuance of building permits.

Also, refer to Mitigation Measures MM-PHS-2 and MM-PHS-4.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

AIRCRAFT OVERFLIGHT

Environmental Impact: The accident potential from aircraft overflights may impact structures and individuals within the flight pattern of the Los Angeles terminal control area.

Level of Significant Before Policies/Mitigation: Less Than Significant Impact.

Policies in the Proposed General Plan: No policies are identified in the proposed General Plan.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

RAIL LINE HAZARDS

Environmental Impact: Development in accordance with the proposed General Plan may result in an increased hazard associated with train operations.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan: The Land Use Element includes the following policies:

LU-10.2 Work with the existing applicable task forces and prepare a special study for those areas adversely impacted by the development of the Corridor.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

CULTURAL RESOURCES

HISTORICAL STRUCTURES OR RESOURCES

Environmental Impact: Implementation of the proposed General Plan may result in the degradation or loss of historic structures or resources.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

PRC-9.1 Promote the preservation of historic resources in the City through the Fine Arts and Historical Commission.

PRC-9.2 Coordinate with the Departments of History and Anthropology at Cal State University Dominguez Hills in order to mutually enrich both the educational and general communities.

PRC-9.3 Create an oral history program that would archive the City's history from long time Carson residents.

Mitigation Measures: In addition to the policy listed above, the following mitigation measure is recommended to further reduce any impacts.

MM-CR-1 Require, as part of the environmental review procedure, an evaluation of the significance of paleontological, archaeological and historical resources and the impact of proposed development on those resources.

MM-CR-2 Promote the preservation of significant historical resources and encourage other public agencies or private organizations to assist in the purchase and/or relocation of sites, buildings and structures deemed to be of historical significance.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

ARCHAEOLOGICAL RESOURCES

Environmental Impact: Implementation of the proposed General Plan may result in the adverse change of archaeological resources.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential archaeological impacts.

Mitigation Measures: Refer to mitigation measure MM-CR-1. In addition, the following mitigation measures are recommended to further reduce any impacts.

MM-CR-3 Require monitoring of grading operations by a qualified paleontologist or archaeologist when the site is reasonably suspected of containing such resources. If, as a result, evidence of resources is found, require the property to be made available for a reasonable period of time for salvage of known paleontological and archaeological resources by qualified experts, organizations or educational institutions.

MM-CR-4 Require development on land containing known archaeological resources to use reasonable care to locate structures, paving, landscaping and fill dirt in such a way as to preserve these resources undamaged for future generations when it is the recommendation of a qualified archaeologist that said resources be preserved in situ.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

PALEONTOLOGICAL RESOURCES

Environmental Impact: Implementation of the proposed General Plan may result in the destruction of a unique paleontological resource or site or unique geologic feature.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential paleontological resource impacts.

Mitigation Measures: Refer to mitigation measures MM-CR-1 and MM-CR-3. No additional mitigation measures are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

DISTURBANCE OF HUMAN REMAINS

Environmental Impact: Implementation of the proposed General Plan may result in the disturbance of human remains.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential impacts regarding human remains or burial sites.

Mitigation Measures: Refer to mitigation measure MM-CR-1. No additional mitigation measures are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

AESTHETICS

VISUAL QUALITY

Environmental Impact: Development associated with implementation of the proposed General Plan may degrade the visual quality of the surrounding environment within the City.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

LU-2.1 Require property owners to remove abandoned and/or boarded up buildings that pose safety hazards.

LU-2.2 Continue to aggressively enforce the Property Maintenance Ordinance in order to maintain properties in transition, abandoned commercial and industrial buildings and properties.

LU-2.3 Develop an incentive rehabilitation program to compliment mandatory code enforcement and property maintenance programs.

LU-3.1 Continue to aggressively enforce the Non-Conforming Use Ordinance in order to eliminate non-conforming and/or incompatible land uses, structures and conditions.

LU-3.2 Through the zoning ordinance, control uses such as salvage yards, automobile dismantling, and scrap metal recycling operations which are not compatible with existing and anticipated development.

LU-3.3 Encourage compatible land uses to locate in appropriate areas of the City.

LU-7.4 Promote the use of buffers between more intensive industrial uses and residential uses.

LU-7.7 Coordinate with adjacent landowners, cities and the County in developing compatible land uses for areas adjacent to the City's boundaries.

LU-7.8 Coordinate with California State University at Dominguez Hills in the planning of its property to ensure compatible land uses.

LU-9.1 Continue to institute an active code enforcement program.

LU-9.2 Develop incentive programs for the improved appearance of residential, commercial and industrial areas.

LU-9.3 Continue to promote and expand programs such as the Carson Beautiful Program which recognize excellence in property upkeep in residential areas.

LU-9.4 Continue to promote programs which offer loans and grants for home repairs.

LU-9.5 Develop design standards to address permanent and effective screening of areas in transition, and heavy industrial uses such as outdoor storage yards, pallet yards, salvage yards, auto dismantling yards, and similar uses.

LU-9.6 Continue to maintain graffiti suppression and removal programs.

LU-9.7 Maintain and upgrade the City's parks, eliminating all evidence of vandalism, wear and deterioration.

LU-9.8 The City shall maintain properties in compliance with applicable regulations and shall incorporate design and maintenance standards to represent a model for private development.

LU-12.1 Develop and implement a Citywide Urban Design Plan.

LU-12.2 Adopt a "Carson Green" program to encourage public/private partnerships in the landscaping of the community.

LU-12.3 Review landscape plans for new development to ensure that landscaping relates well to the scale of structures, the land uses it serves, as well as to the surrounding area.

LU-12.4 Consider amending the landscaping requirements in the Zoning Ordinance to enhance the appearance of the community and to provide for the use of trees to provide shade.

LU-12.5 Improve City appearance by requiring landscaping to screen, buffer and unify new and existing development. And ensure continued maintenance and upkeep of landscaped areas.

LU-12.6 Consider the establishment of an ad hoc Carson Beautification Committee.

LU-13.1 Promote a rhythmic and ceremonial streetscape along the City's arterial roadways, continuing the use of landscaped medians.

LU-13.2 Develop a street tree planting and replacement program for the City's arterial roadways.

LU-13.3 Continue and, when possible, accelerate the undergrounding of utility lines throughout the City.

LU-13.4 Encourage architectural variation of building and parking setbacks along the streetscape to create visual interest, avoid monotony and enhance the identity of individual areas. And encourage pedestrian orientation by appropriate placement of buildings.

LU-13.5 Continue to require landscaping treatment along any part of a building site which is visible from City streets.

LU-13.6 Consider the use of contrasting paving for pedestrian crosswalks to add visual interest to the streetscape and create pedestrian amenities.

LU-13.7 Ensure proper maintenance of parkways along arterial streets and landscaping of private property visible from the public right-of-way.

LU-14.1 Work with Caltrans to provide and maintain an attractive freeway environment in Carson, including access ramps.

LU-14.2 Require new commercial or industrial development adjacent to, and visible from, the freeways and their ramps, to incorporate full architectural and landscape treatment of the building on the freeway side.

LU-14.3 Seek all available funds and consider using redevelopment funds to enhance freeway portals to the City.

LU-16.2 Based on City priorities, determine whether a Specific Plan, redevelopment program, urban design plan, streetscape improvement program, or other plan(s), program(s), and/or document(s) are the desirable implementation tool(s). The City should then embark upon such a study.

ED-3.9 Leverage public improvements to facilitate economic development.

ED-3.10 Provide rehabilitation assistance in targeted commercial districts to enable the upgrading of commercial properties.

ED-7.2 Improve the actual and perceived image of the City through improved design standards, amenities, security, continuing public improvements, and positive advertising campaigns.

ED-11.1 Encourage the redevelopment and cleanup of underutilized and contaminated land.

TI-4.2 Provide appropriate pedestrian access throughout the City. Develop a system of pedestrian walkways, alleviating the conflict between pedestrians, automobiles and bicyclists where feasible.

SAF-6.8 Ensure appropriate signage, street striping and other markings at crosswalks for pedestrian safety. And ensure the visibility of signage and markings through proper landscape maintenance including trimming of shrubbery and trees.

OSC-1.1 Preserve and enhance the existing open space resources in Carson.

OSC-1.2 Maintain the existing landscaping along the City's major streets and expand the landscaping program along other arterial streets throughout the community.

OSC-1.3 Continue to require that adequate, usable and permanent private open space is provided in residential developments.

OSC-1.4 Require access between open space and recreation areas and adjacent developments, where appropriate.

PRC-1.1 Acquire additional parkland whenever it is financially feasible.

PRC-1.4 Promote greater cooperation and coordination with other City departments and public agencies, and encourage the construction of new park facilities in developed areas of Carson as infill development occurs.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

LIGHT AND GLARE

Environmental Impact: Light and glare from new development associated with implementation of the proposed General Plan may adversely affect sensitive receptors such as residential uses.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Policies in the Proposed General Plan:

LU-7.2 Periodically review, and amend if necessary, the City's Zoning Ordinance to ensure the compatibility of uses allowed within each zoning district.

LU-7.4 Promote the use of buffers between more intensive industrial uses and residential uses.

LU-9.8 The City shall maintain properties in compliance with applicable regulations and shall incorporate design and maintenance standards to represent a model for private development.

LU-12.5 Improve City appearance by requiring landscaping to screen, buffer and unify new and existing development. And ensure continued maintenance and upkeep of landscaped areas.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

3.0 PROJECT DESCRIPTION

3.1 LOCATION

The City of Carson is located in the South Bay/Harbor area of the County of Los Angeles, approximately 13 miles south of downtown Los Angeles. Carson is surrounded by the City of Los Angeles on the north and northwest, south and southeast. The City of Compton is adjacent to the northeast and the City of Long Beach is adjacent to the east. Unincorporated areas of Los Angeles County are located on the north, southwest and east. The City is also in close proximity to a number of points of interest: the Ports of Los Angeles and Long Beach are two to three miles away, as is the Long Beach Airport. Los Angeles International Airport is approximately eight miles away. Tourist attractions such as the Queen Mary, Ports O'Call, the Aquarium of the Pacific in Long Beach, and beaches are in close proximity as well.

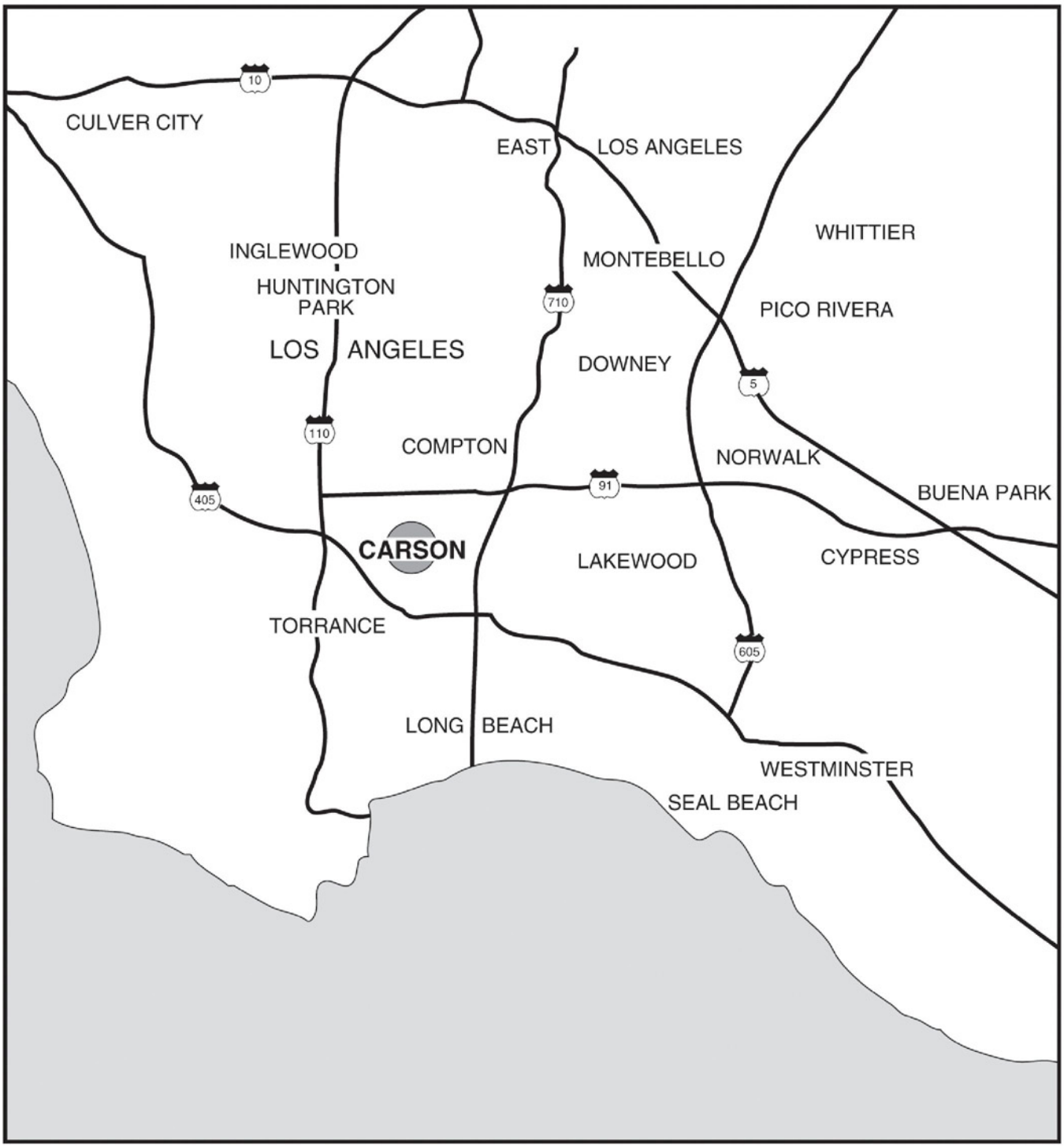
There are four freeways that provide direct access to Carson: San Diego Freeway (I-405), which bisects the City in an east-west direction; Long Beach Freeway (I-710), which forms a portion of the eastern border of Carson; Redondo Beach/Artesia Freeway (SR-91), in the northern portion of the City; and the Harbor Freeway (I-110), which forms much of the western border of the City. Exhibit 3-1, *Regional Location*, shows the City's location in a regional context.

3.2 ENVIRONMENTAL SETTING

The City of Carson is approximately 19.2 square miles in size, making it the eighth largest City in land area in Los Angeles County. The City is relatively flat with most elevations ranging from between 20 to 40 feet, with the exception of the Dominguez Hills in the northeast area of the City where elevations climb to 195 feet. The City's lowest points are at Del Amo Park with an elevation of 5 feet below sea level, and in the Dominguez Channel with an elevation of almost 15 feet below sea level.

As shown on Exhibit 3-2, *Local Vicinity*, the City's western boundary is formed by I-110 (south of 190th Street/Victoria Street), and by Figueroa Street (north of 190th Street/ Victoria Street). Alondra Boulevard is the northernmost boundary for the City, with most of the City located south of SR-91. The eastern boundary of Carson is irregular falling along portions of Central Avenue, Wilmington Avenue, I-710 (which is the furthest east the City extends), Santa Fe Avenue, and just west of the Union Pacific Railroad lines. Lomita Boulevard forms much of the southern boundary, with a small triangular area in the southeast portion of the City extending almost to Pacific Coast Highway (SR-1).

Generally speaking, the City is an urban community with a broad mix of land uses including housing, commercial, office, industrial, parks, open space, and public serving uses. It should be recognized that Carson is primarily builtout (approximately 83 percent), with approximately 17 percent of its land area left to develop.



NORTH

MAP NOT TO SCALE

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Regional Location

EXHIBIT 3-1

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

LOCAL VICINITY

EXHIBIT 3-2

3.3 BACKGROUND

3.3.1 PLANNING AT THE TIME OF CITY INCORPORATION

The City of Carson was incorporated in February 1968. Shortly following the City's incorporation a number of annexations occurred that expanded the City's land area. These annexations included the Lincoln-Dominguez and Stevenson Villages, and the industrial property to the east of the City.

Prior to the incorporation of the City of Carson, the County of Los Angeles was responsible for all of the land use planning functions for the area. The City's first General Plan was adopted in 1971. The City's first zoning ordinance consisted of adopting the Los Angeles County Ordinance by reference; in 1977, the City adopted its own Zoning Code.

3.3.2 EXISTING GENERAL PLAN

After the 1980 Census, the City's first General Plan was updated; the current General Plan is the one updated in the early 1980s, with subsequent elements adopted/updated later. The current General Plan consists of four units, each containing multiple elements, as well as two elements not included within a unit. Below are a summary of the elements, the units in which they are contained (where applicable), and the date of adoption.

Unit 1
Land Use, Open Space, Public Services & Facilities, and Recreation Elements
(1982)

Unit 2
Circulation Element and Bicycle Facilities Section
(1981)

Unit 3
Safety, Seismic Safety, and Noise Elements
(1981)

Unit 4
Historic Preservation, Fine Arts, Conservation, and Scenic Highways Elements
(1981)

Housing Element
(2001-2002)

Air Quality Element
(1994)

The Land Use Element identifies land use designations and the uses permitted for each land use category. The existing Land Use Element includes the following land use designations:

- Low Density Residential (1-8 dwelling units/acre);
- Medium Density Residential (9-12 dwelling units/acre);
- High Density Residential (13-25 dwelling units/acre);
- General Commercial;
- Regional Commercial;
- Light Industry;
- Heavy Industry; and
- Public Facilities.

Table 3-1, *Existing Development by General Plan Land Use Category with Zoning Equivalence*, provides a breakdown of uses by acreage, as well as square footage and zoning designation.

SPHERE OF INFLUENCE

In 1973, the Local Agency Formation Commission (LAFCO) designated land within unincorporated Los Angeles County as being within the City of Carson's Sphere of Influence[1] (SOI). The SOI area is generally bounded on the west by Wilmington Avenue, on the north by Victoria Street, on the east by Alameda Street and the railroad tracks, and on the south by Del Amo Boulevard. The land within the SOI is designated as industrial by both the Los Angeles County General Plan and Zoning Code. Industrial uses are the primary land use found within the SOI; however, some residential uses (i.e., mobile home park) are also found in the SOI. The City of Carson has not applied either general plan or zoning designations to SOI land.

Acreage within the SOI is not accounted for in Table 3-1.

3.4 STATEMENT OF PROGRAM EIR OBJECTIVES

The City of Carson's objectives for the proposed General Plan and General Plan EIR are as follows:

- Update the City's environmental baseline conditions to the year 2000/2001.

- Update the General Plan development projections for the year 2020, including projections for dwelling units, non-residential square footage, population and employment.

- Conform with Section 21000 et. seq. of CEQA, which requires that environmental impacts be addressed and mitigated.

[1] Sphere of Influence is defined as the probable physical boundaries and service area of a local agency, as determined by the Local Agency Formation Commission of the County.

Table 3-1
Existing Development By General Plan Land Use Category With Zoning Equivalence
Revised March 14, 2001

Existing General Plan Land Use Category	Existing Zoning	Acreage	Density/ Intensity	No. of Units/ Sq. Footage
Residential				
Low Density	RS, RA, RM-8	2,432.9	1 – 8 dus/ac.	18,244 dus
Medium Density	RM-12	109.7	9 – 12 dus/ac.	1,127 dus
High Density	RM-25	350.7	13 – 25 dus/ac.	4,203 dus
Commercial				
General Commercial	CG, CN	288.8	0.32 (avg.) 0.7 (max.)	2,383,114 sf
Regional Commercial	CR	320.3	0.32 (avg.) 0.7 (max.)	1,652,268 sf
Industrial				
Light Industry	ML	1,496.6	0.34 (avg.) 0.5 (max.)	17,268,562 sf
Heavy Industry	MH	4,000.2	0.2 – 0.7 (avg.) 1.0 (max.)	23,200,526 sf
Other				
Public Facilities	OS, SU	1,177.3		N/A
Total		**10,176.4**		**24,830 dus*/44,504,470**

* Includes 989 mobile home units currently located in areas designated for non-residential uses, as well as 267 other residential units currently located in areas designated for non-residential purposes.

NOTES:

1) Acreage: Calculated by RBF Consulting, GIS Department, July 25, 2000, based on information provided by the City of Carson.

2) Residential number of units: Based on information supplied by City of Carson, GIS Department, January, 2001. Includes 989 mobile home units currently located in areas designated for non-residential uses, as well as 267 other residential units currently located in areas designated for non-residential purposes.

3) Square footage for non-residential uses: Non-residential square footages are based on information supplied by the City of Carson Planning Department, December 14, 2000, which was based on the City of Carson GIS data base (information provided by the Los Angeles County Assessors Office).

4) General Commercial: Includes Goodwill, Auto Zone, RV Center and Blockbuster projects under construction.

5) Light Industry – Includes Dominguez Technology Center, Lakeshore and Ducommun projects under construction. A total of 282,360 sq. ft of Light Industry are used for commercial purposes, including 110,700 sq. ft. at the Carson Depot Center (Home Depot) and 171,660 sq. ft. at the Super K-Mart Center.

6) Heavy Industry – Includes IDS, Watson Land (220th Street), Watson Land (Arnold Center), IDI, and the Hewson Development project on Sepulveda Boulevard, as well as the southern corners of Victoria and Figueroa Streets. A total of 361,700 sq. ft. of Heavy Industry is used for office purposes, including the Nissan headquarters.

7) Floor area ratios (FARs) – FARs for non-residential uses were developed using the City of Carson GIS data base (original information provided by the Los Angeles County Assessors Office). For purposes of estimating FARs, those properties with a "zero" value for either building or land area in the Assessors Office parcel information have not been included. Also these estimates do not include the following properties (due to the types of facilities on these properties): Shell/Ashland, ARCO, GATX, Fletcher Oil, and the Los Angeles County Sanitation District property in the southwestern corner of the City.

8) Sphere of Influence – The total acreage does not include acreage for land within the City's Sphere of Influence.

- Prepare and certify a General Plan EIR (Program EIR) that will serve as a first tier environmental document, consistent with the requirements of Section 15152 of the CEQA Guidelines.

- Provide a basis for informative decisions when considering the 2020 development associated with implementation of the General Plan in the City of Carson.

- Provide a legally defensible environmental foundation upon which decisions may be evaluated and justified.

3.5 PROJECT CHARACTERISTICS

3.5.1 ELEMENTS AND COMPONENTS OF THE PROPOSED GENERAL PLAN

The proposed General Plan is a comprehensive update of the current General Plan. The update includes a reorganization of the General Plan into the following elements: Land Use; Economic Development; Transportation and Infrastructure; Housing; Safety; Noise; Open Space and Conservation; Parks, Recreation and Human Services; and Air Quality.

Major components of the General Plan include:

- Update of existing conditions, with year 2000/2001 serving as the baseline year.

- Update of General Plan development projections to the year 2020. Projections for population, employment, residential development and non-residential development have been updated for the year 2020.

- Amendment of the Land Use Element, including:

  - Establishment of building intensities for all commercial, industrial and institutional land use categories.

  - Refinement of uses within the Public Facilities designation, which includes separating the uses into three land use designations: 1) Public and Institutional Uses, 2) General Open Space (new designation) and 3) Recreational Open Space (new designation).

  - Creation of two new land use designations: Business Park/Limited Industrial and Mixed Use.

  - Creation of a new Land Use Map.

- Amendment of the remaining General Plan Elements to reflect items 1 and 2, above.

- Additions, Deletions or Modifications to the General Plan Goals, Policies and Implementation Programs.

3.5.2 STUDY AREAS/LAND USE ALTERNATIVES

The development of General Plan land use alternatives was derived from a focused look at 24 study areas (and their sub-areas) located throughout the City. The study areas are typically vacant, underutilized, brownfields, need redevelopment, and/or need to be re-evaluated in terms of land use due to location, transition of uses, etc. These study areas were identified through the Carson Vision process, interviews, and workshops with City staff and decision-makers, as well as through meetings with members of the General Plan Advisory Committee and open houses with the community. Refer to Exhibit 3-3, *Study Area Locations*, and Table 3-2, *Proposed Plan Land Use Changes*, which details the proposed changes in land uses for each of the study areas.

The range of land use options for the 24 study areas were then folded into three land use alternatives, which are shown in Table 3-3, *Carson Proposed General Plan Summary of Land Use Alternatives*. Alternative A is the existing General Plan. Alternative B is the proposed General Plan and is illustrated in Exhibit 3-4, *Proposed General Plan Land Use Map*. Alternatives C and D are modifications of Alternative B.

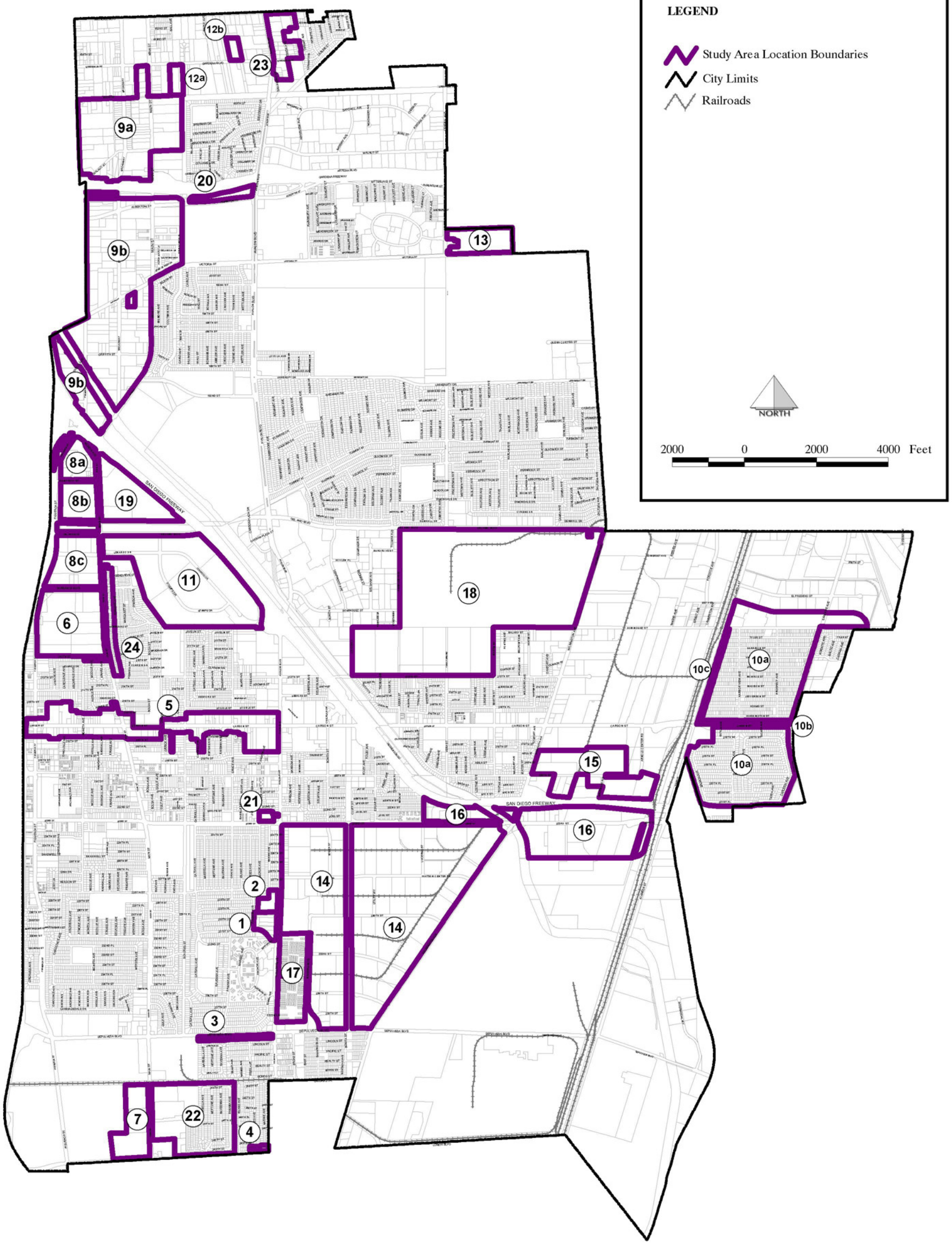
3.5.3 LAND USE PLAN

The General Plan Land Use Map identifies the type, location and density/intensity of future development within the City of Carson (refer to Exhibit 3-4, *Proposed General Plan Land Use Map*).

3.5.4 LAND USE DESIGNATIONS

The City of Carson is largely built out (approximately 83 percent), and existing development generally corresponds with the current General Plan. Therefore, the proposed General Plan proposes little change to the descriptions of the existing land use categories. However, there are two new land use designations that are proposed in the General Plan: 1) Business Park/Limited Industrial and 2) Mixed Use.

In addition, the proposed General Plan includes a refinement of uses within the Public Facilities land use designation. Under the existing General Plan, open space uses are included under the "Public Facilities" land use category. As part of the proposed General Plan, it is proposed that the City's open space uses receive land use designations separate and apart from "Public Facilities," which will now be referred to as Public and Institutional Uses. The proposed open space designations are General Open Space and Recreational Open Space.



Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

STUDY AREA LOCATIONS

EXHIBIT 3-3

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Table 3-2
Proposed Plan Land Use Changes

Study Area No.	Existing General Plan Designation	Existing Use(s)	Proposed General Plan Designation	Proposed Change to Land Use(s)
1	General Commercial	75,438 sf (vacant/abandoned strip mall)	Medium Density Residential	• Reduce General Commercial by 75,438 sf (currently vacant) to 0 sf • Add 107 dus of Medium Density Residential
2	General Commercial	0 sf	Medium Density Residential	• Add 72 dus of Medium Density Residential
3	General Commercial	35,555 sf	General Commercial High Density Residential	• Reduce General Commercial by 21,620 sf to 13,935 sf • Add 57 dus of High Density Residential
4	Low Density Residential	62 dus (apartments)	High Density Residential	No change in unit count
5	Low Density Residential Medium Density Residential High Density Residential General Commercial Regional Commercial	93 dus 1 du 22 dus 460 dus & 854,914 sf 5 dus & 19,660 sf	Mixed Use	• Add 528 dus • Add 39,600 sf of Mixed Use (commercial & office uses)
6	Light Industrial Heavy Industrial	328,184 sf (commercial) 8,020 sf	General Commercial Business Park	• Add 26,100 sf of General Commercial • Reduce Heavy Industrial by 8,020 sf to 0 sf • Add 1,073,900 sf of Business Park
7	Heavy Industrial	35,374 sf (abandoned oil refinery)	Light Industrial	• Reduce Heavy Industrial by 35,374 sf (abandoned) • Add 660,500 sf of Light Industrial
8a	Heavy Industrial	387,944 sf	Light Industrial	• Add 419,000 sf of Light Industrial
8b	Light Industrial	7,376 sf (abandoned/vacant Drive-In)	Light Industrial	• Reduce 7,376 sf of vacant Drive-In • Add 450,100 sf of Light Industrial
8c	Light Industrial	208,346 sf	Light Industrial	• Add 457,400 sf of Light Industrial
9a	Light Industrial Heavy Industrial	28,603 sf 1,205,205 sf	Light Industrial	• Add 652,800 sf of Light Industrial
9b	Heavy Industrial Public Facility	3,012,091 sf 0 sf	Light Industrial Public Facility	• Add 700,000 sf of Light Industrial • No Change in Public Facility
10a	Low Density Residential High Density Residential General Commercial Light Industrial	1,545 dus 267 dus 1,280 sf 528,754 sf	No Change	No Change
10b	General Commercial Light Industrial	73,798 sf 14,342 sf	No Change	No Change
10c	Light Industrial	64,406 sf	No Change	• Add 20,000 sf of Light Industrial
11	Regional Commercial Light Industrial	0 sf	Mixed Use	• Add 2,700,000 sf (Regional Commercial and Office) • Add 300,000 sf (Hotel)

Table 3-2 - Continued
Proposed Plan Land Use Changes

Study Area No.	Existing General Plan Designation	Existing Use(s)	Proposed General Plan Designation	Proposed Change to Land Use(s)
12a	Light Industrial	50 dus (MHP)	No Change	• Reduce 50 du of MHP • Add 128,000 sf of Light Industrial
12b	Light Industrial	81 dus (MHP)	No Change	• Reduce 81 du of MHP • Add 86,000 sf of Light Industrial
13	Heavy Industrial	0 sf	General Commercial Light Industrial	• Add 54,500 sf of General Commercial • Add 430,000 sf of Light Industrial
14	Light Industrial Heavy Industrial	95,856 sf 5,996,711 sf	No Change	No Change
15	Light Industrial	282,500 sf	No Change	• Add 1,137,200 sf of Light Industrial
16	Light Industrial Heavy Industrial Public Facility	16,290 sf 123,748 sf 0 sf	Regional Commercial Heavy Industrial Public Facility	• Add 164,000 sf of Regular Commercial • Add 650,400 sf of Heavy Industrial • No change in Public Facility
17	High Density Residential	599 dus	No Change	No Change
18	Heavy Industrial	120,000 sf (abandoned oil refinery)	Low Density Residential General Commercial Light Industrial Heavy Industrial	• Reduce Heavy Industrial by 120,000 sf (abandoned) • Add 137 dus of Low Density Residential • Add 79,500 sf of General Commercial • Add 4,072,500 sf of Light Industrial
19	General Commercial Light Industrial	12 dus & 6,995 sf 20,642 sf	No Change	• No Change in General Commercial • Add 140,900 sf of Light Industrial
20	General Commercial	147,989 sf (abandoned hotel)	No Change	• Add 87,100 sf of General Commercial • Assume hotel to become occupied
21	General Commercial	15,000 sf (vacant)	Mixed Use	• Reduce General Commercial by 15,000 sf (vacant) • Add 54 dus • Add 5,900 sf of General Commercial
22	Low Density Residential Light Industrial	354 dus 731,404 sf	No Change	No Change
23	Light Industrial Heavy Industrial	133,503 sf 379,905 sf	Business Park	• Add 237,800 sf of Business Park
24	Low Density Residential General Commercial Light Industrial	54 dus 5,925 sf 43,866 sf	Low Density Residential Light Industrial	• Add 8 dus of Low Density Residential • Add 18,300 sf of Light Industrial

Table 3-3
Carson Proposed General Plan Summary of Land Use Alternatives

Land Use	Alternative A: Existing General Plan	Alternative B: Proposed Plan	Alternative C: Modified Proposed Plan 1	Alternative D: Modified Proposed Plan 2
Residential				
Low Density	2,432.9 ac.	2,446.5 ac.	2,458.5 ac.	2,426.9 ac.
Medium Density	109.7 ac.	122.8 ac.	109.7 ac.	107.9 ac.
High Density	350.7 ac.	352.4 ac.	350.7 ac.	348.5 ac.
Commercial				
General Commercial	288.8 ac.	233.8 ac.	372.8 ac.	297.7 ac.
Regional Commercial	320.3 ac.	293.2 ac.	411.6 ac.	343.0 ac.
Mixed Use	0.0 ac.	247.0 ac.	16.2 ac.	99.0 ac.
Industrial				
Business Park	0.0 ac.	153.2 ac.	153.2 ac.	142.5 ac.
Light Industrial	1,496.6 ac.	1,917.2 ac.	1,933.9 ac.	1,618.5 ac.
Heavy Industrial	3,989.5 ac.	3,221.9 ac.	3,181.4 ac.	3,604.0 ac.
Other				
Recreational Open Space	0.0 ac.	316.5 ac.	316.5 ac.	316.5 ac.
General Open Space	0.0 ac.	284.5 ac.	284.5 ac.	284.5 ac.
Public Facilities	1,188.0 ac.	587.4 ac.	587.4 ac.	587.4 ac.
TOTAL	**10,176.4 ac.**	**10,176.4 ac.**	**10,176.4 ac.**	**10,176.4 ac.**

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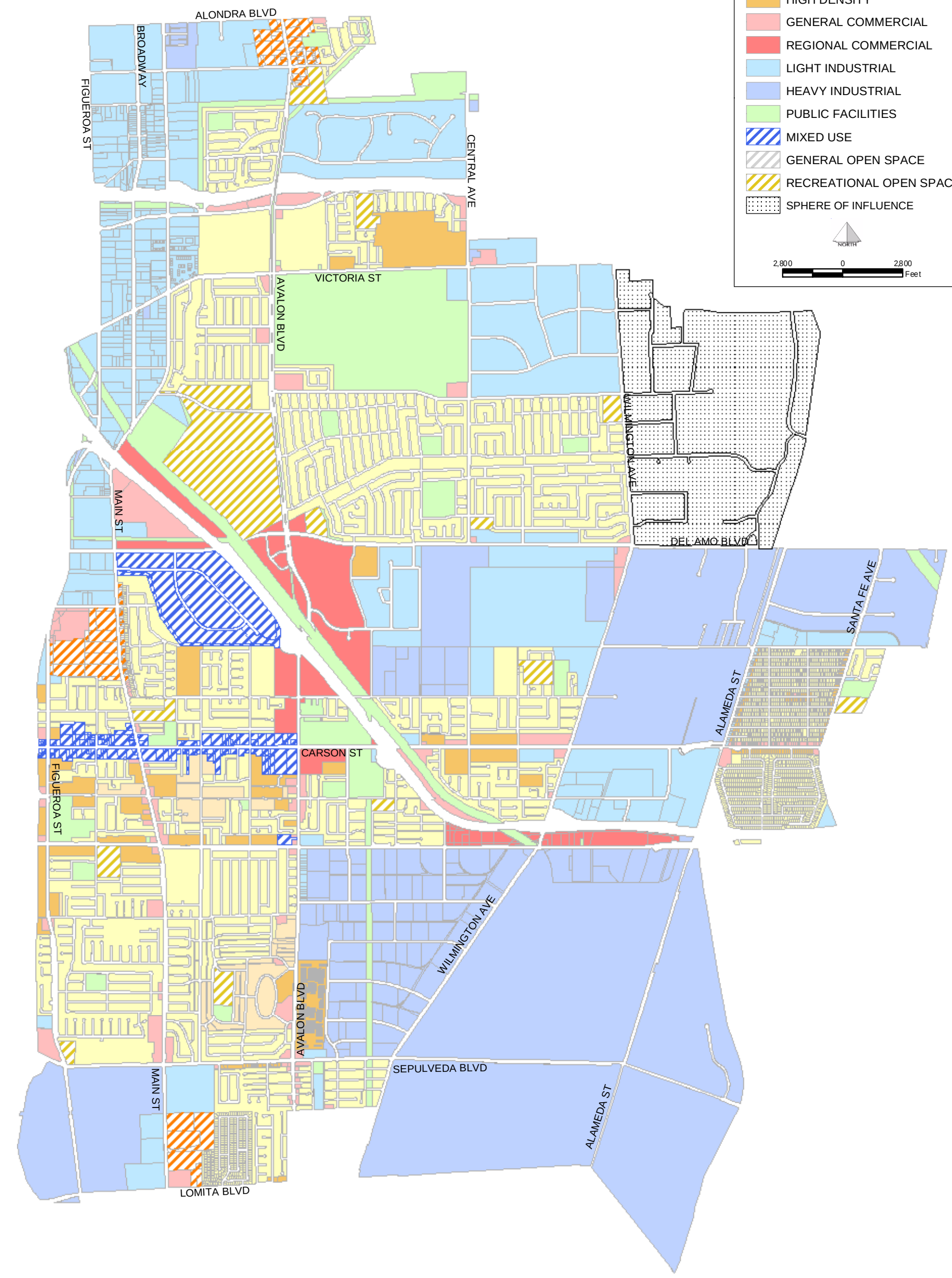
CARSON GENERAL PLAN EIR



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

PROPOSED GENERAL PLAN LAND USE MAP

EXHIBIT 3-4

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RESIDENTIAL LAND USES

The 1982 Carson General Plan Land Use Element classified the residential areas of the City into Low, Medium and High Density categories. There are no changes proposed to the residential land use designations.

A description of each residential land use designation follows.

Low Density Residential. Low Density Residential includes all residential areas composed of single-family detached dwellings and like development considered harmonious with such low density residential development. The maximum density allowed is 8 dwelling units per acre (du/ac).

Medium Density Residential. Medium Density Residential is intended to provide for multiple dwelling units as well as single-family detached dwellings, and like development considered harmonious with such medium density residential development. Residential densities of up to 12 du/ac are allowed.

High Density Residential. High Density Residential areas are intended to provide for multiple dwelling units, combinations of multiple- and single-family residential units, as well as like development considered harmonious with such high density residential development. Residential densities of up to 25 du/ac are allowed.

COMMERCIAL LAND USES

Commercial land uses encompass those retail and service establishments which are planned to serve neighborhood, city-wide or regional clientele. There are two commercial land use categories. There are no changes proposed to the commercial land use designations. Below is a description of each commercial land use designation and a discussion about floor-to-area ratios (FAR).

General Commercial. This commercial designation includes both general and neighborhood commercial land uses that provide both highway-oriented and smaller neighborhood retail opportunities. The maximum allowable FAR is 0.5, the average FAR which will ultimately be built out for this land use is expected to be approximately 0.25 to 0.32.

Regional Commercial. This land use category includes uses intended to serve a broad population base. Businesses in this designation provide a wider array of services such as major department stores, specialty shops, as well as hotels and motels. Regional Commercial is intended to provide for the City's primary shopping center and its peripheral areas. The purpose of this land use designation is to offer the widest range of goods and services to both the community and the region. The maximum allowable FAR is 0.6, the average FAR which will ultimately be built out for this land use is expected to be approximately 0.32.

INDUSTRIAL LAND USES

Industrial areas are intended to accommodate the manufacturing, processing, warehousing and distribution functions of the community. There are three industrial classifications identified herein, one of which, Business Park, is a new category proposed to be incorporated into the proposed General Plan. Below is a description of each industrial land use designation and floor-to-area ratios (FAR) for each designation.

Business Park /Limited Industrial. This new land use category is intended to provide for the least intensive industrial uses. It is envisioned that this land use category will accommodate a variety of businesses and professional offices, services, and associated business and retail activities in an attractive environment. These uses are also intended to provide a buffer between residential and/or commercial land uses and other heavier industrial uses. The maximum allowable FAR is 0.5, the average FAR which will ultimately be built out for this land use is expected to be approximately 0.42.

- In Alternative B: Proposed Plan, the Business Park designation is recommended as a component of the Mixed Use designation for the Cal Compact site (Study Area No. 11).
- In Alternative C: Modified Proposed Plan 1, the Business Park designation is recommended for Carson Town Center, located on the west side of Main Street, south of Torrance Boulevard (Study Area No. 6).
- In Alternative C: Modified Proposed Plan 2, this designation is recommended for the Village Center, also known as the Try-It Mall, on Avalon Boulevard (Study Area No. 2).

Light Industrial. Light Industrial areas are intended to provide for small- and medium-sized industrial uses which are not likely to have adverse effects upon adjacent properties. These uses are also intended to provide a buffer between residential and/or commercial land uses and other heavier industrial uses. The maximum allowable FAR is 0.5, the average FAR which will ultimately be built out for this land use is expected to be approximately 0.42.

Heavy Industrial. Heavy Industrial areas are intended to provide for a full range of industrial uses which are acceptable within the community, but whose operations require provisions for controlling adverse effects upon the more sensitive areas of the City. These uses are intended to be separated from residential and commercial uses. The maximum allowable FAR is 1.0, the average FAR which will ultimately be built out for this land use is expected to range between 0.5 to 0.7.

OPEN SPACE USES

Under the existing General Plan, open space uses are included under the category "Public Facilities." As part of the proposed General Plan, it is proposed that the City's open space uses receive land use designations separate and apart from "Public Facilities"; the proposed open space designations are General Open Space and Recreational Open Space.

General Open Space. This new land use category would apply to land or water that is essentially unimproved for the purposes of the management of natural resources; the production, preservation and/or enhancement of natural resources; or public health and safety. The Dominguez and Compton Channels, utility easements, and like uses are found within this land use category.

Recreational Open Space. This new land use category is intended to provide for public and private open space recreational uses designed to meet the active and passive recreational needs of the community. City-owned parks, regional parks, golf courses and other similar uses are allowed in the category.

OTHER LAND USES

Mixed Use. The Mixed Use category is another new land use designation proposed to be incorporated into the proposed General Plan. The Mixed Use designation provides opportunities for mixtures of commercial, office and/or residential uses in the same building, on the same parcel, or within the same area.

The densities and intensities will vary within this land use designation based on actual uses proposed; in general, it is envisioned that the maximum allowable FAR will be 0.5 for the non-residential components of any mixed use projects. The residential densities will also vary, but are expected to be in the Medium to High Density ranges. Below is a description, by Alternative, of expected square footage and number of dwelling units for each of the Mixed Use areas.

Areas recommended for the new Mixed Use designation in Alternative B: Proposed Plan, include:

- The Carson Street Mixed Use Corridor (Study Area No. 5), with a combination of residential and commercial uses as identified in the adopted Zoning Overlay for the area. It is anticipated that there will be an additional 528 dwelling units and 39,600 square feet of commercial and office uses developed over the next 20 years along this corridor.

- The Cal Compact site (Study Area No. 11), with a combination of Regional Commercial, Business Park, and Light Industrial uses. It is anticipated that there will be 2.7 million square feet of regional commercial and office uses developed at this site as well as a 300,000 square foot hotel.

Areas recommended for the new Mixed Use designation in Alternative C: Modified Proposed Plan 1, include:

- The Village Center, also known as the Try-It Mall (Study Area No.1), with a combination of residential and commercial uses. It is anticipated that the abandoned 75,438 square foot commercial center will be removed and in its place will be 54 dwelling units and 48,000 square feet of commercial uses. This land use designation would be implemented by the OS - Open Space zone.

- The commercial area along the south side of Sepulveda Boulevard, between Avalon Boulevard and Marbella Avenue (Study Area No. 3), with a combination of commercial and residential uses. It is anticipated that the commercial uses will be reduced from 21,620 square feet to 13,935 square feet and that 57 High Density Residential units will be constructed along this corridor in the next 20 years.

Areas recommended for Mixed Use in Alternative D: Modified Proposed Plan 2, include:

- The vacant property north of the Village Center (Study Area No. 2), with a combination of residential and commercial uses. It is anticipated that there will be 36 dwelling units and 30,000 square feet of commercial uses at this site.

PUBLIC AND INSTITUTIONAL USES

This land use category has been refined from the previous designation of Public Facilities. Uses found within this land use category include city or government offices and facilities, the Sheriff's Station, public schools, California State University, Dominguez Hills, cemeteries or other similar uses.

3.5.5 PROJECTED LAND USE GROWTH

The City of Carson is approximately 83 percent built out. As such, the proposed General Plan will focus on preserving residential neighborhoods, guiding the remaining development opportunities, and encouraging the revitalization of selected areas. In total, these efforts are anticipated to result in a General Plan 2020 planning horizon condition with the following scenario:

- 26,669 dwelling units;
- 2,180,891 square feet of general commercial;
- 1,632,608 square feet of regional commercial;
- 3,920,074 square feet of mixed use;
- 1,825,108 square feet of business park;
- 31,042,634 square feet of light industrial; and
- 18,846,223 square feet of heavy industrial.

For the non-residential categories, these numbers represent a total of 59,447,538 square feet of development. The 26,669 dwelling units will result in a City population of 98,602 in 2020.

In addition to the General Plan 2020 estimates, the City has developed estimates for growth over existing conditions. The anticipated growth in residential, commercial, industrial and business parks uses over year 2000 conditions is:

- 1,839 dwelling units; and
- 14,943,068 square feet of commercial, mixed use, business park and industrial related uses.

Refer to Table 3-4, *Projected Additional Residential Development - 2020*, and Table 3-5, *Projected Additional Non-Residential Development – 2020*, which provide a summary of development by General Plan land use categories, projected additional residential development in 2020, and projected additional non-residential development in 2020.

Table 3-4
Projected Additional Residential Development – 2020

Total New Dus	Low Density (LDR) (1-8 dus/ac.)	Medium Density (MDR) (9-12 dus/ac)	High Density (HDR) (13-25 dus/ac.)	Residential in Non-Residential Areas	Mixed Use – Residential
Study Areas	-10	+178	+97	-596	+1,015
Projects Underway	+177	0	+830	N/A	+148
Sub-Total	+167	+178	+927	-596	+1,163
TOTAL		**+1,839**			

Table 3-5
Projected Additional Non-Residential Development – 2020

	General Commercial	Regional Commercial	Mixed Use	Business Park	Light Industrial	Heavy Industrial
Near-Term	0	0	0	0	+275,460 sf	+143,836 sf
Long-Term	- 202,223 sf	- 19,660 sf	+3,920,074 sf	+1,825,108 sf	+13,498,612 sf	- 4,498,139 sf
Sub-Total	- 202,223 sf	- 19,660 sf	+3,920,074 sf	+1,825,108 sf	+13,774,072 sf	- 4,354,303 sf
TOTAL	**+14,943,068 sf**					

SPHERE OF INFLUENCE

For purposes of this EIR, no land use designations were applied to land within the City's Sphere of Influence. This EIR does not analyze any changes in land use or additional development within the SOI. Future annexation of the SOI into the City would be subject to separate environmental review.

3.5.6 PROPOSED GENERAL PLAN GOALS AND POLICIES

Each element of the General Plan contains goals and policies based upon the needs and desires of the community, as derived from the General Plan, Carson Vision, background research, planning staff and members of the City Council.

A goal is defined as a broad vision of what the community wants to achieve or provide to residents, landowners, business owners and tourists. It is a statement of a desired

condition based on community values. Goals are general in nature and usually timeless. A policy is a specific statement that guides decision-making. It indicates a commitment of the City to a particular course of action. A policy is based on and helps implement a goal. The following are the goals and associated policies that have been set for the proposed General Plan.

LAND USE ELEMENT

The guiding principle, goals and policies that address land use are as follows:

Guiding Principle: *The City of Carson is committed to providing a balance of land uses including residential, commercial, industrial, educational, recreational, and open space. The City is also committed to providing quality development which incorporate features such as integrated, walkable, and mixed use neighborhoods. Furthermore, the City is committed to facilitating the adaptive reuse of former landfills and contaminated sites.*

The City of Carson is committed to creating an attractive environment for its citizens by developing, implementing and enforcing community design guidelines which will assure quality development and the maintenance and beautification of properties.

Adaptive Reuse of "Brownfields"

Goal:	**LU-1:**	**Productive reuse of "brownfield" sites.**
Policies:	LU-1.1	Consider launching a Brownfield Redevelopment Program.
	LU-1.2	Explore the opportunities associated with the establishment of a landfill improvement district and/or like options.
	LU-1.3	Continue to monitor federal, state and regional programs and funding sources designed to reclaim brownfields.
	LU-1.4	As projects are proposed at brownfield sites, establish a task force to include representatives from the City and State, developer, consultant team, and if necessary, county and/or federal representatives. The purpose of each task force will be to ensure appropriate and timely development of the brownfield site.
	LU-1.5	Support, monitor and participate in the United States Conference of Mayors and their Brownfields Redevelopment Expanded Action Agenda.

See also the Goals and Policies in the Economic Development Element.

Effective Development of Underutilized Properties and Redevelopment of those Properties Which Detract from the Community

Goal:	**LU-2:**	**Rehabilitation and/or removal of abandoned buildings/ facilities.**
Policies:	LU-2.1	Require property owners to remove abandoned and/or boarded up buildings that pose safety hazards.
	LU-2.2	Continue to aggressively enforce the Property Maintenance Ordinance in order to maintain properties in transition, abandoned commercial and industrial buildings and properties.
	LU-2.3	Develop an incentive rehabilitation program to compliment mandatory code enforcement and property maintenance programs.
Goal:	**LU-3:**	**Removal of incompatible and non-conforming uses which detract from the aesthetics and safety of the community.**
Policies:	LU-3.1	Continue to aggressively enforce the Non-Conforming Use Ordinance in order to eliminate non-conforming and/or incompatible land uses, structures and conditions.
	LU-3.2	Through the zoning ordinance, control uses such as salvage yards, automobile dismantling, and scrap metal recycling operations which are not compatible with existing and anticipated development.
	LU-3.3	Encourage compatible land uses to locate in appropriate areas of the City.
Goal:	**LU-4:**	**Implementation of the Redevelopment Plan to enhance the Redevelopment Project Areas.**
Policies:	LU-4.1	Direct Redevelopment Agency investments to those economic activities and locations with the greatest potential economic return.
	LU-4.2	Consider amending the boundaries of the Redevelopment Project Areas to take full advantage of redevelopment tools.

LU-4.3 Bring the site assembly tools and marketing efforts of redevelopment to bear in the revitalization of the Carson Street Corridor and the Northwest Industrial Corridor, as well as other areas which are appropriate.

LU-4.4 Use redevelopment financing in conjunction with code enforcement activities to assist in the rehabilitation of non-residential and residential developments.

LU-4.5 Prioritize and coordinate redevelopment area public improvements with those in the City's Capital Improvement Program.

Expansion of the Commercial Base

Goal: **LU-5: Maximize the City's market potential, in order to enhance and retain shopping opportunities to serve the population, increase revenues for the City, as well as provide new employment opportunities.**

Policies:

LU-5.1 Coordinate Redevelopment and Planning activities and resources to maximize commercial opportunities.

LU-5.2 Continue to implement, and expand when necessary, strategies to market, attract, and/or retain retail commercial areas.

LU-5.3 Identify unique economic opportunities, such as niche markets, that will allow the City to capitalize on the City's location in Southern California, the community's cultural diversity, and the tourism industry in the region.

LU-5.4 Fully capitalize on potential physical and market linkages between land uses.

LU-5.5 Continue public improvements throughout the City and redevelopment project areas.

LU-5.6 Provide rehabilitation assistance in targeted commercial districts to enable the upgrading of commercial properties.

See also the Goals and Policies in the Economic Development Element.

A Balance of Uses

Goal:	**LU-6:**	**A balance of residential and non-residential development throughout the City.**
Policies:	LU-6.1	Monitor development trends in Carson to ensure that future development/redevelopment provides for the needs of the community.
	LU-6.2	Achieve a land use balance through a variety of methods, including: provision of incentives for desired uses; coordination of land use and circulation patterns; and promotion of a variety of housing types and affordability.
	LU-6.3	Consider establishing minimum land use density requirements in certain areas such as mixed use zones to provide more efficient, consistent, and compatible development patterns while also promoting greater potential for pedestrian and transit-oriented development.
	LU-6.4	Coordinate Redevelopment and Planning activities and resources to balance land uses, amenities, and civic facilities to improve the quality of life.
	LU-6.5	Coordinate strategies with the County, Southern California Association of Governments (SCAG), South Bay Cities Council of Governments (SBCCG), and other appropriate agencies and/or organizations to meet housing and employment needs.
	LU-6.6	Attract land uses that generate revenue to the City of Carson, while maintaining a balance of other community needs such as housing, open space, and public facilities.
	LU-6.7	Implement and monitor the development intensities identified earlier in this Element. Periodically review these intensities and densities based on market demand and other conditions to confirm their appropriateness.
	LU-6.8	Evaluate land use intensities in conjunction with the review of any zone change and/or General Plan Amendment to permit development or modify intensity.

Incompatible Land Uses

Goal:	**LU-7:**	**Adjacent land uses that are compatible with one another.**
Policies:	LU-7.1	Ensure that zoning classifications are consistent with General Plan designations.
	LU-7.2	Periodically review, and amend if necessary, the City's Zoning Ordinance to ensure the compatibility of uses allowed within each zoning district.
	LU-7.3	Locate truck intensive uses in areas where the location and circulation pattern will provide minimal impacts to residential and commercial uses.
	LU-7.4	Promote the use of buffers between more intensive industrial uses and residential uses.
	LU-7.5	Through the discretionary review process, ensure that the siting of any land use which handles, generates, and/or transports hazardous substances, as defined by state and federal regulations, will not negatively impact existing sensitive receptors/land uses.
	LU-7.6	Monitor existing, and carefully review all requests to expand intensive commercial and industrial uses.
	LU-7.7	Coordinate with adjacent landowners, cities and the County in developing compatible land uses for areas adjacent to the City's boundaries.
	LU-7.8	Coordinate with California State University at Dominguez Hills in the planning of its property to ensure compatible land uses.

Mixed Use Developments

Goal:	**LU-8:**	**Promote mixed use development where appropriate.**
Policies:	LU-8.1	Amend the Zoning Ordinance to include those Mixed Use areas identified on the General Plan Land Use Plan.
	LU-8.2	Continue to monitor the success of mixed use projects within the Carson Street Mixed Use Corridor. And as

appropriate, promote mixed use projects within this area.

LU-8.3 Locate higher density residential uses within proximity of commercial centers to encourage pedestrian traffic, and to provide a consumer base for commercial uses.

Property Enhancement

Goal: **LU-9: Strive to eliminate all evidence of property deterioration throughout Carson.**

Policies:

LU-9.1 Continue to institute an active code enforcement program.

LU-9.2 Develop incentive programs for the improved appearance of residential, commercial and industrial areas.

LU-9.3 Continue to promote and expand programs such as the Carson Beautiful Program which recognize excellence in property upkeep in residential areas.

LU-9.4 Continue to promote programs which offer loans and grants for home repairs.

LU-9.5 Develop design standards to address permanent and effective screening of areas in transition, and heavy industrial uses such as outdoor storage yards, pallet yards, salvage yards, auto dismantling yards, and similar uses.

LU-9.6 Continue to maintain graffiti suppression and removal programs.

LU-9.7 Maintain and upgrade the City's parks, eliminating all evidence of vandalism, wear and deterioration.

LU-9.8 The City shall maintain properties in compliance with applicable regulations and shall incorporate design and maintenance standards to represent a model for private development.

Alameda Corridor

Goal:	**LU-10:**	**Development of, and along, the Alameda Corridor which provides a benefit for the City.**
Policies:	LU-10.1	Continue to work with regional and state agencies to ensure adequate transportation facilities along the Corridor to serve the adjacent areas.
	LU-10.2	Work with the existing applicable task forces and prepare a special study for those areas adversely impacted by the development of the Corridor.
	LU-10.3	Promote the benefits of the Alameda Corridor to businesses and industries considering relocating to Carson.

Development of a "Signature Project"

Goal:	**LU-11:**	**Development of a "Signature Project" to create a focal point for the City.**
Policies:	LU-11.1	Target potential sites or areas for the development of such a project.
	LU-11.2	Encourage development of desired uses such as quality retail, restaurant uses, and entertainment in targeted areas.

See also the Goals and Policies in the Economic Development Element.

City Image

Goal:	**LU-12:**	**Create a visually attractive appearance throughout Carson.**
Policies:	LU-12.1	Develop and implement a Citywide Urban Design Plan.
	LU-12.2	Adopt a "Carson Green" program to encourage public/ private partnerships in the landscaping of the community.
	LU-12.3	Review landscape plans for new development to ensure that landscaping relates well to the scale of structures, the land uses it serves, as well as to the surrounding area.

LU-12.4 Consider amending the landscaping requirements in the Zoning Ordinance to enhance the appearance of the community and to provide for the use of trees to provide shade.

LU-12.5 Improve City appearance by requiring landscaping to screen, buffer and unify new and existing development. And ensure continued maintenance and upkeep of landscaped areas.

LU-12.6 Consider the establishment of an ad hoc Carson Beautification Committee.

Goal: **LU-13: Encourage interesting and attractive streetscapes throughout Carson.**

Policies: LU-13.1 Promote a rhythmic and ceremonial streetscape along the City's arterial roadways, continuing the use of landscaped medians.

LU-13.2 Develop a street tree planting and replacement program for the City's arterial roadways.

LU-13.3 Continue and, when possible, accelerate the undergrounding of utility lines throughout the City.

LU-13.4 Encourage architectural variation of building and parking setbacks along the streetscape to create visual interest, avoid monotony and enhance the identity of individual areas. And encourage pedestrian orientation by appropriate placement of buildings.

LU-13.5 Continue to require landscaping treatment along any part of a building site which is visible from City streets.

LU-13.6 Consider the use of contrasting paving for pedestrian crosswalks to add visual interest to the streetscape and create pedestrian amenities.

LU-13.7 Ensure proper maintenance of parkways along arterial streets and landscaping of private property visible from the public right-of-way.

Goal: **LU-14: Enhance those freeway corridors which act as gateways into the City of Carson.**

Policies:

LU-14.1 Work with Caltrans to provide and maintain an attractive freeway environment in Carson, including access ramps.

LU-14.2 Require new commercial or industrial development adjacent to, and visible from, the freeways and their ramps, to incorporate full architectural and landscape treatment of the building on the freeway side.

LU-14.3 Seek all available funds and consider using redevelopment funds to enhance freeway portals to the City.

Livable Communities

Goal:

LU-15: Promote development in Carson which reflects the Livable Communities concepts.

Policies:

LU-15.1 Ensure that the City of Carson is a complete and balanced community which contains housing, shops, work places, schools, parks and civic facilities, essential to the daily lives of residents.

LU-15.2 Encourage the location of housing, jobs, shopping, services and other activities within easy walking distance of each other.

LU-15.3 Maintain a diversity of housing types to enable citizens from a wide range of economic levels and age groups to live in Carson.

LU-15.4 Encourage businesses within the City to provide a range of job types for the community's residents.

LU-15.5 Ensure that the character of the community and its transportation facilities are connected to a larger transit network.

LU-15.6 Develop a center focus within the community that combines commercial, civic, cultural and recreational uses.

LU-15.7 Ensure that the design of public spaces encourages the attention and presence of people at all hours of the day and night.

LU-15.8 Ensure development of pedestrian-oriented improvements which provide better connections between and within all developments while reducing dependence on vehicle travel.

LU-15.9 Ensure that development and building design works to conserve resources and minimize waste.

LU-15.10 Provide for the efficient use of water through the use of natural drainage, drought tolerant landscaping, and use of reclaimed water, efficient appliances and water conserving plumbing fixtures.

LU-15.11 Ensure that the street orientation, placement of buildings and the use of shading in existing and new developments contribute to the energy efficiency of the community.

Special Study Areas

Goal: **LU-16: Clear direction for development in each of the Special Study Areas.**

Policies:

LU-16.1 Evaluate the importance and value to the City of each of the Special Study Areas, shown on Exhibit LU-6, *Special Study Areas*.

LU-16.2 Based on City priorities, determine whether a Specific Plan, redevelopment program, urban design plan, streetscape improvement program, or other plan(s), program(s), and/or document(s) are the desirable implementation tool(s). The City should then embark upon such a study.

ECONOMIC DEVELOPMENT ELEMENT

The guiding principle, goals and policies that address economic development are as follows:

Guiding Principle: *The City of Carson is committed to aggressively pursuing, retaining, and promoting quality and sustainable economic development and jobs, on both local and regional levels, through the utilization of the City's natural advantages which include, but are not limited to: the City's strategic location in the South Bay; to the ports, access to freeways and airports, and the Alameda Corridor; multi-cultural communities;*

international trade; California State University, Dominguez Hills; and a diverse and skilled labor force.

Carson is not Capturing the Potential Resident Demand Within the City

Goal:	**ED-1:**	**Strengthen existing City services and support systems.**
Policies:	ED-1.1	Evaluate existing City services and programs to determine whether they are adequately meeting the needs of residents.
	ED-1.2	Encourage the development of quality housing.
	ED-1.3	Promote the development of cultural activities and events.
	ED-1.4	Strengthen the physical image of Carson through visual enhancement along freeway corridors, major traffic routes, and areas adjoining residential neighborhoods. To this end: • Aggressively pursue code enforcement activities; • Develop adequate design standards; and • Establish a City identity.
	ED-1.5	Enhance the City's website to include more extensive economic development information and interactive tools to promote and evaluate properties, development, and other business opportunities in Carson.
	ED-1.6	Provide appropriate infrastructure to support economic development.
Goal:	**ED-2:**	**Encourage a variety of commercial activities to enhance and retain shopping opportunities to serve the population and increase sales tax revenues.**
Policies:	ED-2.1	Pursue categories of resident retail demand which are not being met within the City. To this end, initiate strategies to market, attract, and retain targeted types of retail commercial uses, including expanded use of the City's website.
	ED-2.2	Continue to enhance the City's public relations/ marketing program to improve communications through the business community and the City.

	ED-2.3	Provide rehabilitation assistance in targeted commercial districts to enable the upgrading of commercial properties.
Goal:	**ED-3:**	**Maximize the City's market potential, in order to enhance and retain shopping opportunities to serve the population, increase revenues for the City, as well as provide new employment opportunities.**
Policies:	ED-3.1	Continue to implement, and expand when necessary, strategies to market, attract, and/or retain retail commercial areas. These strategies should, at a minimum, address target areas and the tools necessary to implement such strategies.
	ED-3.2	Identify and pursue areas of retail demand leakage.
	ED-3.3	Develop a comprehensive economic development program and initiate strategies to retain existing businesses, as well as markets, and attract new office, commercial and industrial activity.
	ED-3.4	Continue to maintain, and expand as necessary, the City's marketing and business retention/attraction program to effectively compete with neighboring cities in attracting and retaining regional businesses. Said program to include: business outreach programs, business assistance programs, business incentives, use of public/private partnerships to promote business relations, and other programs and/or incentives.
	ED-3.5	Identify unique economic opportunities, such as niche markets, that will allow the City to capitalize on the City's location in Southern California, the community's cultural diversity, and the tourism industry in the region.
	ED-3.6	Capitalize on potential physical and market linkages among land uses.
	ED-3.7	Continue to enhance the City's public relations program in order to improve communications through the business community and the City.
	ED-3.8	Maximize secondary industrial activity providing services to existing industrial and commercial establishments in Carson.

ED-3.9 Leverage public improvements to facilitate economic development.

ED-3.10 Provide rehabilitation assistance in targeted commercial districts to enable the upgrading of commercial properties.

Potentially Missed Revenues

Goal: **ED-4: Maintain and increase net fiscal gains to the City.**

Policies:

ED-4.1 Evaluate existing City services and programs and compare efficiency and net result of providing the programs and services.

ED-4.2 Research and pursue State and Federal grants as well as foundation grants for specific community and capital projects.

ED-4.3 Support public/private efforts and link infrastructure and service costs with development projects.

ED-4.4 Encourage development opportunities that increase economic gains to the City.

ED-4.5 Update the inventory of available land and vacant building space and market these sites to the business community.

ED-4.6 Market the City of Carson through all available and appropriate means.

Employment Opportunities and Development of the Labor Force

Goal: **ED-5: Creation of employment opportunities and career advancement.**

Policies:

ED-5.1 Understand employment trends and needs of local businesses and link residents and businesses together through an Employment Resources Program.

ED-5.2 Support a local labor force with training programs to provide skill requirements for current and prospective employers. Cooperate with the University and educational organizations within the City to develop job training programs and training for Carson's youth.

ED-5.3 Promote opportunities for research and development incubators within the City.

ED-5.4 Encourage local industries and businesses to hire local people.

Business Incentives

Goal: **ED-6: Promote and assist the growth and vitality of existing businesses.**

Policies:

ED-6.1 Assess the needs, limitations, and concerns of existing businesses and develop or enhance programs to increase their competitiveness.

ED-6.2 Educate both the residential and business communities in the advantages of shopping within City limits and supporting local businesses.

ED-6.3 Continue to facilitate the process of operating a business within Carson through:

- A business database,
- Employment Center, and
- Streamlining and expediting the permit process.

ED-6.4 Monitor the conditions and status of dated shopping centers and smaller, underutilized commercially-zoned parcels.

ED-6.5 Provide assistance to local businesses with building improvement programs and enhance and expand these programs.

ED-6.6 Provide technical assistance to small businesses and coordinate with outside business organizations to support the specific needs of small business.

Goal: **ED-7: Attract new wealth and job-creating businesses to Carson.**

Policies:

ED-7.1 Encourage the diversification of land uses while not alienating existing businesses or industries requiring space in Carson.

ED-7.2 Improve the actual and perceived image of the City through improved design standards, amenities, security,

continuing public improvements, and positive advertising campaigns.

Coordination of Economic Development Within the Region

Goal:	**ED-8:**	**Coordinate economic development within the region to enhance opportunities.**
Policies:	ED-8.1	Identify State and regional agencies conducting economic development activities.
	ED-8.2	Coordinate activities with State and regional agency efforts.

Attraction of Niche Industries and/or Businesses

Goal:	**ED-9:**	**Attract specialized businesses and industries to Carson to provide diversity in the City's economic base.**
Policies:	ED-9.1	Identify target or niche industries or companies that would be suitable for Carson and that are looking for large areas of space, to diversify the City's economic base. To this end, utilize broker contacts, relationships in the business community and regional organizations, as well as a community survey to help identify target industries.
	ED-9.2	Understand the needs, limitations, and concerns of targeted industries and companies. Develop programs to attract them to Carson to effectively compete with neighboring cities. To this end, develop and maintain a comprehensive database program and marketing program for the City.

Development of a "Signature Project"

Goal:	**ED-10:**	**Development of a "Signature Project" to create a focal point for the City.**
Policies:	ED-10.1	Determine the type of facilities/uses the community would like to see in a "Signature Project."

ED-10.2 Encourage development of desired uses such as quality retail, restaurant uses, and entertainment in targeted areas.

ED-10.3 Consider offering public incentives to promote the development of a project.

Reuse of "Brownfields"

Goal: **ED-11: Adaptive reuse and redevelopment of "brownfields".**

Policies:

ED-11.1 Encourage the redevelopment and cleanup of underutilized and contaminated land.

ED-11.2 Maintain proper infrastructure levels and flexible financing options to encourage redevelopment.

ED-11.3 Understand and promote available land inventory and initiate strategies to develop balanced land use planning.

ED-11.4 Encourage development of compatible uses and phase out non-conforming uses.

ED-11.5 Consider forming an assessment district to include brownfields and landfills which would address methane collection systems and monitoring of groundwater.

TRANSPORTATION AND INFRASTRUCTURE ELEMENT

The guiding principle, goals and policies that address transportation, circulation and infrastructure are as follows:

Guiding Principle: *The City of Carson is committed to providing a safe and efficient circulation system that improves the flow of traffic while enhancing pedestrian safety, promoting commerce, and providing for alternative modes of transportation. The City is committed to maintaining and improving all forms of infrastructure including not only water, sewer and storm drainage facilities, but also communication and other technological facilities.*

Truck Traffic in Carson

Goal: **TI-1: Minimize impacts associated with truck traffic through the City, as well as the truck parking locations.**

Policies:

TI-1.1 Enforce the City's revised truck route system.

TI-1.2 Devise strategies to protect residential neighborhoods from truck traffic.

TI-1.3 Ensure that the City's designated truck routes provide efficient access to and from the I-405, I-110 and Route-91 Freeways, as well as the Alameda Corridor.

TI-1.4 Ensure that all new commercial projects have properly designed truck loading facilities.

TI-1.5 Require that all new construction or reconstruction of streets or corridors that are designated as truck routes, accommodate projected truck volumes and weights.

Improving and Maintaining Transportation Infrastructure in the City

Goal:

TI-2: Provide a sustainable, safe, convenient and cost-effective circulation system to serve the present and future transportation needs of the Carson community.

Policies:

TI-2.1 Require that new projects not cause the Level of Service for intersections to drop more than one level if it is at Level A, B or C, and not drop at all if it is at D or below, except when necessary to achieve substantial City development goals.

TI-2.2 Pursue and protect adequate right-of-way to accommodate future circulation system improvements.

TI-2.3 Widen substandard streets and alleys to meet City standards wherever feasible.

TI-2.4 Provide up-to-date safety devices and lighting on City streets where appropriate.

TI-2.5 Facilitate cooperation between the City and the transportation agencies serving the region in order to provide adequate regional vehicular traffic volumes and movements on freeways, streets and through intersections.

TI-2.6 Establish a comprehensive traffic impact fee program and other programs/actions to provide for "fair-share" funding from new development for transportation improvements to accommodate growth.

TI-2.7 Provide all residential, commercial and industrial areas with efficient and safe access to major regional transportation facilities.

TI-2.8 Provide traffic calming, landscape and pedestrian improvements in all non-truck route streets and other streets as appropriate.

Protection of Residential Neighborhoods from Traffic

Goal: **TI-3: Minimize intrusion of commuter traffic on local streets through residential neighborhoods.**

Policies:

TI-3.1 Monitor traffic intrusion on local residential streets and establish a formalized mechanism to respond to resident complaints and requests regarding residential street traffic problems.

TI-3.2 Where feasible, create disincentives for cut-through traffic through neighborhoods, without impacting adjacent residential streets.

TI-3.3 Prioritize circulation improvements that enhance through traffic flow on Major and Secondary Highways providing parallel routes to residential streets, in order to reduce through traffic during peak commute periods.

TI-3.4 Adopt Neighborhood Traffic Control Guidelines to address all aspects of residential requests, complaints, and traffic calming alternatives.

Alternate Forms of Transportation

Goal: **TI-4: Increase the use of alternate forms of transportation generated in, and traveling through, the City of Carson.**

Policies:

TI-4.1 Promote the use of public transit.

TI-4.2 Provide appropriate pedestrian access throughout the City. Develop a system of pedestrian walkways, alleviating the conflict between pedestrians, automobiles and bicyclists where feasible.

TI-4.3 Provide appropriate bicycle access throughout the City of Carson by implementing the Bicycle Plan.

Reduce Trips in Carson

Goal: **TI-5:** **Use Transportation Demand Management (TDM) measures throughout the City, where appropriate, to discourage the single-occupant vehicle, particularly during the peak hours. In addition, ensure that any developments that are approved based on TDM plans incorporate monitoring and enforcement of TDM targets as part of those plans.**

Policies:

TI-5.1 Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/ vanpool preferential parking.

TI-5.2 Encourage the provision of preferential parking for high occupancy vehicles wherever possible.

Federal, State and Regional Compliance

Goal: **TI-6:** **Cooperate to the fullest extent possible with Federal, State, County and regional planning agencies responsible for maintaining and implementing circulation standards to ensure orderly and consistent development of the entire South Bay region.**

Policies:

TI-6.1 Actively participate in various intergovernmental committees and other planning forums associated with County, Regional and State Congestion Management Programs.

TI-6.2 Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

TI-6.3 Ensure that new roadway links are constructed as designated in the Circulation Element, and link with existing roadways in neighboring jurisdictions to allow efficient access into and out of the City.

TI-6.4 Assess local agencies' plans to ensure compatibility across jurisdictional boundaries.

TI-6.5 Encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization.

Improving the Quality of Transportation Corridors

Goal: **TI-7: Provide improved aesthetic enhancements to and maintenance of the City's transportation corridors.**

Policies:

TI-7.1 Provide landscaped medians and greenbelts along major arterials, when economically feasible.

TI-7.2 Encourage the aesthetic quality and maintenance of facilities within the City, under the jurisdiction of other agencies.

TI-7.3 Target and prioritize street beautification programs along major transportation corridors.

TI-7.4 Strive to achieve adequate funding levels for street and parkway maintenance in each budgetary cycle.

Improving and Maintaining the City's Infrastructure

Goal: **TI-8: Provide sustainable water and wastewater systems which meet the needs of the community.**

Policies:

TI-8.1 Continue to maintain, improve and replace aging water and wastewater systems to ensure the provision of these services to all areas of the community.

TI-8.2 As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of uses, as well as existing uses.

Goal: **TI-9: Promote sustainable energy, communication, fiber optic and other systems which meet the needs of the community.**

Policies:

TI-9.1 Cooperate with the providers of the energy, communication, fiber optic and other systems in

Carson to maintain, improve, expand, and replace (when necessary) these systems throughout the City as good partners.

TI-9.2 As development intensifies and/or as redevelopment occurs in the City, encourage the provision of communication, fiber optic and other systems to accommodate any intensification of uses, as well as existing uses.

Goal: **TI-10:** **Provide public facilities that are maintained and rehabilitated in a manner that provides an acceptable level of service, is cost-effective and consistent with the community's ability to pay.**

Policies:

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

TI-10.2 Require that all civic facilities be maintained and rehabilitated to ensure their continued availability and use.

TI-10.3 Rehabilitate public facilities using technologies, methods, and materials which result in energy and water savings, and implement cost effective, long-term maintenance programs.

TI-10.4 Ensure that construction of new civic facilities have state-of-the-art technologies.

SAFETY ELEMENT

The guiding principle, goals and policies that address safety concerns are as follows:

Guiding Principle: *The City of Carson is committed to promoting safety in order to enhance the livability, quality of life, business environment, positive image of the community, and reduce the effects of crime and environmental hazards to all citizens.*

Protection in the Event of Natural Resources

Goal: **SAF-1:** **Minimize the risk of injury, loss of life, and property damage caused by earthquake hazards.**

Policies:

SAF-1.1 Continue to require all new development to comply with the most recent City Building Code seismic design standards.

SAF-1.2 Work with the City's Public Information Office and Public Safety Division to:

- Educate residents in earthquake safety at home,
- Educate the public in self-sufficiency practices necessary after a major earthquake (e.g., alternative water sources, food storage, first aid, family disaster plans, and the like), and
- Identify locations where information is available to the public for planning self-sufficiency.

SAF-1.3 Examine the potential to create a commercial loan program to subsidize the cost of retro-fitting buildings to meet seismic safety regulations. To this end, pursue all sources of State and Federal funding in order to retro-fit buildings to meet seismic requirements.

Goal: **SAF-2: Strive to minimize injury and loss of life, damage to public and private property and infrastructure, and economic and social disruption caused by flood hazards.**

Policy: SAF-2.1 Continue to maintain and improve levels of storm drainage service.

SAF-2.2 Continue to work with the appropriate local, State and Federal agencies (i.e., Los Angeles County Department of Public Works, Caltrans, Federal Emergency Management Agency, etc.) to reduce the potential for flood damage in the City of Carson.

SAF-2.3 Ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. To this end, work closely with Los Angeles County Department of Public Works and other cities in the South Bay region to ensure that facilities are adequate to accommodate storm waters.

SAF-2.4 As development intensifies and/or as redevelopment occurs in the City, ensure that storm drain systems are adequate to accommodate any intensification of uses, as well as existing uses.

SAF-2.5 Periodically review and recommend appropriate changes to the Los Angeles County Department of Public Works for the Storm Drainage Master Plan for Los Angeles County.

Goal:	**SAF-3:**	**Minimize the effects from natural and urban disasters to reduce, to the extent possible, the social and economic impacts that these may have on the community.**
Policies:	SAF-3.1	Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress.
	SAF-3.2	Maintain and update, as necessary, the SEMS Multi-Hazard Functional Plan which identifies emergency response and recovery actions in the event of an incident.
	SAF-3.3	Continue to be able to provide assistance in shelter, relief and first-aid operations.
	SAF-3.4	Work with the City's Public Information Office and Public Safety Division and the County Fire and Sheriff's Departments to promote and expand public education programs and seminars on safety.
	SAF-3.5	Support legislation and tax measures which tie disaster insurance and tax rates to hazard reduction measures.

Public Safety Relating to the Handling and Exposure of the Community to Hazardous Materials

Goal:	**SAF-4:**	**Minimize the threat to the public health and safety and to the environment posed by a release of hazardous materials.**
Policies:	SAF-4.1	Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.
	SAF-4.2	Periodically review and amend the appropriate ordinances which regulate the storage and handling of hazardous materials to conform with the standards and definitions of the State and other regulatory agencies.
	SAF-4.3	Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

SAF-4.4 Explore the possibility of identifying specific routes for the transport of hazardous materials, to include both railroad and street systems.

SAF-4.5 As truck routes within the City are altered, inform Caltrans and transporters of hazardous materials of the changes.

SAF-4.6 Develop an educational awareness program which encourages proper residential management of hazardous materials.

SAF-4.7 Continue to implement the goals, policies and programs identified in the City's Household Hazardous Waste Element.

SAF-4.8 Maintain cooperative relationships with the chemical handlers, response agencies and community representatives through such organizations as South Bay Community Awareness and Emergency Response (CAER), to ensure an informed and coordinated response to chemical emergencies.

Urban Fires

Goal: **SAF-5: Minimize the public hazard from fire emergencies.**

Policies:

SAF-5.1 Coordinate with the Fire Department to provide fire and paramedic service at standard levels of service.

SAF-5.2 Continue to involve the Fire Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes.

SAF-5.3 Continue to work with the Fire Department to ensure their capability to address fires and other emergencies at refineries, tank farms, and other heavy industrial facilities within the City.

SAF-5.4 Work with the City's Public Information Office and County Fire Department to promote and expand public education programs and seminars on safety and emergency response for those areas surrounding refineries, tank farms, and other heavy industrial facilities.

SAF-5.5 Continue to enforce current regulations which relate to safety from fire, particularly in critical and high occupancy facilities.

SAF-5.6 Work with the City's Public Information Office and the Fire Department to continue to promote and enhance public outreach programs which educate the community about the importance of fire resistant building materials, promote the use of smoke alarms/detectors, and highlight other ways to reduce the public hazard from fire emergencies.

Safety from Crime

Goal: **SAF-6: Strive to provide a safe place to live, work and play for Carson residents and visitors.**

Policies:

SAF-6.1 Coordinate with the Sheriff's Department to provide sheriff service at standard levels of service.

SAF-6.2 Continue to involve the Sheriff's Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes. To this end, promote the development of defensible spaces, or Crime Prevention Through Design (CPTD), through the use of site and building lighting, visual observation of open spaces, and secured areas.

SAF-6.3 Develop standards and/or guidelines for new development and redevelopment with an emphasis on site and building design, or CPTD, to minimize vulnerability to criminal activity. Said standards and/or guidelines shall balance public safety and design objectives, and at a minimum address:

- High risk circumstances such as dark alleys, enclosed stairwells, and dark entrances,
- Site security lighting, including exterior lighting that enhances safety and night use (but minimize impacts on surrounding land uses),
- Utilization of landscape treatments which will not obstruct the visibility of walkways and entrances, and
- Similar public safety and design issues.

SAF-6.4 Maintain and improve the effectiveness of code enforcement and policing programs such as increased community policing activities, such as foot and bicycle patrols in areas where warranted, and related programs.

SAF-6.5 Continue to promote and enhance the Sheriff Department's public outreach programs.

SAF-6.6 Continue to promote the Neighborhood Watch Program.

SAF-6.7 Continue to support strict enforcement of the California Motor Vehicle Code and local speed limits, particularly in the areas near schools and off-ramps from area freeways.

SAF-6.8 Ensure appropriate signage, street striping and other markings at crosswalks for pedestrian safety. And ensure the visibility of signage and markings through proper landscape maintenance including trimming of shrubbery and trees.

Goal: **SAF-7: Reduce, to the greatest extent possible, the number of violent or criminal acts perpetrated, with specific emphasis on youth.**

Policies: SAF-7.1 Continue to take a "zero tolerance" approach to gangs and gang activity in Carson.

SAF-7.2 Continue to work with the community, and specifically involve and educate parents, to reduce criminal behavior by Carson's youth.

SAF-7.3 Continue to support immediate, positive consequences for minor criminal behavior by youth, such as graffiti removal programs, restitution programs, and other effective acceptable programs.

SAF-7.4 Continue to encourage and promote jobs programs for youth in both the public and private sector in order to reduce crime.

SAF-7.5 Work with the City's Public Information Office and the Sheriff's Department to promote community awareness regarding drug use, graffiti, gangs, and other youth related crimes.

SAF-7.6 Maintain the comprehensive Carson Youth Accountability Network and youth diversion programs. These programs should include education, intervention, and enforcement strategies.

NOISE ELEMENT

The guiding principle, goals and policies that address noise hazards and conditions are as follows:

Guiding Principle: *The City of Carson is committed to preventing, regulating, and controlling unnecessary and excessive noise emanating from uses and activities within the City. To this end, the City will continue promoting compatible land uses, considering sensitive receptors, and implementing enforcement procedures and mitigation measures.*

Carson's Noise Ordinance

Goal: **N-1:** **Maximize efficiency in noise abatement efforts through clear and effective policies, plans and ordinances.**

Policies:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-1.4 Inform the public regarding City noise regulations and programs.

N-1.5 Coordinate with the California Occupational Safety and Health Administration (Cal-OSHA) to provide

information on occupational noise requirements within the City.

Buffering of Sensitive Land Uses

Goal:	**N-2:**	**Minimize noise impacts on residential uses and noise sensitive receptors along the City's streets, ensuring that the City's interior and exterior noise levels are not exceeded.**
Policies:	N-2.1	Limit truck traffic to specific routes and designated hours of travel, where necessary, as defined in the Transportation and Infrastructure Element and by the City's Development Services Group. Said routes and hours shall be reviewed periodically to ensure the protection of sensitive receptors and residential neighborhoods.
	N-2.2	Examine the feasibility of implementing sound attenuation measures along the City's arterial streets, particularly along designated truck routes. To this end, prioritize the areas in need of sound attenuation based on degree of sensitivity of uses, excess of maximum allowable standards, length of time the noise impact has existed, and number of residential units and sensitive receptors impacted.
	N-2.3	Examine the feasibility of an ordinance which creates an overlay zone to be placed over residential properties along arterial streets and/or designated truck routes. This overlay zone would provide additional sound attenuation techniques to improve affected residential homes.
	N-2.4	Augment the list of eligible improvements under housing programs, such as the Community Development Block Grant (CDBG) Home Improvement Loan/Rebate Program, to include remedial improvements to homes lying within the designated improvement areas and located within the overlay zone, as described above in Policy N-2.3.
	N-2.5	Minimize potential transportation noise through proper design of street circulation, coordination of routing, and other traffic control measures such as enforcing the speed limit, shifting travel lanes away

from impacted units or sensitive receptors, adding bike lanes.

N-2.6 Discourage through traffic in residential neighborhoods.

N-2.7 Actively advocate noise control requirements for all motor vehicles.

Goal: **N-3: Minimize noise impacts from the Alameda Corridor.**

Policies: N-3.1 Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric or other non-polluting fuels for Carson Circuit buses and other City vehicles, which are also quieter.

N-3.2 Coordinate with the businesses along the Corridor to ensure that noise attenuation measures are addressed in the selection of the vehicle technology, location of truck pick-up and loading areas, locations of mechanical and electrical equipment, exterior speaker boxes, public address systems, and similar noise sources.

N-3.3 For both transportation-related and development projects along the Corridor, continue to incorporate noise assessments into the environmental review process, as needed.

N-3.4 At such a time when Alameda Street becomes a State highway:

- Encourage Caltrans to meet the City's standard for exterior noise levels of 65 dBA CNEL;
- Where appropriate and feasible, encourage Caltrans to keep interior residential noise levels below the City's standard of 45 dBA CNEL; and
- Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of improvements to the Corridor.

Goal: **N-4: Minimize noise impacts from the freeway corridors which surround and bisect the City of Carson, ensuring that the City's interior and exterior maximum noise level standards are not exceeded.**

Policies: N-4.1 Encourage Caltrans to meet the City's standard for exterior noise levels of 65 dBA CNEL.

	N-4.2	Where appropriate and feasible, encourage Caltrans to keep interior residential noise levels below the City's standard of 45 dBA CNEL.
	N-4.3	Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of improvements to existing facilities, as well as any new highway projects.
Goal:	**N-5:**	**Minimize noise impacts on residential areas from rail and/or transit operations.**
Policies:	N-5.1	Continue to encourage the railroad and transit operators within the City to schedule trains during the daylight hours, when possible.
	N-5.2	Require noise attenuation measures for residential construction in areas affected by the 65 dBA CNEL railroad noise contour. Sound attenuation measures shall reduce interior noise to a maximum of 45 dBA CNEL. These measures shall apply to new residential construction as well as renovations, remodels, and building additions.
	N-5.3	Coordinate with the railroad and transit operators to ensure that noise attenuation measures are addressed in the selection of the rail and vehicle technology for use along rail/transit lines, and the design and reconstruction of existing lines.
Goal:	**N-6:**	**Minimize noise impacts on residential areas from nearby airport operations.**
Policies:	N-6.1	Continue to monitor noise associated with airport operations at the Compton and Long Beach Airports.
	N-6.2	Coordinate with the operators of the Long Beach Airport to ensure that any increase in operations will not adversely impact the residential areas on the eastern side of the City.
Goal:	**N-7:**	**Incorporate noise considerations into land use planning decisions.**
Policies:	N-7.1	Incorporate noise considerations into land use planning decisions by establishing acceptable limits of noise for various land uses throughout the community.

N-7.2 Continue to incorporate noise assessments into the environmental review process, as needed. Said assessments shall identify potential noise sources, potential noise impacts, and appropriate sound attenuation. In non-residential projects, potential noise sources shall include truck pick-up and loading areas, locations of mechanical and electrical equipment, and similar noise sources. Require mitigation of all significant noise impacts as a condition of project approval.

N-7.3 Require all new residential construction in areas with an exterior noise level greater than 65dBA CNEL to include sound attenuation measures that reduce interior noise levels to the standards shown in Table N-1. Sound attenuation measures include:

- Sound walls,
- Double glazing,
- Building location, and/or
- Facade treatment.

N-7.4 Ensure acceptable noise levels near schools, hospitals, convalescent homes, churches, and other noise sensitive areas in accordance with Table N-1. To this end, require buffers or appropriate mitigation of potential noise sources. Such sources include, but are not limited to truck pickup and loading areas, mechanical and electrical equipment, exterior speaker boxes, and public address systems.

Goal: **N-8:** **Minimize noise impacts associated with residential uses in mixed use development.**

Policies: N-8.1 Require the design of mixed use structures to incorporate techniques to prevent transfer of noise and vibration from the commercial to the residential uses.

N-8.2 Encourage commercial uses in mixed use developments which are not noise intensive.

OPEN SPACE AND CONSERVATION ELEMENT

The guiding principle, goals and policies that address the conservation of resources are as follows:

Guiding Principle: *The City of Carson is committed to preserving and enhancing it's key natural features including, but not limited to, trees and vegetation, open space, water, and other natural resources. To this end, the City shall continue promoting environmental awareness and practices to protect these resources.*

Enhancement of the City's Open Space

Goal: **OSC-1: Enhancement of Carson's open space resources.**

Policies:

OSC-1.1 Preserve and enhance the existing open space resources in Carson.

OSC-1.2 Maintain the existing landscaping along the City's major streets and expand the landscaping program along other arterial streets throughout the community.

OSC-1.3 Continue to require that adequate, usable and permanent private open space is provided in residential developments.

OSC-1.4 Require access between open space and recreation areas and adjacent developments, where appropriate.

OSC-1.5 Utilize electric transmission and other utility corridors for greenbelt and recreational uses where appropriate.

See also the Goals and Policies in Chapter 2.0, Land Use Element, of this General Plan.

Water Conservation

Goal: **OSC-2: Protection and conservation of Carson's water resources.**

Policies:

OSC-2.1 Maintain and improve water quality.

OSC-2.2 Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

OSC-2.4 Conserve the water supply available to the City and promote water conservation in the management of public properties.

OSC-2.5 Educate citizens about water conservation, encourage its practice, and monitor its effectiveness.

OSC-2.6 Ensure the completion of the reclaimed water facility in the City of Carson.

OSC-2.7 Encourage the use of reclaimed water in all applications for which potable water is not necessary.

Energy Conservation

Goal: **OSC-3** **Conservation of scarce energy resources.**

Policies:

OSC-3.1 Promote incentives for the use of site planning techniques, building orientation, building materials, and other measures which reduce energy consumption.

OSC-3.2 Support the development of alternative sources of energy such as roof-mounted solar panels or energy generated from non-conventional systems outside the City.

OSC-3.3 Work with energy providers to develop and implement programs to reduce electrical demand in residential, commercial and industrial developments.

OSC-3.4 Support energy conservation via alternative forms of transportation.

Solid Waste Reduction

Goal: **OSC-4:** **Minimize solid waste generated within Carson.**

Policies:

OSC-4.1 Reduce the generation of solid waste from sources in the City in accordance with the Source Reduction and Recycling Element for Carson (separate from this General Plan) and State regulations.

OSC-4.2 Develop a public education program to address waste management and proper household waste sorting and handling.

OSC-4.3 Facilitate physical collection of recyclable waste.

PARKS, RECREATION AND HUMAN SERVICES ELEMENT

The guiding principle, goals and policies that recreation and cultural activities are as follows:

Guiding Principle: *The City of Carson is committed to expanding the recreational facilities and activities within the City by providing commercial recreational uses, affordable recreation opportunities, and a variety of public and private recreational facilities. The City is also committed to promoting the assets associated with the diversity of the community by involving its citizens in a broad spectrum of cultural and recreational activities and programs.*

Recreational and Cultural Facilities

Goal: **PRC-1:** **Increase of and improvement to park, recreational and cultural facilities to meet the needs of existing and future residents and workers in the City.**

Policies:

PRC-1.1 Acquire additional parkland in accordance with long-term planning efforts, such as this General Plan and the City's Capital Improvement Program.

PRC-1.2 Work with local governmental and educational agencies and departments to maintain and, wherever feasible, expand the joint use of facilities within the City.

PRC-1.3 Promote greater cooperation and coordination with other City departments and public agencies, and encourage the construction of new park and human services facilities in developed areas of Carson as infill development occurs.

PRC-1.4 Develop non-traditional approaches to providing supplementary services and programs in areas where there are facility deficiencies.

PRC-1.5 Provide access to existing and future recreational facilities in accordance with the Americans with Disabilities Act.

Community Involvement

Goal: **PRC-2:** **Active citizen involvement to establish and achieve community goals.**

Policies:

PRC-2.1 Continue to support the efforts of Carson's civic and social service organizations.

PRC-2.2 Recognize the individuals, organizations, and agencies who have made a contribution to community life in Carson.

PRC-2.3 Continue to develop a program by which volunteers are solicited to assist in recreational and human services programs and then recognized.

PRC-2.4 Encourage volunteerism and create a greater sense of stewardship for parks within each neighborhood and community through active public involvement programs.

Safety in Carson Parks

Goal: **PRC-3: Improved safety in the City's parks.**

Policies:

PRC-3.1 Work with the Sheriff's Department in designing park improvements which facilitate effective police surveillance and protection. Continue the Park Safety meetings with Park staff, Sheriff Department personnel, and City Public Safety staff that share park safety issues and solutions.

PRC-3.2 Continue to support citizen programs that fight crime and promote citizen involvement, such as "Neighborhood Watch", "DARE", "Adopt-A-Park", and similar programs.

PRC-3.3 Continue to explore, design, and implement vandalism reduction strategies at park and recreation facilities in the City.

Goal: **PRC-4: Enhanced maintenance and rehabilitation of existing park and recreational facilities.**

Policies:

PRC-4.1 Inventory existing parks and recreational facilities to determine rehabilitation needs through a periodic monitoring program.

PRC-4.2 Plan fiscally responsible rehabilitation and maintenance strategies which enhance the amenity and usability of existing parks.

PRC-4.3 Require park improvements and facilities that are durable and economical to maintain.

See also Policies PRC-2.1 through PRC-2.4.

Affordability of Recreational and Cultural Programs

Goal: **PRC-5: Recreational and cultural programs affordable to all income segments of the Carson population.**

Policy: PRC-5.1 Pursue innovative methods, such as the use of volunteers, grants, and private sponsorship, to improve the affordability of recreational programs for residents of the City.

Opportunities for Carson's Community Child Care Facilities

Goal: **PRC-6: Quality public and private childcare facilities throughout the community.**

Policies: PRC-6.1 Expand the supply of quality child care in Carson.

PRC-6.2 Explore opportunities for the provision of child care for children of low income families and those with special needs.

PRC-6.3 Provide information to the community on the family care resources offered to City residents.

Human Relations

Goal: **PRC-7: Promotion of relationships and understanding between all racial, ethnic, social, and other groups within the community.**

Policies: PRC-7.1 Encourage and promote a citywide Unity Day in conjunction with the School District.

PRC-7.2 In conjunction with the School District, support and expand activities representative of City residents' diversity.

PRC-7.3 Support and enhance the Sister City relationships with: Soka, Japan; La Carlota, Philippines; and Wanju-Un County, South Korea.

PRC-7.4 Utilize appropriate City recreational and cultural programs to increase cross-cultural experiences among residents.

Promotion of Cultural Activities

Goal: **PRC-8: Support of fine, performing and cultural arts programs in the City.**

Policies:

PRC-8.1 Expand the fine and cultural arts in the City's K-12 schools.

PRC-8.2 Develop a formal relationship between the City and Cal State University Dominguez Hills to improve town-gown relationships, provide enrichment to area residents and businesses, and enhance the identity of the Carson community.

PRC-8.3 Promote local and regional participation in the City's cultural and social activities such as art exhibitions, and musical and theatrical productions.

Goal: **PRC-9: Protection of historic resources within the City.**

Policies:

PRC-9.1 Promote the preservation of historic resources in the City through the Fine Arts and Historical Commission.

PRC-9.2 Coordinate with the Departments of History and Anthropology at Cal State University Dominguez Hills in order to mutually enrich both the educational and general communities.

PRC-9.3 Create an oral history program that would archive the City's history from long time Carson residents.

Services for Senior Citizens

Goal: **PRC-10: Enhance services available to the senior citizens of Carson.**

Policies:

PRC-10.1 Administer and, wherever feasible, expand programs designed to meet the recreational, social, physical and economic needs of the City's senior citizens.

PRC-10.2 Review the City's hiring policies to ensure against age discrimination bias.

PRC-10.3 Advocate for more senior housing and better transportation options.

AIR QUALITY ELEMENT

The guiding principle, goals and policies that address air quality concerns are as follows:

Guiding Principle: *The City of Carson is committed to improving air quality by: reducing total air emissions, educating the public on pollution control measures, minimizing dust generation, and encouraging the use of best available technology.*

Dust Generation

Goal: **AQ-1: Reduced particulate emissions from paved and unpaved surfaces and during building construction.**

Policies:

AQ-1.1 Continue to enforce ordinances which address dust generation and mandate the use of dust control measures to minimize this nuisance.

AQ-1.2 Promote the landscaping of undeveloped and abandoned properties to prevent soil erosion and reduce dust generation.

AQ-1.3 Adopt incentives, regulations, and/or procedures to minimize particulate emissions.

Regional Air Quality

Goal: **AQ-2: Air quality which meets State and Federal standards.**

Policies:

AQ-2.1 Coordinate with other agencies in the region, particularly the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG), to implement provisions of the regions' Air Quality Management Plan (AQMP), as amended.

AQ-2.2 Utilize incentives, regulations and implement the Transportation Demand Management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.

AQ-2.3 Cooperate and participate in regional air quality management plans, programs and enforcement measures.

AQ-2.4 Continue to work to relieve congestion on major arterials and thereby reduce emissions.

AQ-2.5 Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

AQ-2.6 Encourage in-fill development near activity centers and along transportation routes.

AQ-2.7 Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.

Goal: **AQ-3: Increased use of alternate fuel vehicles.**

Policies: AQ-3.1 Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric or other non-polluting fuels for Carson Circuit buses and other City vehicles.

AQ-3.2 Continue to promote ridership on the Carson Circuit and Los Angeles County Metropolitan Transportation Authority (MTA) bus and metro rail lines.

Community Awareness and Emergency Response Actions

Goal: **AQ-4: Increased community awareness and participation in efforts to reduce air pollution and enhance air quality.**

Policies: AQ-4.1 Work with the City's Public Information Office to increase public awareness regarding air quality and implementation issues.

AQ-4.2 Promote and encourage ride sharing activities within the community, including such programs as preferential

parking, park-and-ride lots, alternative work week/flexible working hours and telecommuting, as well as other trip reduction strategies.

Polluting Industries

Goal:	**AQ-5:**	**Reduce emissions related to industry to enhance air quality.**
Policies:	AQ-5.1	Through the City's Planning processes, monitor air pollutant emissions by mitigating air quality impacts, to the greatest extent possible, associated with facilities/industries in Carson.
	AQ-5.2	Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.

HOUSING ELEMENT

Carson's housing goals concentrate on five specific aspects of the housing market. Goals are provided to address each of these issues, and policies have been developed to support and implement each goal. The five priorities are:

- Preserving and enhancing existing housing and neighborhoods;
- Preserving affordability;
- Providing adequate sites;
- Providing adequate housing opportunities and accessibility for all segments of the community; and
- Encouraging coordination and cooperation.

The goals and policies that address housing are as follows:

Property Maintenance

Goal:	**H-1:**	**Improvement and maintenance of the existing housing stock while preserving affordability.**
Policies:	H-1.1	The City should work toward the elimination and prevention of the spread of blight and deterioration, and the conservation, rehabilitation and redevelopment of blighted areas within the City.

	H-1.2	The City should provide financial assistance to encourage private sector investment in the City.
	H-1.3	The City should promote economic well being of the City by encouraging the development and diversification of its economic base.
	H-1.4	The City should ensure that housing meets all applicable code requirements, without imposing unnecessary costs.
	H-1.5	The City should establish and maintain development standards that support housing development while protecting the quality of life.
Goal:	**H-2:**	**Maintenance and enhancement of neighborhood quality.**
Policies:	H-2.1	The City should develop safeguards against noise and pollution to enhance neighborhood quality.
	H-2.2	The City should assure residential safety and security.
	H-2.3	The City should improve housing and assistance of low and moderate income persons and families to obtain homeownership.

Diversity of Housing

Goal:	**H-3:**	**The City shall seek to provide an adequate supply of housing for all economic segments of the City.**
Policies:	H-3.1	The City should promote the development of quality affordable housing.
	H-3.2	The City should work to expand the resource of developable land by making underutilized land available for development.
	H-3.3	The City should promote a variety of housing types, prices and tenure in order to satisfy community demand and needs.
	H-3.4	The City should promote the availability of housing which meets the special needs of the elderly, handicapped and large families.

Goal:	**H-4:**	**Protection of the existing supply of affordable housing.**
Policies:	H-4.1	The City should establish funding sources for affordable housing.
	H-4.2	The City should minimize the permit and city costs for affordable housing developments.
	H-4.3	The City should encourage the preservation of affordable rental housing.
	H-4.4	The City should limit the conversion of affordable rental units to ownership units.
Goal:	**H-5:**	**Housing opportunities to all persons regardless of race, religion, ethnicity, sex, age marital status, household composition, or other arbitrary factor.**
Policies:	H-5.1	The City should support the development and enforcement of Federal and State anti-discrimination laws.
	H-5.2	The City should make Fair Housing information and contact agencies available at City Hall and as a part of the City's Public Information Program.

Private Property With Common Area Ownership (Condominiums and Planned Unit Developments)

Goal:	**H-6:**	**Long-term maintenance of private properties with common area ownership, such as condominiums and planned unit developments.**
Policies:	H-6.1	The City should continue to implement Neighborhood Initiative Partnership program(s) comprised of Fannie Mae, the City of Carson, homeowners association(s), etc.
	H-6.2	The City should amend existing, and ensure that future association covenant documents address: proper maintenance of individual units as well as common areas, collection of assessments, etc.
	H-6.3	The City should consider assisting the renovation of common areas in troubled developments.

H-6.4 The City should consider design solutions to enhance "policing" of troubled developments (e.g., replacement of solid walls with open fencing, security lighting along streets, etc.).

H-6.5 The City should educate homeowners about the rehabilitation assistance programs through the City.

H-6.6 The City should continue to monitor Federal, State, and regional programs and funding sources designed to improve areas of troubled housing.

H-6.7 The City should develop socially minded programs, such as the COPS Program, to instill a sense of community in the residents.

H-6.8 The City should continue to work toward increasing the number of owner-occupied units.

Energy Conservation

Goal: **H-7:** **Conservation of natural resources and reduction of energy consumption in all areas of residential development.**

Policies:

H-7.1 The City should educate the public in the area of energy conservation.

H-7.2 The City should promote the use of alternative energy sources.

H-7.3 The City should promote financial reimbursement programs for the use of energy efficient building products and appliances.

4.0 ENVIRONMENTAL ANALYSIS

4.1 LAND USE

Land use refers to the use of land for various activities, such as commerce, industry, recreation and residences. Land use patterns influence the character and function of a community and, therefore, land use planning is a fundamental component of a city's general plan. Land use is the element of the General Plan that is most closely linked to physical development and growth. Carson's Land Use Element identifies a Land Use Plan, and sets forth policies for the permitted types, intensities and location of land uses in the City. This section of the EIR describes the amount of growth permitted by the Land Use Element and identifies potential impacts related to proposed land use policies.

4.1.1 ENVIRONMENTAL SETTING

EXISTING LAND USES

The City of Carson is approximately 83 percent developed. In March 2001, the City contained 24,830 dwelling units on approximately 2,893 acres and approximately 7,283 acres of non-residential areas. Residential uses account for approximately 28 percent of developed land in the City. Industrial uses comprise approximately 5,497 acres, accounting for 54 percent of developed land. Commercial uses and public facilities account for approximately one percent of the remaining developed land. Refer to Table 4.1-1, *Existing Land Use Designations*. The primary land use designations located within the City are described below.

RESIDENTIAL AREAS

A relatively small portion of the City, approximately 28.4 percent, is developed with residential uses. Most of the existing residential units were built prior to 1970 when farming was slowly phased out and replaced with residential, commercial and industrial development. The residential uses are categorized as low density, medium density and high density.

Low Density Residential (LDR)

Low-Density Residential land uses comprise 84 percent of the overall residential acreage within the City (Refer to Table 4.1-1). These areas include single-family detached dwellings and similar development consistent with such low-density residential development. The Low Density Residential land use is characterized by a density of 1 to 8 dwelling units per acre (du/ac). Today, residential development of single-family homes would occur primarily on vacant or undeveloped parcels.

Table 4.1-1
Existing Land Use Designations

Existing General Plan Land Use Category	Existing Zoning	Acreage	Density/ Intensity	No. of Units/ Sq. Footage
Residential				
Low Density	RS, RA, RM-8	2,432.9	1 – 8 dus/ac.	18,244 dus
Medium Density	RM-12	109.7	9 – 12 dus/ac.	1,127 dus
High Density	RM-25	350.7	13 – 25 dus/ac.	4,203 dus
Commercial				
General Commercial	CG, CN	288.8	0.32 (avg.) 0.7 (max.)	2,383,114 sf
Regional Commercial	CR	320.3	0.32 (avg.) 0.7 (max.)	1,652,268 sf
Industrial				
Light Industry	ML	1,496.6	0.34 (avg.) 0.5 (max.)	17,268,562 sf
Heavy Industry	MH	4,000.2	0.2 – 0.7 (avg.) 1.0 (max.)	23,200,526 sf
Other				
Public Facilities	OS, SU	1,177.3		N/A
Total		**10,176.4**		**24,830 dus*/44,504,470 sf**

* Includes 989 mobile home units currently located in areas designated for non-residential uses, as well as 267 other residential units currently located in areas designated for non-residential purposes.

NOTES:

1) Acreage: Calculated by RBF Consulting, GIS Department, July 25, 2000, based on information provided by the City of Carson.

2) Residential number of units: Based on information supplied by City of Carson, GIS Department, January, 2001. Includes 989 mobile home units currently located in areas designated for non-residential uses, as well as 267 other residential units currently located in areas designated for non-residential purposes.

3) Square footage for non-residential uses: Non-residential square footages are based on information supplied by the City of Carson Planning Department, December 14, 2000, which was based on the City of Carson GIS data base (information provided by the Los Angeles County Assessors Office).

4) General Commercial: Includes Goodwill, Auto Zone, RV Center and Blockbuster projects under construction.

5) Light Industry – Includes Dominguez Technology Center, Lakeshore and Ducommun projects under construction. A total of 282,360 sq. ft of Light Industry are used for commercial purposes, including 110,700 sq. ft. at the Carson Depot Center (Home Depot) and 171,660 sq. ft. at the Super K-Mart Center.

6) Heavy Industry – Includes IDS, Watson Land (220th Street), Watson Land (Arnold Center), IDI, and the Hewson Development project on Sepulveda Boulevard, as well as the southern corners of Victoria and Figueroa Streets. A total of 361,700 sq. ft. of Heavy Industry are used for office purposes, including the Nissan headquarters.

7) Floor area ratios (FARs) – FARs for non-residential uses were developed using the City of Carson GIS data base (original information provided by the Los Angeles County Assessors Office). For purposes of estimating FARs, those properties with a "zero" value for either building or land area in the Assessors Office parcel information have not been included. Also these estimates do not include the following properties (due to the types of facilities on these properties): Shell/Ashland, ARCO, GATX, Fletcher Oil, and the Los Angeles County Sanitation District property in the southwestern corner of the City.

Medium Density Residential (MDR)

Approximately four percent of the residential land is designated Medium Density Residential (Refer to Table 4.1-1). These areas provide for multiple dwelling units as well as single-family detached dwellings and similar development consistent with such medium density residential development. The maximum density allowed under this land use designation is 12 du/ac.

High Density Residential (HDR)

High Density Residential areas provide for multiple dwelling units, combinations of multiple- and single-family residential units and similar development consistent with such high-density residential development. Approximately 12 percent of the residential land is developed as High Density Residential (Refer to Table 4.1-1). The maximum density allowed under this land use designation is 25 du/ac.

COMMERCIAL

Commercial land uses consist of retail and service establishments planned to serve neighborhood, citywide or regional clientele. Commercial uses comprise 609.1 acres, which is approximately six percent of the total acreage within the City (Refer to Table 4.1-1). There are two commercial land use designations within the City of Carson: General Commercial (GC) and Regional Commercial (RC).

General Commercial (GC)

The General Commercial designation includes both general and neighborhood commercial land uses, providing highway oriented and smaller neighborhood retail opportunities. These centers are limited in size and are located throughout the community, providing day-to-day goods and services. Grocery or major retail stores are the anchors for these centers with a variety of service and commercial uses in the same center. The maximum allowable floor to area ratio (FAR) for this land use designation is 0.5. At buildout, the average FAR for this land use is expected to be approximately 0.32.

Regional Commercial (RC)

The Regional Commercial land use category includes uses planned to serve a broad population base. Businesses in this designation provide a wider array of services, such as major department stores, specialty shops as well as hotels and motels. The Regional Commercial use is intended to provide the City's primary shopping center and its peripheral areas. These businesses offer a variety of goods and services to both the community and the surrounding region. The maximum allowable FAR for this land use designation is 0.6. The average FAR is expected to be approximately 0.32 at buildout.

INDUSTRIAL

Approximately 5,497 acres or 54 percent of the land in Carson is designated for Industrial land uses (Refer to Table 4.1-1). Industrial areas are intended to accommodate the manufacturing, processing, warehousing and distribution functions of the community. Industrial sites are situated to provide easy access to truck routes and major transportation routes, including freeways and rail. Currently, Carson has two industrial land use classifications: Light Industrial (LI) and Heavy Industrial (HI).

Light Industrial (LI)

Light Industrial areas are intended to provide for small- and medium-sized industrial uses that are not likely to have adverse effects upon adjacent properties. These uses provide a buffer between residential and/or commercial land uses and other heavier industrial uses. The maximum allowable FAR is 0.5, with the average FAR at buildout expected to be approximately 0.42.

Heavy Industrial (HI)

Heavy Industrial uses are intended to provide for a range of industrial uses which are acceptable within the community, but whose operations requires provisions for controlling adverse effects upon the more sensitive areas of the City. These uses are separated from residential and commercial uses. The maximum allowable FAR is 1.0. The average FAR at buildout is expected to range from 0.5 to 0.7.

OPEN SPACE

Public Facilities (PF)

The Public Facilities land use designation includes a broad range of civic, governmental, institutional and utility related uses in Carson. This category includes public buildings and associated grounds and utility transmission corridors. The Sheriff's Station, public schools, California State University, Dominguez Hills, cemeteries and other similar uses would be included under the PF land use designation. This designation may be implemented through any of the City's zones, for instance many utility corridors are zoned Open Space while schools are found in areas zoned Single-Family Residential.

The City of Carson has 16 City-operated parks (including four mini parks), one county park (Victoria Park), two golf courses (Victoria Golf Course and Dominguez Golf Course) and a sports complex (Veterans Sports Complex). In addition, Carson has four public swimming pools, a boxing facility (Fabela Chavez Boxing Center) and the Carson Community Center that provide additional recreation facilities to the community.

In addition, open space uses are in the category of Public Facilities under the existing General Plan. Approximately 1,177.3 acres or 12 percent of the land in Carson is currently designated as Public Facilities.

VACANT AND UNDERUTILILZED LAND

The land inventory completed for the Housing Element of the proposed General Plan found that the City has 131.22 acres of vacant or underutilized land currently zoned for residential uses. Refer to Table 4.1-2, *Summary of Vacant and Underutilized Land*. Vacant land refers to parcels with no development. Underutilized land refers to parcels that are developed below the potential use or capacity of the site. In some cases underutilized land can consist of parcels that have: (1) a large portion of the site in non-building uses, such as excessive surface parking or outdoor work or storage areas; (2) a high percentage of structure(s) vacant; (3) a low floor area ratio; (4) buildings that are dilapidated or otherwise impaired by physical deficiencies; or (5) inefficient or functionally obsolete structures. Exhibit 4.1-1, *Vacant and Underutilized Land*, shows the locations of these areas within Carson.

Table 4.1-2
Summary of Vacant and Underutilized Land

Description	Acres
Vacant	
Residential	
• Single-Family	130.87
• Double (2-unit building) or Duplex	0.24
• Five-unit Residential	0.11
Total Residential	*131.22*
Commercial	
• Commercial	123.00
Total Commercial	*123.00*
Industrial	
• Industrial	612.36
• Light Manufacturing	13.43
• Heavy Manufacturing	39.21
Total Industrial	*665.00*
Total Vacant Acres	**919.22**
Underutilized	
Commercial	
• Commercial	31.00
Total Commercial	*31.00*
Industrial	
• Industrial	832.00
Total Industrial	*832.00*
Total Underutilized Acres	**863.00**
Source: City of Carson Final Existing Conditions Report for the General Plan Update, April 2000.	

APPLICABLE PLANS, POLICIES AND REGULATIONS

FEDERAL PLANS AND POLICIES

Clean Air Act

The Federal Clean Air Act was enacted to protect and enhance air quality and promote the health and welfare of the public. The United States (U.S.) Environmental Protection Agency (EPA) has established ambient air quality standards for certain criteria pollutants, which are generally implemented by state and local agencies.

Clean Water Act (Section 404)

Section 404(b) of the Federal Clean Water Act was established to preserve water quality, and discourages the alteration or destruction of wetlands. This act requires that the U.S. Army Corps of Engineers (Corps) evaluate the impacts of discharge of dredged or fill materials into any water of the United States. The Corps Wetlands Policy requires the implementation of mitigation measures for any impacts to designated wetland areas.

National Pollutant Discharge Elimination System Permit Program

The National Pollutant Discharge Elimination System (NPDES) program requires the owner or operator of any facility, or person responsible for any activity that discharges waste into the surface waters of the U.S. to obtain a NPDES permit from the Regional Water Quality Control Board, as mandated by the National Clean Water Act. The existing NPDES (Phase 1) storm water program requires municipalities serving greater than 100,000 persons to obtain a NPDES storm water permit for construction projects greater than five acres. Proposed NPDES storm water regulations (Phase II) expand this existing national program to smaller municipalities with populations of 10,000 or more and construction sites that disturb greater than one acre of land.

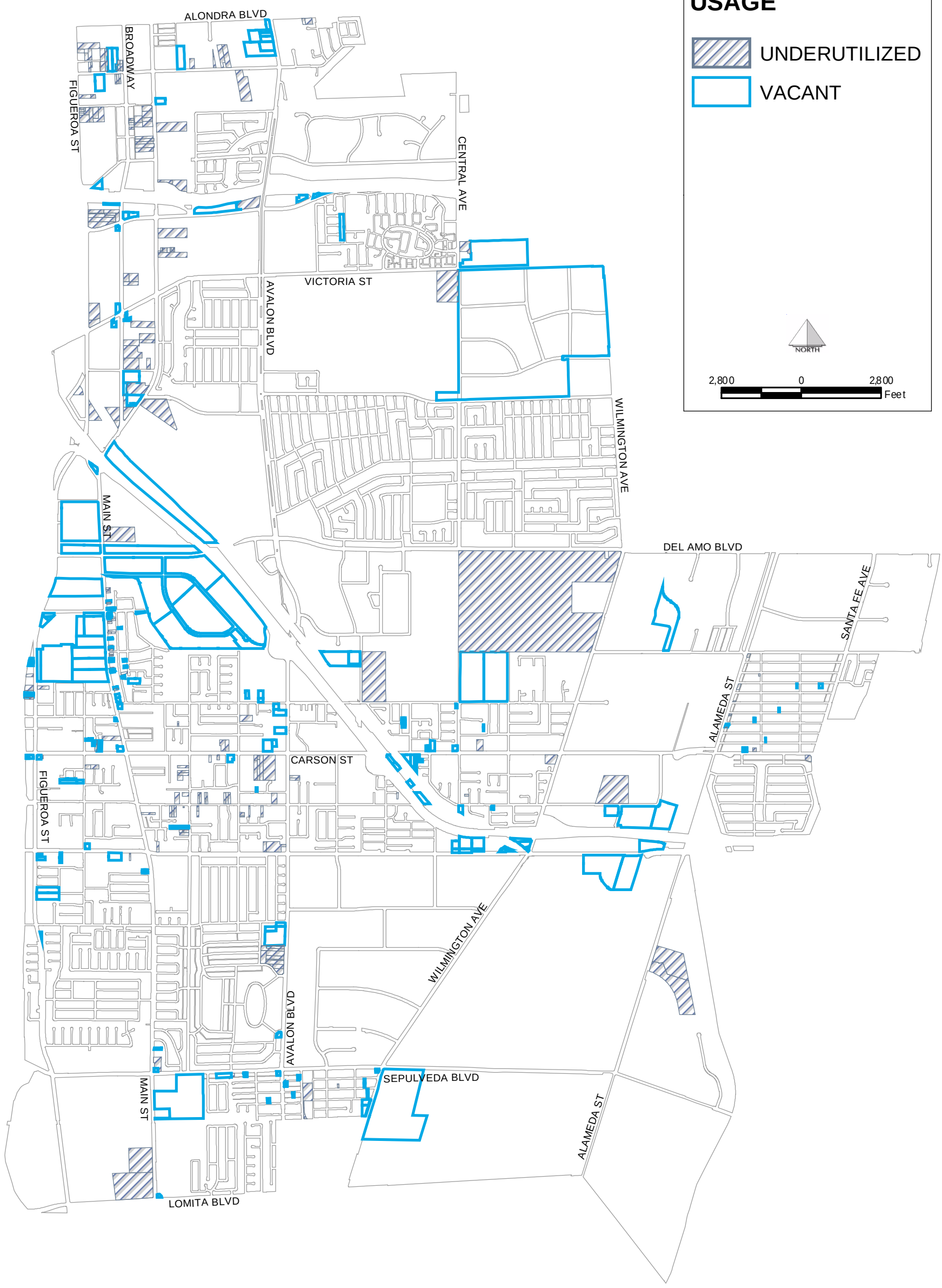
Federal Endangered Species Act

The Federal Endangered Species Act (ESA) was passed in 1973 to provide a process for listing species as endangered or threatened, and established requirements for the protection of all listed species. The ESA also identifies candidate species, which may qualify for listing but are not formally incorporated. The ESA is administered by the U.S. Department of Fish and Wildlife Service.

STATE PLANS AND POLICIES

California Wetlands Policy

The State Wetlands Policy protects marshlands and other designated wetland areas, and requires mitigation for disturbance of wetland areas. The wetlands policy is administered by the California Department of Fish and Game (CDFG) under Section 1601-1606.



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

VACANT AND UNDERUTILIZED LAND

EXHIBIT 4.1-1

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California Endangered Species Act

The California Endangered Species Act (CESA) was enacted in 1984 to protect rare, threatened, and endangered species in California. The CESA is administered by the CDFG.

REGIONAL PLANS AND POLICIES

A number of regional plans influence land use planning in the City of Carson. Regional planning agencies such as the Southern California Association of Governments (SCAG) recognize that planning issues extend beyond the boundaries of individual cities. Efforts to address regional planning issues such as affordable housing, transportation and air pollution have resulted in the adoption of regional plans that affect Carson.

Southern California Association of Governments (SCAG) Regional Comprehensive Plan and Guide and Regional Transportation Plan

Growing regional concern and legislation regarding traffic, air pollution, rising housing costs and other issues affecting the Southern California community as a whole led SCAG to prepare comprehensive regional plans to address these concerns. Three such plans affect planning in Carson: SCAG's Regional Mobility Plan, Growth Management Plan and the Air Quality Management Plan prepared by the South Coast Air Quality Management District (SCAQMD). These three plans are intended to work in conjunction to help reduce traffic congestion and pollutant levels throughout the greater Los Angeles Basin.

All applicable SCAG policies are provided later in Table 4.1-4, *Carson Proposed General Plan Consistency with SCAG's Regional Comprehensive Plan and Guide Policies* in the impacts and mitigation measures section.

South Coast Air Quality Management Districts (SCAQMD) Air Quality Management Plan

The SCAQMD has prepared multiple Air Quality Management Plan (AQMPs) to accomplish the five percent annual reduction goal. The most recent AQMP was published in 1997. To accomplish its tasks, the AQMP relies on a multi-level partnership of governmental agencies at the Federal, State, regional and local level. These agencies, which include EPA, California Resources Board (CARB), local governments, Southern California Association of Governments (SCAG) and SCAQMD, are the cornerstones that implement the AQMP programs.

The 1997 AQMP was adopted by SCAQMP on November 15, 1996, and adopted by CARB on January 23, 1997. The 1997 Plan contains two tiers of control measures: short- and intermediate-term and long-term. Short- and intermediate-term measures are scheduled to be adopted between 1997 and the year 2005. These measures rely on known technologies and other actions to be taken by several agencies that currently have the statutory authority to implement the measures. They are designed to satisfy the Federal CAA requirement of Reasonably Available Control Technology (RACT) and the CCAA requirement of Best Available Retrofit Control Technology (BARCT). There are 37 stationary source and 24 mobile source control measures in this group.

LOCAL PLANS AND POLICIES

Land Use Element

The Land Use Element of the City of Carson General Plan sets forth objectives and policies for the permitted types, intensities and locations of land uses in the City. The Land Use Element contains descriptions of residential, commercial, industrial, parks and recreation and community facilities land use categories which include standards for the minimum and maximum development intensities permitted within each category.

The Element includes a Land Use Plan that establishes a planned pattern of land use by designating the types of uses permitted for land in the City. Policies in the Land Use Element also address City identity, economic development, open space, land use balance, fiscal objectives and land use compatibility.

Zoning Ordinance

Zoning is the means by which cities implement their General Plan. The Zoning Ordinance contains regulations for land use and new development, including uses permitted by zone and development standards. The Zoning Ordinance is the City's primary implementing mechanism for the policies of the Land Use Element and therefore, all zoning regulations must be consistent with the General Plan. The General Plan provides long-range and broad categories of land uses, while zoning provides specific development requirements, such as density, height, size and development character. Similar to the General Plan, a zoning map accompanies the ordinance, which is primarily text, to define the boundaries of each zoning district.

Specific Plans

In addition to the Zoning designations, there are five Specific Plan areas in the City of Carson: Dominguez Technology Centre, Dominguez Hills Village, Cambria Pines, Monterey Pines and Carson Town Center. These areas are governed by detailed land use regulations, unique to each Specific Plan area.

Dominguez Technology Centre. The Dominguez Technology Centre Specific Plan was adopted in two phases: the first phase was adopted in August 1986; the second phase was adopted in October 1990. The Dominguez Technology Centre Specific Plan consists of 288 acres in the northeastern portion of Carson. The Specific Plan area is bounded by Cal State Dominguez Hills, Victoria Street, Wilmington Avenue and University Drive. Dominguez Technology Centre is proposed as a business park with limited support commercial uses. Specific uses proposed include: Technology, Office, Support Commercial, Industrial and Petroleum.

Dominguez Hills Village. The Dominguez Hills Village Specific Plan, Specific Plan No. 4-93, was adopted by Ordinance No. 96-1084 on January 5, 1999. The Specific Plan addresses 100 acres located north of Victoria Street at Central Avenue; there are 72 acres located west of Central Avenue designated for residential uses, and 28 acres located east of Central Avenue designated for commercial/industrial uses. West of Central Avenue, the Specific Plan allows for 650 residential units with densities ranging

from 8 to 25 units per acre with an overall density of 8.9 dwelling units per acre, a 1.6 acre child care facility and open space. The Specific Plan allows for retail commercial, oil production and industrial uses on the portion of the property that is east of Central Avenue.

Cambria Pines. The Cambria Pines Specific Plan, Specific Plan No. 7-97, was adopted by Ordinance No. 97-1124 on November 18, 1997; the project is now known as Sea Country Homes. The project consists of 20.7 acres in the western portion of Carson along Main Street. The purpose of the Specific Plan was to allow for the development of a residential community which will provide affordable housing opportunities. The area in which the site is located has transitioned from an area dominated by oil storage tanks to an area of residential neighborhoods. A single use district was incorporated into the Specific Plan, mirroring the RS - Residential, Single-Family Zoning designation. The proposed density is 7.9 dus./ac. (gross), which will allow 162 homes.

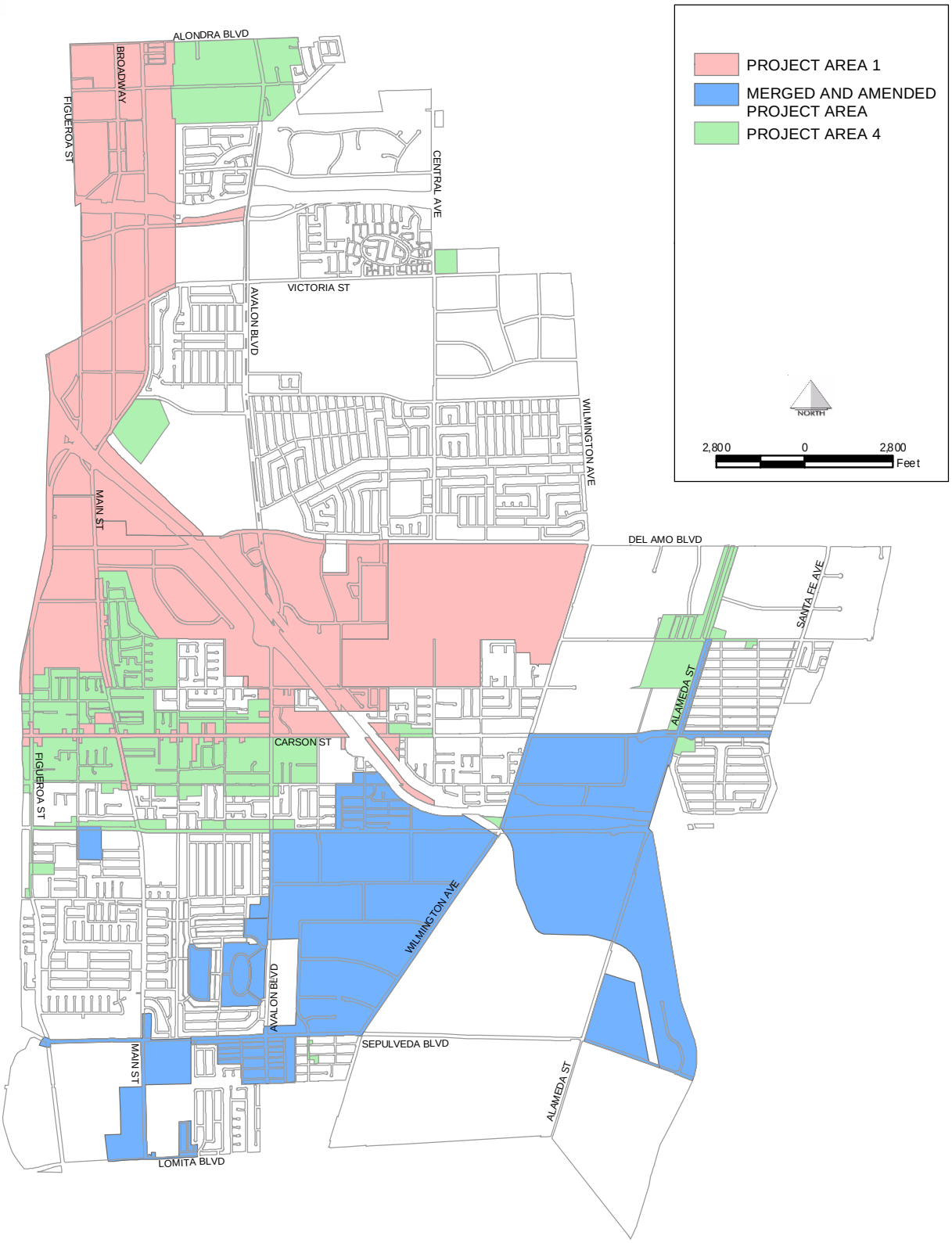
Monterey Pines. The Monterey Pines Specific Plan, Specific Plan No. 6-95, was adopted by Ordinance No. 95-1063 on June 20, 1995 and was amended on November 20, 1996. The Monterey Pines Specific Plan consists of 9.13 acres, and is located in the southern portion of Carson along Lomita Boulevard, between Avalon Avenue and Main Street. The Monterey Pines Specific Plan provided for the development of 69 single-family detached homes, resulting in an average density of 7.56 dwelling units per acre. Per the Specific Plan, the average lot size is 3,200 square feet. While most of the site has been developed for residential uses, there are 1.15 acres of the site that remain industrial.

Carson Town Center. The Carson Town Center Specific Plan, Specific Plan No. 3-90, was adopted by Ordinance No. 94-1044 on October 25, 1994 and was amended on June 18, 1996. The Carson Town Center consists of 76 acres, and is located in the western portion of Carson. The site is bounded by Torrance Boulevard, Main Street and Figueroa Street. The Specific Plan area is located within the City's Redevelopment Planning Area 1-D where heavy manufacturing uses are being replaced with limited manufacturing and Business Park uses. The Specific Plan established three types of use districts:

- Retail, Recreational/Entertainment, Visitor Commercial,
- Office, Recreational/Entertainment, Retail Commercial, and
- Office/R&D, Light Industrial/Retail Commercial.

Redevelopment Plans

The City of Carson's Redevelopment Agency has adopted three redevelopment project areas: Redevelopment Project Area No. 1, Merged and Amended Redevelopment Project Areas Nos. 2 and 3 (now referred to as Redevelopment Project Area No. 2) and Redevelopment Project Area No. 4. Project Area No. 1 consists of approximately 2,244 acres, Project Area No. 2 consists of approximately 1,634 acres, and Redevelopment Project Area No. 4 consists of approximately 1,034 acres. The Redevelopment Plans for the Project Areas are available for review at the City of Carson, Development Services Group, Planning Division. The locations of these Project Areas are shown on Exhibit 4.1-2, *Redevelopment Project Areas*.



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

REDEVELOPMENT PROJECT AREAS

EXHIBIT 4.1-2

Project Area No. 1. Originally established in December 1971, the original Redevelopment Project Area No. 1 encompassed approximately 635 acres. The Project Area contained primarily commercial and industrial uses with a few pockets of residential uses. Since that time it has been amended six times. The most recent amendment, the Sixth Amendment to the Redevelopment Project Area, was adopted in June 1996; the sixth amendment added approximately 609 acres to the existing project area; with the amendment, the total area of Project Area No. 1 is approximately 2,244 acres.

Project Area No. 2. The Redevelopment Plan for Project Area No. 2 was originally adopted by Ordinance No. 74-295 in February 1974. The now 730-acre Project Area contained two residential neighborhoods and an industrial park. The Redevelopment Plan was amended four times between the years 1975 and 1994. The amendments in 1975 and 1982 added a substantial amount of territory to the original Project Area No. 2.

The Redevelopment Plan for Project Area No. 3 was originally adopted by Ordinance No. 84-695 in July 1984. Project Area No. 3 originally contained approximately 500 acres of primarily industrial uses along the San Diego Freeway and some general uses along Carson Street. Project Area No. 3 also contained some non-conforming residential uses. Project Area No. 3 was amended in 1984 and again in 1996.

In June 1996, Project Areas 2 and 3 were merged to maximize available resources. They are formally referred to as the Merged and Amended Redevelopment Project Area Nos. 2 and 3, and commonly referred to as Redevelopment Project Area No. 2. The total area of the Merged and Amended Project Area Nos. 2 and 3 is approximately 1,634 acres.

Project Area No. 4. The Redevelopment Plan for Project Area No. 4 was adopted by Ordinance No. 02-1254 in July 2002. Project Area No. 4 is comprised of approximately 1,034 acres in eleven non-contiguous subareas located throughout the City. The existing land uses in the Project Area include residential, commercial, industrial and public uses.

Livable Communities Program

The South Bay Cities Council of Governments (SBCCOG) was granted funds from the Southern California Association of Governments (SCAG) to increase awareness and understanding of "Livable Communities" concepts. With these funds, the SBCCOG developed the Livable Communities Education and Outreach Program.

The Southern California Association of Governments (SCAG) developed a guidebook, entitled Creating Livable Places in February 1996. The guidebook contains background information, a model resolution and reference materials. This guidebook describes the concepts that create livable communities, as well as some of the barriers that impede the creation of more livable communities and strategies to overcome them. The concepts, which are addressed in the guidebook, include, but are not limited to: integrated communities, design, center focus, public spaces, balanced transportation, diversity, environmental sustainability, public safety and full community participation.

City of Carson Economic Development Strategy

The City Council approved the City of Carson Economic Development Strategy on April 21, 1998. The Strategy contained a Mission Statement, goals, objectives and action steps (specifying the time frame within which the action would occur). The Economic Development Strategy is on file at the City of Carson, Development Services Group, Planning Division.

The Mission Statement for the Economic Development Strategy is to: *"Enhance the quality of life in the City of Carson through promotion of a strong local economy that offers growing employment and business opportunities and supports a healthy and diversified tax base vital to the long-term viability of the City and its citizens."*

4.1.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. For the purposes of this project, impacts related to land use are considered significant in one or more of the following conditions would result from implementation of the proposed project:

- Physically divide an established community (refer to Section 7.0, *Effects Found Not To Be Significant*);

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; and/or

- Conflict with any applicable habitat conservation plan or natural community conservation plan (refer to Section 7.0, *Effects Found Not To Be Significant*).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through application of mitigation, it is categorized as a significant and unavoidable impact.

4.1.3 IMPACTS AND MITIGATION MEASURES

PROPOSED LAND USE DESIGNATIONS

The General Plan proposes three additional land use designations: Mixed Use (MU), General Open Space (GOS) and Recreational Open Space (ROS). A third industrial classification, Business Park (BP), is also proposed to be incorporated into the General Plan.

Mixed Use (MU)

The Mixed Use designation provides opportunities for mixtures of commercial, office and/or residential uses in the same building, on the same parcel or within the same area. The densities and intensities will vary within this land use designation based on actual uses proposed. The maximum allowable FAR for non-residential components of any mixed-use project is expected to be 0.5. The residential densities will also vary, but are expected to be in the Medium to High Density ranges.

The proposed General Plan recommends the Mixed Use designation to include the Carson Street Mixed Use Corridor (Study Area No. 5) with a combination of residential and commercial uses as identified in the adopted Zoning Overlay for the area and the Cal Compact site (Study Area No. 11) with a combination of Regional Commercial, Business Park and Light Industrial uses.

General Open Space (GOS)

The General Open Space land use designation consists of land or water that is essentially unimproved for the purposes of management of natural resources, production, preservation and/or enhancement of natural resources or public health and safety. The Dominguez Channel, utility easements and similar uses are found within this land use category.

Recreational Open Space (ROS)

The Recreational Open Space land use designation provides for public recreational uses designed to meet the active and passive recreational needs of the community. City-owned parks, regional parks, golf courses and similar uses are allowed in this category.

Business Park (BP)

The BP land use category is intended to provide for the least intensive industrial uses. This category will accommodate a variety of businesses and professional offices, services and associated business and retail activities in an attractive environment. These uses will provide a buffer between residential and/or commercial land uses and other heavier industrial uses. The maximum allowable FAR is 0.5. At buildout the average FAR is expected to be approximately 0.42.

IMPLICATIONS OF THE LAND USE PLAN

Future development in Carson is directed by the Land Use Element, which contains a map and text describing the community's future land use pattern. The Carson Proposed General Plan Land Use Map (refer to Exhibit 3-4 in Section 3.0, *Project Description*) presents the proposed distribution of land uses in the City. Total acreages for each of these land use designations are presented under Alternative B in Table 3-3, *Carson Proposed General Plan Summary of Land Use Alternatives*, in Section 3.0, *Project Description*. The table provides acreages for the proposed land use designations according to alternative. Alternative A is the existing General Plan. Alternative B is the Proposed General Plan Land Use Map. Alternatives C and D are modifications of Alternative B.

Tables 3-4, *Projected Additional Residential Development - 2020*, and Table 3-5, *Projected Additional Non-Residential Development – 2020*, provide a summary of development by General Plan land use categories, projected additional residential development in 2020, and projected additional non-residential development in 2020.

Residential

The General Plan accommodates low, medium and high residential density development. These densities are compatible with existing residential developed densities. There are no changes proposed to the residential land use designations.

Implementation of the proposed General Plan would result in 1,839 additional dwelling units. Residential development would primarily be accommodated through intensification of residential uses in areas zoned for higher density, integration of mixed-use units and the development of vacant and underutilized land. The proposed Carson Street Mixed Use Corridor (Study Area No. 5), with a combination of residential and commercial uses would provide an additional 528 dwelling units to the City. Medium density residential development at Village Center and on vacant property north of Village Center (Study Areas No. 1 and 2) would provide 179 additional dwelling units.

Commercial

Commercial uses within the City of Carson are currently designated either General Commercial or Regional Commercial. The maximum allowable FAR for General Commercial is 0.5 and 0.6 for Regional Commercial. No changes are proposed to the commercial land use designations in the proposed General Plan.

The proposed General Plan proposes the addition of a Mixed Use land use designation. The mixed-use land use designation allows for commercial, office and/or residential uses in the same building, on the same parcel or within the same area. With implementation of the proposed General Plan, the total amount of Commercial acreage would be increased. However, individual square footages for the General Commercial and Regional Commercial land use designations would decrease due to projected development occurring on land designated as Mixed Use.

Proposed mixed-use projects such as the Carson Street Mixed Use Corridor (Study Area No. 5) with a combination of residential and commercial uses and The Cal Compact Site (Study Area No. 11) with a combination of Regional Commercial, Business Park and Light Industrial uses are anticipated to provide 39,600 square feet of commercial and office uses and 2.7 million square feet of regional commercial and office uses, respectively.

Industrial

Industrial land uses in Carson include both light and heavy industrial development. Implementation of the proposed General Plan would include the creation of a Business Park land use category. Several Heavy Industrial uses would be redesignated to Light industrial or Business Park, significantly reducing the square footage of heavy industrial land uses throughout the City. The greatest reduction in Heavy Industrial land uses, 4,217,296 square feet, would occur in the Northwest Industrial Corridor (Study Area Nos. 9a and 9b). Approximately 1.8 million square feet of Business Park land uses would exist at Carson Town Center Proposed Warehouse Distribution Facility (Study Area No. 6) and at Avalon/Alondra Industrial Area (Study Area No. 23) with implementation of the proposed General Plan.

Public and Institutional

Currently the Public Facilities category includes open space uses. The General Plan proposes new land use designations of General Open Space and Recreational Open Space (previously discussed). The Public Facilities designation be renamed to Public and Institutional and would continue to include civic, governmental, institutional and utility related uses in Carson.

CONSISTENCY WITH RELEVANT FEDERAL AND STATE PLANS AND POLICIES

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN POTENTIAL CONSISTENCY IMPACTS WITH FEDERAL AND STATE PLANS AND POLICIES.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: The proposed General Plan for the City of Carson has developed and supplemented policies regarding future development with the City. The proposed General Plan would make the General Plan a more effective planning tool to review future projects and to coordinate with other jurisdictions and regulatory agencies on regional planning and environmental matters.

The proposed General Plan maintains policies and implementing actions that include appropriate referral of plans to federal, state, regional and adjacent jurisdictions and agencies to assure consistency between City and other agency regulations and requirements. The policies and actions in the proposed General Plan recognize that all communities within the area have an interest in area-wide land use and transportation

planning, economic development, environmental protection and the provision of adequate services and facilities.

The consistency of the proposed General Plan with specific Federal and State plans is presented in Table 4.1-3, *Proposed General Plan Consistency With Federal and State Plans or Policies*.

Table 4.1-3
Proposed General Plan Consistency With Federal or State Plans or Policies

Plan or Policy	Consistency Statement
Federal Plans or Policies	
Clean Air Act	Consistent. The proposed General Plan contains policies to protect air quality consistent with the Clean Air Act, including management of local pollutants to meet air quality standards, land use and transportation measures to reduce vehicle trips and congestion, and encouraging alternate modes of transportation (i.e., walking, biking, and public transit use).
Clean Water Act (Section 404)	Consistent. The City of Carson contains approximately 17 acres of wetlands. This area has been identified by CDFG and has deed restrictions to protect the wetland habitat. In addition, the proposed General Plan contains goals and policies designed to protect water resources and enhance water quality.
National Pollutant Discharge Elimination System (NPDES) Permit Program	Consistent. The proposed General Plan provides goals and policies designed to protect water quality. Development associated with implementation of the proposed General Plan would be required to implement storm water management practices during and after construction in accordance with the NPDES permit.
Federal Endangered Species Act	Consistent. No known rare or endangered plant or animal species have been identified within the City of Carson. However, should any be identified, any development occurring as a result of implementation of the proposed General Plan would be required to comply in full with the Endangered Species Act. This would include mitigation of any significant impacts to any rare or endangered species.
State Plans or Policies	
California Wetlands Policy	Consistent. Approximately 17 acres of wetlands currently existing in the City of Carson (see Clean Water Act above). Future development resulting from implementation of the proposed General Plan would be subject to the California Department of Fish and Game streambed alteration agreement requirements. These agreements require the avoidance of wetlands and implementation of mitigation measures for any related wetlands impacts.
California Endangered Species Act	Consistent. The City of Carson does not contain any known rare or endangered species. However, should any such plant or animal species be identified, development resulting from implementation of the proposed General Plan would be required to comply fully with California Endangered Species Act and mitigate any impacts to such species.

Policies in the Proposed General Plan: The Transportation and Infrastructure, Open Space and Conservation, and Air Quality Elements include the following policies:

TI-6.2 Ensure that the City remains in compliance with the County, Regional and State Congestion Management Program (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

OSC-2.1 Maintain and improve water quality.

OSC-2.2 Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

OSC-2.4 Conserve the water supply available to the City and promote water conservation in the management of public properties.

OSC-4.1 Reduce the generation of solid waste from sources in the City in accordance with the Source Reduction and Recycling Element for Carson (separate from this General Plan) and state regulations.

AQ-1.1 Continue to enforce ordinances which address dust generation and mandate the use of dust control measures to minimize this nuisance.

AQ-1.2 Promote the landscaping of undeveloped and abandoned properties to prevent soil erosion and reduce dust generation.

AQ-1.3 Adopt incentives, regulations, and/or procedures to minimize particulate emissions.

AQ-2.1 Coordinate with other agencies in the region, particularly the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG), to implement provisions of the regions' Air Quality Management Plan (AQMP), as amended.

AQ-2.2 Utilize incentives, regulations and implement the Transportation Demand Management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.

AQ-2.3 Cooperate and participate in regional air quality management plans, programs and enforcement measures.

AQ-2.4 Continue to work to relieve congestion on major arterials and thereby reduce emissions.

AQ-2.5 Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

AQ-2.6 Encourage in-fill development near activity centers and along transportation routes.

AQ-2.7 Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.

AQ-3.1 Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric or other non-polluting fuels for Carson Circuit buses and other City vehicles.

AQ-3.2 Continue to promote ridership on the Carson Circuit and Los Angeles County Metropolitan Transportation Authority (MTA) bus and metro rail lines.

AQ-5.1 Through the City's Planning processes, monitor air pollutant emissions by mitigating air quality impacts, to the greatest extent possible, associated with facilities/industries in Carson.

AQ-5.2 Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance after Policies/Mitigation: Less Than Significant Impact.

CONSISTENCY WITH RELEVANT REGIONAL PLANS AND POLICIES

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN POTENTIAL CONSISTENCY IMPACTS WITH POLICIES IN SCAG'S REGIONAL COMPREHENSIVE PLAN AND GUIDE.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: Table 4.1-4, *Proposed General Plan Consistency With SCAG's Regional Comprehensive Plan and Guide Policies*, assesses the proposed General Plan's relationship and consistency to pertinent policies contained in various chapters of the Regional Comprehensive Plan and Guide.

The proposed General Plan includes relevant policies and programs that reflect and respond to SCAG's regional goals. The Land Use Element is intended to establish the overall policy direction for land use planning decisions in the City of Carson. As such, goals and policies established in the Land Use Element shape and reflect the policies and programs contained in other General Plan Elements. In addition, policies in the Land Use and Housing Elements address regional jobs/housing balance objectives, the Transportation and Infrastructure Element contains programs aimed at reducing traffic congestion and public infrastructure, the Housing Element discusses Carson's role in providing affordable housing, the Economic Development Element contains policies to provide a range of housing and employment opportunities to meet the needs of Carson's residents and the Air Quality Element outlines the City's efforts to participate in programs aimed at improving regional air quality.

Table 4.1-4
Proposed General Plan Consistency
With SCAG's Regional Comprehensive Plan and Guide Policies

SCAG RCPG Policies		Consistency Statement
Growth Management Chapter		
3.01	The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.	Consistent. The projected 2020 population of the proposed General Plan is 98,602, which is below the Regional Comprehensive Plan projections identified by SCAG by 4,798 people. The proposed General Plan 2020 population projections reflect current growth conditions based on existing land use and zoning designations within the City. They do not reflect natural population changes such as deaths and births. Since the population resulting from implementation of the proposed General Plan is within SCAG's projections, the proposed General Plan is consistent with this policy.
3.03	The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.	Consistent. No specific infrastructure or service improvement projects are identified as part of the proposed General Plan. However, future development projects as a result of General Plan implementation would require infrastructure and service improvements subject to review by the City and responsible agencies.
1998 Regional Transportation Plan		
4.01	Transportation investments shall be based on SCAG's adopted Regional Performance Indicators.	Consistent. The proposed General Plan contains goals and policies ensuring that traffic congestion is reduced and that adequate transportation facilities are provided. (Refer to the following proposed General Plan goals and policies: TI-2.5, TI-2.6, TI-2.7, TI-4.1, TI-5.1, TI-6.1 and TI-6.2)
4.02	Transportation investments shall mitigate environmental impacts to an acceptable level.	Consistent. The General Plan contains policies requiring new development to pay its share of costs associated with the mitigation of project-generated impacts including regional traffic congestion. (Refer to the following General Plan goals and policies: TI-2.1, TI-2.2 and TI-2.6)
4.04	Transportation Control Measures shall be a priority.	Consistent. The General Plan contains policies to participate in regional air quality management plans, programs, and enforcement measures. (Refer to the following proposed General Plan goals and policies: AQ-2.1, AQ-2.2, and AQ-2.3.)
4.06	Implementing transit restructuring, including Smart Shuttles, freight improvements, advanced transportation technologies; airport ground access and traveler information services are RTP priorities.	Consistent. The proposed General Plan contains policies supporting the need to diversify transportation choices. (Refer to the following proposed General Plan goals and policies: LU-10.1, LU-15.5, LU-15.8, TI-4, TI 4.1 and TI-4.3)
4.07	Projects proposed for the Regional Transportation Improvement Program (RTIP) that do not indicate a reasonable phasing of construction between segments will not be approved.	Consistent. The proposed General Plan contains policies aimed at phasing new development to maintain balance between land use and circulation systems. (Refer to the following proposed General Plan goals and policies: LU-6.2, LU-6.3, LU-8.1, LU-8.2, LU-8.3, LU-15.2, and LU15.8)

Table 4.1-4 - Continued
General Plan Consistency
With SCAG's Regional Comprehensive Plan and Guide Policies

SCAG RCPG Policies		Consistency Statement
4.08	All existing and new public transit services, facilities and/or systems shall be fully accessible to persons with disabilities as required by applicable sections of the 1990 Americans with Disabilities Act.	Consistent. No specific infrastructure or service improvement projects are identified as part of the proposed General Plan. However, future development projects as a result of General Plan implementation would be required to conform to applicable sections of the 1990 Americans with Disabilities Act.
4.10	All existing and new public transit services shall be provided in a manner consistent with Title VI of the 1964 Civil Rights Act, prohibiting intentional discrimination and adverse disparate impact with regard to race, ethnicity, or national origin.	Consistent. No specific infrastructure or service improvement projects are identified as part of the proposed General Plan. However, future development projects as a result of General Plan implementation would be required to conform to Title VI of the 1964 Civil Rights Act.
4.11	All existing and new public transit services, facilities and/or systems shall evaluate the potential for private sector participation through the use of competitive procurement.	Consistent. The City of Carson maintains and operates the Carson Circuit public transportation system and Carson North/South Shuttle. Torrance Transit and the Los Angeles County MTA bus lines also provide public transportation in the City. In addition, private sector companies such as Dial-A-Ride Service and Access Services provide economical transit service to Carson residents. The City would continue to seek private sector participation in any future transit service development.
4.15	Arterial HOV facilities to support transit and rideshare will be supported and encouraged.	Consistent. The proposed General Plan provides Policy AQ-4.2 to promote and encourage ride share activities including park and ride lots.
4.16	Maintaining and operating the existing transportation system will be a priority over expanding capacity.	Consistent. The proposed General Plan incorporates numerous policies aimed at relieving congestion through implementation of ridership programs, improving alternative transportation, land use decisions, etc. rather than through expanding capacity. (Refer to the following proposed General Plan goals and policies: LU-6.3, LU-8 LU-8.1, LU-8.2, LU-8.3, LU-15.2, LU-15.8, TI-2.5, TI-2.8, TI-3.4, TI-4.1, TI-5.1, and TI-6.1)
4.17	Alternatives to highway expansion must be evaluated before giving regional approval to expand single occupancy lanes.	Consistent. Refer to consistency analysis for SCAG Policy 4.16.
GMC Policies Related to the RCPG Goal to Improve the Regional Standard of Living		
3.04	Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.	Consistent. The proposed General Plan contains policies to maintain a good balance between jobs and housing and to provide housing opportunities affordable to the incomes of all segments of the community. (Refer to the following proposed General Plan goals and policies: LU-1, H-1, H-1.2, H-2, H-3, H-3.1, H-3.2 and H-3.3,.)
3.05	Encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.	Consistent. Refer to consistency analysis for SCAG Policy 4.16.

Table 4.1-4 - Continued
General Plan Consistency
With SCAG's Regional Comprehensive Plan and Guide Policies

SCAG RCPG Policies		Consistency Statement
3.09	Support local jurisdictions' actions to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.	Consistent. The proposed General Plan contains policies to seek private funding sources for the extension of services and facilities where these services are not already part of the City's financed capital improvement program. (Refer to the following proposed General Plan goals and policies: ED-4.3, ED-11.2, TI-2.6, TI-10.1, H-1.2)
3.10	Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.	Consistent. The proposed General Plan provides policies to expedite the permitting process. (Refer to the following proposed General Plan goals and policies: H-4.2 and ED-6.3
GMC Policies Related to the RCPG Goal to Improve the Regional Quality of Life		
3.11	Support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing rich subregions.	Consistent. The proposed General Plan provides policies that provide incentives for both housing and job growth. (Refer to the following proposed General Plan goals and policies: LU-5.2, LU-5.3, LU-6.2, LU-6.6, LU-15.1, LU-15.3, LU-15.4, H-3.1, H-3.3,)
3.12	Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.	Consistent. Refer to consistency analysis for SCAG Policy 4.16.
3.13	Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.	Consistent. Carson is predominately built out and surrounded by other urbanized areas. New development allowed under the proposed General Plan would take the form of development of vacant parcels, redevelopment or infill projects on underutilized lots. In addition, the proposed General Plan contains policies that encourage the use and redevelopment of existing urbanized areas. (Refer to the following proposed General Plan goals and policies: LU-1.1, LU-4, and ED-11.1.)
3.14	Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.	Consistent. Refer to consistency analysis for SCAG Policies 4.16 and 3.13.
3.15	Support local jurisdiction's strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.	Consistent. The proposed General Plan contains policies to encourage mixed-use, redevelopment and infill development in urbanized areas accessible to transit. (Refer to the following proposed General Plan goals and policies: LU-8, LU-8.1, LU-8.2, LU-8.3, and AQ-2.6.)
3.16	Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.	Consistent. Refer to consistency analysis for SCAG Policies 4.16, 3.13, and 3.15.
3.17	Support and encourage settlement patterns, which contain a range of urban densities.	Consistent. The General Plan Land Use Element and Land Use Map provide a range of residential densities throughout the City.

Table 4.1-4 - Continued
General Plan Consistency
With SCAG's Regional Comprehensive Plan and Guide Policies

SCAG RCPG Policies		Consistency Statement
3.18	Encourage planned development in locations least likely to cause environmental impact.	Consistent. In addition to the mitigation measures proposed in this EIR, the proposed General Plan contains numerous policies to protect environmental resources and minimize adverse environmental effects. All future development allowed for under the proposed General Plan would be required to undergo subsequent environmental review by the City.
3.19	Support policies and actions that preserve open space areas identified in local, state, and federal plans.	Consistent. The proposed General Plan contains policies to preserve open space areas within the City. (Refer to the following proposed General Plan goals and policies: OSC-1, OSC-1.1, OSC-1.3, OSC-1.5, PRC-1.1, PRC-1.2, PRC-1.3 and PRC-1.4.)
3.20	Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.	Consistent. The proposed General Plan contains policies to protect environmental resources and minimize adverse environmental effects for wetlands, groundwater, and wildlife. (Refer to the following proposed General Plan goals and policies: OSC-2, OSC-2.4 and OSC-2.7.)
3.21	Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.	Consistent. The proposed General Plan contains policies to protect environmental resources and minimize adverse environmental effects for cultural and archaeological resources. (Refer to the following proposed General Plan goals and policies: PRC-8.1, PRC-8.2, PRC-8.3, PRC-9.1, PRC-9.2 and PRC-9.3)
3.22	Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.	Consistent. The proposed General Plan provides policies that protect against flooding, slope and seismic hazards. (Refer to the following proposed General Plan goals and policies: SAF-1.1 to SAF-1.3, SAF-2.2 and SAF-5.1 to SAF-5.6.)
3.23	Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.	Consistent. Refer to the consistency analysis for SCAG Policy 3.18.
GMC Policies Related to the RCPG Goal to Provide Social, Political, and Cultural Equity		
3.24	Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.	Consistent. The proposed General Plan contains numerous policies to provide incentives to developers to supply affordable housing and to encourage a strong housing base. (Refer to all the proposed General Plan Housing Element goals and policies.)

Table 4.1-4 - Continued
General Plan Consistency
With SCAG's Regional Comprehensive Plan and Guide Policies

SCAG RCPG Policies		Consistency Statement
3.27	Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.	Consistent. The Carson General Plan is the primary source of long-range planning and policy direction that will guide growth and preserve the quality of life within the community. The Housing Element encourages the development of housing for all income levels. The Parks, Recreation and Human Services Element provides the protection and enhancement of open space and recreational facilities. The Safety Element contains policies to support strong law enforcement and fire protection. The Land Use Element promotes harmony between the diverse types of uses within the City in balance with public services and infrastructure. In addition, public service and utility providers were contacted as part of the proposed General Plan and EIR process; their input on how the proposed General Plan would impact their services is reflected in the General Plan Elements and EIR.
Air Quality Chapter		
5.11	Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.	Consistent. This EIR addresses air quality, land use and transportation impacts of the proposed General Plan and provides mitigation measures where feasible to reduce significant environmental impacts to a less than significant level. In addition, all future development allowed for under the proposed General Plan would be required to undergo subsequent environmental review by the City.
Water Quality Chapter		
11.02	Encourage "watershed management" programs and strategies, recognizing the primary role of local governments in such efforts.	Not Applicable. This SCAG policy is not pertinent to the City of Carson. The County of Los Angeles oversees "watershed management" programs within the County including Carson.
11.07	Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.	Consistent. The proposed General Plan contains policies to encourage water reclamation. (Refer to proposed General Plan policies: OSC-2.6 and OSC 2.7.)
Open Space Chapter		
9.01	Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region and to promote tourism in the region.	Consistent. The proposed General Plan contains policies to provide and protect open space uses. Refer to the consistency analysis for SCAG Policy 3.19.
9.02	Increase the accessibility to open space lands for outdoor recreation.	Consistent. The proposed General Plan contains policies to promote increased accessibility of open space for public use. (Refer to the following proposed General Plan goals and policies: OSC-1.1, OSC-1.3, OSC-1.4, PRC-1.1, PRC-1.2, PRC-1.3, PRC 1.4 and PRC-1.5.)
9.03	Promote self-sustaining regional recreation resources and facilities.	Consistent. Refer to the consistency analysis for SCAG Policy 3.19.
9.04	Maintain open space for adequate protection of lives and properties against natural and man-made hazards.	Consistent. Refer to the consistency analysis for SCAG Policy 3.19.

Table 4.1-4 - Continued
General Plan Consistency
With SCAG's Regional Comprehensive Plan and Guide Policies

SCAG RCPG Policies		Consistency Statement
9.05	Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.	Consistent. Refer to the consistency analysis for SCAG Policy 3.22.
9.06	Minimize public expenditure for infrastructure and facilities to support urban type uses in areas where public health and safety could not be guaranteed.	Consistent. Through General Plan goals, policies, and implementation programs; Specific Plans and zoning requirements, the City provides for adequate infrastructure and facilities, as well as ensures the public's health and safety. Public expenditures are determined by the City Council as a part of the City's annual budget process for the Capitol Improvement Program.
9.08	Develop well-managed viable ecosystems or known habitats of rare, threatened and endangered species, including wetlands.	Consistent. The General Plan promotes the protection of viable ecosystems and habitats through the preservation and enhancement of open space uses. Refer to the consistency analysis for SCAG Policy 3.19, which provides a list of proposed General Plan open space preservation policies.

The analysis contained in Table 4.1-4 concludes that the proposed General Plan would be consistent with SCAG's policies. Therefore, implementation of the proposed General Plan would not result in significant land use impacts related to relevant SCAG policies, nor with any relevant applicable land use plans, policies or regulations.

Policies in the Proposed General Plan: Table 4.1-4 identifies all relevant policies.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

CONSISTENCY WITH RELEVANT LOCAL PLANS AND POLICIES

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN POTENTIAL CONSISTENCY IMPACTS WITH LOCAL PLANS AND POLICIES.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: Due to the comprehensive nature of the Land Use Element, land use issues are not addressed in the same detail as they might be in other regional and local physical planning documents, plans and ordinances that the City can adopt. The land use categories described in the Land Use Plan Element of the proposed General Plan indicate general categories of allowed uses and development intensities within each land use category. Other City documents including the zoning ordinance, specific plans and redevelopment plans establish more specific regulations and policies influencing

development. The proposed General Plan's consistency with these plans is shown in Table 4.1-5, *Proposed General Plan Consistency with Local Plans or Policies*. The analysis in Table 4.1-5 concludes that the proposed General Plan would be consistent with the City's Zoning Ordinance, existing Specific Plans, Redevelopment Plans and Economic Development Strategy. Therefore, implementation of the proposed General Plan would not result in significant land use impacts relative to these local plans or policies.

Table 4.1-5
Proposed General Plan Consistency With Local Plans or Policies

Plan or Policy	Consistency Statement
City of Carson Zoning Ordinance	Consistent. Carson continues to ensure that its legislative enactments, including zoning, are consistent with the General Plan. Each of Carson's General Plan land use categories corresponds to one or more zoning districts.
Specific Plans	Consistent. Each Specific Plan adopted by the City of Carson has been designed to implement specific goals and policies of the General Plan. The adopted Specific Plans would remain consistent with the proposed General Plan.
Redevelopment Plans	Consistent. California State Law requires all adopted Redevelopment Plans to conform to the City General Plan. The proposed General Plan would not involve any changes that would make the Redevelopment Plans inconsistent with the proposed General Plan. Similarly, as the General Plan is intended to guide future development in the City of Carson, the Redevelopment Plans adopted by the City would be consistent with the proposed General Plan.
Economic Development Strategy	Consistent. The City of Carson proposed General Plan would not involve any changes that would make the Economic Development Strategy inconsistent with the proposed General Plan. The proposed General Plan includes an Economic Development Element with policies to further enhance and implement the approved strategy.

Policies in the Proposed General Plan: The Land Use Element includes the following policies:

LU-3.2 Through the zoning ordinance, control uses such as salvage yards, automobile dismantling, and scrap metal recycling operations which are not compatible with existing and anticipated development.

LU-4.1 Direct Redevelopment Agency investments to those economic activities and locations with the greatest potential economic return.

LU-4.2 Consider amending the boundaries of the Redevelopment Project Areas to take full advantage of redevelopment tools.

LU-4.3 Bring the site assembly tools and marketing efforts of redevelopment to bear in the revitalization of the Carson Street Corridor and the Northwest Industrial Corridor, as well as other areas which are appropriate.

LU-4.4 Use redevelopment financing in conjunction with code enforcement activities to assist in the rehabilitation of non-residential and residential developments.

LU-4.5 Prioritize and coordinate redevelopment area public improvements with those in the City's Capital Improvement Program.

LU-6.4 Coordinate Redevelopment and Planning activities and resources to balance land uses, amenities, and civic facilities to improve the quality of life.

LU-6.7 Implement and monitor the development intensities identified earlier in this Element. Periodically review these intensities and densities based on market demand and other conditions to confirm their appropriateness.

LU-6.8 Evaluate land use intensities in conjunction with the review of any zone change and/or General Plan Amendment to permit development or modify intensity.

LU-7.2 Periodically review, and amend if necessary, the City's Zoning Ordinance to ensure the compatibility of uses allowed within each zoning district.

LU-8.1 Amend the Zoning Ordinance to include those Mixed Use areas identified on the General Plan Land Use Plan.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

LAND USE COMPATIBILITY

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN DIRECT IMPACTS REGARDING LAND USE COMPATIBILITIES.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: Incompatible land uses currently exist throughout the City of Carson. A majority of the incompatibilities occur amid residential and heavy industrial land uses. The eastern, southeastern and northwestern portions of the City are predominately developed with heavy industrial land uses adjacent to or surrounding residential land uses. These conditions create a number of incompatibility issues between industrial and residential uses, such as operational noise impacts from industrial businesses, traffic noise impacts, railroad noise impacts, truck traffic through or immediately adjacent to residential neighborhoods, or impacts associated with hazardous materials (spills or

accidents). As Carson is mostly developed, the proposed General Plan seeks to improve these incompatibilities through the modification of existing land uses. However, a number of these issues are addressed in other sections of this EIR. Refer to Section 4.3, *Transportation/Circulation*; Section 4.5, *Noise*; and Section 4.10, *Public Health and Safety*.

The land use designations for residential and commercial uses were not modified in the proposed General Plan. However, the General Plan does propose the addition or modification of other land use categories.

The proposed General Plan proposes the addition of Business Park (BP) as a new land use category intended to provide for the least intensive industrial uses. This would be in addition to the existing land use categories of Light Industrial (LI) and Heavy Industrial (HI). The General Plan also proposes that the City's open space uses receive land use designations separate and apart from "Public Facilities". The proposed open space designations are General Open Space (GOS) and Recreational Open Space (ROS). The GOS land use would be implemented by the OS- Open Space zone. It is recommended that the City develop a more specific zoning designation to implement the ROS land use. A Mixed Use (MU) category is proposed as a new land use designation under the proposed General Plan as well. This category provides opportunities for mixtures of commercial, office and/or residential uses in the same building, on the same parcel or within the same area.

With the new land use designations, the General Plan recommends the Business Park designation as a component of the Mixed Use designation for the Cal Compact site. In addition, the Carson Street Mixed Use Corridor would be designated as Mixed Use. The Public Facilities land use designation would be modified to include civic, governmental, institutional and utility related uses within Carson. The designation may be implemented through any of the City's zones.

The greatest land use incompatibility currently in the City is the location of heavy industrial next to residential. The proposed General Plan seeks to reduce residential and heavy industrial conflicts with the addition of approximately 153 acres of Business Park, the addition of approximately 400 acres of Light Industrial and the reduction of approximately 800 acres of Heavy Industrial. Overall, the proposed General Plan reduces Industrial designated land by approximately 200 acres citywide when compared to the existing General Plan. The proposed Land Use Plan and the new land use designations provide the City with additional opportunities to ensure that compatible and more appropriate uses are near one another. Implementation of the proposed General Plan would not result in significant adverse impacts regarding land use compatibility within the City. Therefore, a less than significant impact would result.

Policies in the Proposed General Plan: The Land Use Element includes the following policies:

LU-3.1 Continue to aggressively enforce the Non-Conforming Use Ordinance in order to eliminate non-conforming and/or incompatible land uses, structures and conditions.

LU-3.2 Through the zoning ordinance, control uses such as salvage yards, automobile dismantling, and scrap metal recycling operations which are not compatible with existing and anticipated development.

LU-3.3 Encourage compatible land uses to locate in appropriate areas of the City.

LU-6.2 Achieve a land use balance through a variety of methods, including: provision of incentives for desired uses; coordination of land use and circulation patterns; and promotion of a variety of housing types and affordability.

LU-6.3 Consider establishing minimum land use density requirements in certain areas such as mixed use zones to provide more efficient, consistent, and compatible development patterns while also promoting greater potential for pedestrian and transit-oriented development.

LU-6.8 Evaluate land use intensities in conjunction with the review of any zone change and/or General Plan Amendment to permit development or modify intensity.

LU-7.1 Ensure that zoning classifications are consistent with General Plan designations.

LU-7.2 Periodically review, and amend if necessary, the City's Zoning Ordinance to ensure the compatibility of uses allowed within each zoning district.

LU-7.3 Locate truck intensive uses in areas where the location and circulation pattern will provide minimal impacts to residential and commercial uses.

LU-7.4 Promote the use of buffers between more intensive industrial uses and residential uses.

LU-7.5 Through the discretionary review process, ensure that the siting of any land use which handles, generates, and/or transports hazardous substances, as defined by state and federal regulations, will not negatively impact existing sensitive receptors/land uses.

LU-7.6 Monitor existing, and carefully review all requests to expand intensive commercial and industrial uses.

LU-7.7 Coordinate with adjacent landowners, cities and the County in developing compatible land uses for areas adjacent to the City's boundaries.

LU-7.8 Coordinate with California State University at Dominguez Hills in the planning of its property to ensure compatible land uses.

LU-8.1 Amend the Zoning Ordinance to include those Mixed Use areas identified on the General Plan Land Use Plan.

LU-8.2 Continue to monitor the success of mixed use projects within the Carson Street Mixed Use Corridor, and as appropriate, promote mixed use projects within this area.

LU-8.3 Locate higher density residential uses within proximity of commercial centers to encourage pedestrian traffic, and to provide a consumer base for commercial uses.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.1.4 UNAVOIDABLE SIGNIFICANT IMPACTS

With implementation of policies proposed in the General Plan listed above, land use impacts would be less than significant. The proposed General Plan would not result in any significant and unavoidable land use impacts.

4.2 POPULATION, EMPLOYMENT AND HOUSING

This section of the EIR addresses some of the socioeconomic impacts associated with implementation of the proposed General Plan. The setting discussion presents the baseline information required for establishing changes due to the proposed General Plan. Impacts related to the year 2020 projections of the General Plan are then analyzed based on population, employment and housing changes compared to current conditions. This section is based on data contained in the Land Use and Housing Elements of the proposed General Plan. Additional information incorporated into this section was derived from the 2000 U.S. Census, Los Angeles County Population and Housing Estimates (Report E-5) revised 2001, obtained from the California Department of Finance, Demographic Research Unit and prepared by the California Employment Development Department, May 2002, as well as projections from the Southern California Association of Governments (SCAG) regional projections dated May 1998.

4.2.1 ENVIRONMENTAL SETTING

POPULATION, HOUSING AND EMPLOYMENT TRENDS

POPULATION

Table 4.2-1, *Regional Population Projections*, presents population data and projections for the years 1990, 2000 and 2020 for the City of Carson, Los Angeles County and the six-counties of the Southern California region (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties). The data has been obtained from SCAG projections, 1990 and 2000 Census data and the California Employment Development Department.

According to 2000 Census data, Carson has a population of 89,730 residents. This represents a population increase of 6.8 percent since 1990.

Within a regional context, Carson's population of 89,730 residents in 2000 accounted for less than one percent of Los Angeles County's approximately 9.5 million residents. Los Angeles County represents 57.6 percent of the region's 16.5 million residents. Los Angeles, compared to the rest of the SCAG region is relatively developed; thus, this percentage may decrease in the future, as increases in population growth occur outside of Los Angeles County.

HOUSING

Carson supplies less than one percent of the County's housing supply of 3,270,909 units. However, housing supply within Carson increased 3.6 percent from 1990 to 2000. In 2000, the City had approximately 25,337 housing units with almost 78 percent of the housing supply being owner occupied and a vacancy rate of 2.7 percent. A majority of Carson's housing units (67.5 percent) were built prior to 1970.

Table 4.2-1
Regional Population Projections (1990 – 2020)

Year	Population, Households, & Employment			Total Growth		Percentage Growth	
	1990	2000	2020	1990-2000	2000-2020	1990-2000	2000-2020
Population							
Carson	83,995[1]	89,730[2]	103,400[3]	5,735	13,670	6.8	15.2
Los Angeles County	8,863,164[1]	9,519,338[2]	11,760,000[3]	656,174	2,240,662	7.4	23.5
Region	14,640,832[1]	16,516,006[2]	21,305,000[3]	1,875,174	4,788,994	12.8	28.9
Housing Units							
Carson	24,441[1]	25,337[2]	26,880[4]	896	1543	3.6	6.1
Los Angeles County	3,163,343[1]	3,270,909[2]	4,054,050[4]	107,566	783,141	3.4	23.9
Region	5,180,240[1]	5,722,039[6]	7,254,450[4]	541,799	1,532,411	10.5	26.7
Employment							
Carson	44,424[1]	40,590[2]	67,900[3]	(3,834)	27,310	(.09)	67.2
Los Angeles County	4,203,792[1]	4,312,264[2]	5,156,000[3]	108,472	843,736	2.3	19.5
Region	7,064,508[1]	7,536,949[2]	9,571,000[3]	472,441	2,034,051	6.6	26.9

Sources: [1]1990 Census
[2]2000 Census
[3]Southern California Association of Governments (SCAG) RTP growth projections, 2001.
[4]SCAG Regional Transportation Plan, April 2001.

EMPLOYMENT PROFILE

According to 2000 Census data, approximately 40,590 persons are employed within the City of Carson, which is approximately one percent of the County's employment base of 4,312,264 jobs. By 2020, approximately 67,900 jobs are projected to exist within the City, representing a 67 percent increase of the City's employment base. Although jobs actually decreased from 1990 to 2000 in the City of Carson, the amount of jobs increased for Los Angeles County by 2.3 percent and for the region by 6.6 percent. Projections for 2020 reveal a substantial increase of jobs for the City, County and Region.

Table 4.2-2, *Los Angeles County Employment Profile*, indicates that educational, health and social services were the largest sources of jobs in Los Angeles County. Manufacturing is the second largest job source and professional, scientific, management; administrative and waste management services are the third largest.

Table 4.2-2
Los Angles County Employment Profile

Type of Industries	1990		2000	
	Number	Percent	Number	Percent
Agriculture, Fishery, Mining & Forestry	61,126	1.5%	10,188	0.3%
Construction	246,580	5.9%	202,829	5.1%
Manufacturing	861,337	20.5%	586,627	14.8%
Transportation, Communications, & Utilities	289,005	6.9%	198,375	5.0%
Wholesale Trade	213,097	5.1%	184,369	4.7%
Retail Trade	647,951	15.4%	416,390	10.5%
Information			213,589	5.4%
Finance, Insurance & Real Estate	327,998	7.8%	272,304	6.9%
Other Services	296,399	7.1%	233,193	5.9%
Public Administration	120,901	2.9%	124,937	3.2%
Professional, scientific, management, administrative & waste management services	420,925	10%	455,069	11.5%
Educational, health and social services	587,944	13.9%	722,792	18.3%
Arts, entertainment, recreation, accommodation & food services	130,529	3.1%	332,753	8.4%
Total	**4,203,792**		**3,953,415**	

Source: 1990 and 2000 Census.

DEMOGRAPHIC PROFILE

Table 4.2-3, *Carson/Los Angeles County Race Characteristics*, summarizes the racial mix within the City of Carson. Census data shows the City to have similar percentages of White, Black or African-American and Asian populations with total percentages of 25.7 percent, 25.4 percent and 22.3 percent, respectively. In addition the category of "Other Race" includes two or more races and represents 23.1 percent of the City's population.

In contrast, the County of Los Angeles is predominately White with a total population of 4,637,062 or 48.7 percent. Black or African-Americans comprise 9.8 percent of the population (approximately 930,957 persons), Asian persons residing in the County comprise 11.9 percent of the population (approximately 1,137,500 persons) and races specified as "Other" represent 23.5 percent of the County population (approximately 2,709,778 persons).

Table 4.2-3
Carson/Los Angeles County Race Characteristics

Race	City of Carson		Los Angeles County	
	Population	Percent of Total	Population	Percent of Total
White	23,049	25.7	4,637,062	48.7
Black or African-American	22,804	25.4	930,957	9.8
American Indian and Alaska Native	505	0.6	76,988	0.8
Asian	19,987	22.3	1,137,500	11.9
Native Hawaiian or Pacific Islander	2,680	3.0	27,053	0.3
Other Race	16,137	18.0	2,709,778	23.5
Two or more races	4,568	5.1	469,781	4.9
Total	**89,730**	**100.0**	**9,519,338**	**100.0**

Source: 2000 Census.

4.2.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Population, Housing and Employment impacts resulting from implementation of the proposed General Plan could be considered significant if they cause any of the following results:

- Induce substantial population growth in an area, either directly (for example, proposing new homes and business) or indirectly (for example, through extension roads or other infrastructure);

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

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact". Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

The characteristics of a project that can trigger population, employment or housing changes are 1) actual development of residential, commercial or industrial space, or 2) changes in land use development intensity standards. The proposed changes to the General Plan would result in the potential for an increase in population, employment and housing in the year 2020.

4.2.3 IMPACTS AND MITIGATION MEASURES

POPULATION GROWTH

❍ **POPULATION GROWTH ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY INCREASE WITHIN THE CITY THROUGH THE PLANNING HORIZON YEAR OF 2020.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: As of January 1, 2001, the California Department of Finance (DOF) estimated the City of Carson's population to be 92,000 persons. In 1998, approximately 936.6 acres were vacant and 233.9 acres were underutilized in the City of Carson. The proposed General Plan would allow an additional 1,839 residential dwelling units in 2020. These additional dwelling units are anticipated to increase the population by 6,602[1] persons. Development and occupation of the dwelling units would increase the total population within Carson to approximately 98,602. Therefore, implementation of the proposed General Plan is not the main source of population growth. Rather it is assumed to be attributed to the natural increase in population[2].

The 2001 Regional Transportation Plan (RTP) administered by the Southern California Association of Governments (SCAG) projects the population of Carson to reach 103,400 by 2020. The RTP also projects the Los Angeles County subregion to have an approximate population of 11,760,000 in the year 2020. Population growth resulting from implementation of the proposed General Plan would be consistent and within SCAG's 2020 projections. Therefore, impacts are considered to be less than significant.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential impacts due to population growth.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

[1] Based on average household size of 3.59 persons, 2000 Census.

[2] Natural increase is the net gain after subtracting the number of deaths from the number of births.

HOUSING

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN WOULD RESULT IN AN ADDITIONAL 1,839 HOUSING UNITS FOR THE CITY OF CARSON.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: The proposed General Plan would allow for the construction of an additional 1,839 dwelling units within the City, resulting in a total of 26,669 housing units in 2020. This represents a 5.3 percent increase in housing units from 2000.

Residential development within the City is based on target density. Development could occur at densities either greater or lower than these targets. The Land Use and Housing Elements of the proposed General Plan include a discussion of the circumstances under which development could occur at maximum densities. Development that confers a special public benefit, for example affordable housing, could occur at maximum densities.

According to SCAG projections, the total number of housing units in Carson is expected to reach 26,880 by 2020. This represents an increase of 1,543 housing units or 6.1 percent over the 2000 SCAG projections. In addition, the Los Angeles County subregion is projected to have approximately 4,054,050 housing units in the year 2020. The increase in housing units resulting from implementation of the proposed General Plan is slightly larger than SCAG's projection for the City. The number of housing units resulting from implementation of the proposed General Plan (26,669) are similar to SCAG's 2020 projections (26,880). Development within Carson would occur at densities consistent and compatible with surrounding development and would be consistent with the General Plan and zoning designations. The increase in housing would be gradual over the next 20 years; therefore, impacts are considered to be less than significant.

Policies in the Proposed General Plan: The Land Use, Housing and Economic Development Elements include the following policies:

LU-6.2 Achieve a land use balance through a variety of methods, including: provision of incentives for desired uses; coordination of land use and circulation patterns; and promotion of a variety of housing types and affordability.

LU-6.5 Coordinate strategies with the County, Southern California Association of Governments (SCAG), South Bay Cities Council of Governments (SBCCG), and other appropriate agencies and/or organizations to meet housing and employment needs.

LU-15.1 Ensure that the City of Carson is a complete and balanced community which contains housing, shops, work places, schools, parks and civic facilities, essential to the daily lives of residents.

LU-15.2 Encourage the location of housing, jobs, shopping, services and other activities within easy walking distance of each other.

LU-15.3 Maintain a diversity of housing types to enable citizens from a wide range of economic levels and age groups to live in Carson.

H-1.5 Establish and maintain development standards that support housing development while protecting the quality of life.

H-2.3 Improve housing and assistance of low and moderate income persons and families to obtain homeownership.

H-3.1 Promote the development of quality affordable housing.

H-3.2 Work to expand the resource of developable land by making underutilized land available for development.

H-3.3 Promote a variety of housing types, prices and tenure in order to satisfy community demand and needs.

H-3.4 Promote the availability of housing which meets the special needs of the elderly, handicapped and large families.

H-6.8 Continue to work toward increasing the number of owner-occupied units.

ED-1.1 Evaluate existing city services and programs to determine whether they are adequately meeting the needs of residents.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

EMPLOYMENT

- **EMPLOYMENT GROWTH ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED GENERAL PLAN IS ANTICIPATED TO RESULT IN AN INCREASE IN EMPLOYMENT GROWTH WITHIN THE CITY.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: Employment opportunities decreased within the City of Carson from 1990 to 2000. According to the Employment Development Department, as of August 2002, Carson had 44,390 jobs within the City. SCAG projects Carson would experience an addition of 27,310 employment opportunities from 2000 for a total of 67,900 jobs citywide by 2020. This represents a 67.2 percent increase from 2000. In turn, Los

Angeles County is projected to have 5,156,000 employment opportunities by 2020. This represents a 19.5 percent increase from 2000.

According to the Economic Development Element of the proposed General Plan, economic development within Carson is generally favorable with strongest development potential in the industrial and retail markets. These industries would in-turn provide employment opportunities within Carson. The increase in employment opportunities would be gradual over the next 20 years; therefore, impacts are considered to be less than significant.

Policies in the Proposed General Plan: The Economic Development and Land Use Elements include the following policies:

ED-3.3 Develop a comprehensive economic development program and initiate strategies to retain existing businesses, as well as markets, and attract new office, commercial and industrial activity.

ED-3.4 Continue to maintain, and expand as necessary, the City's marketing and business retention/attraction program to effectively compete with neighboring cities in attracting and retaining regional businesses. Said program to include: business outreach programs, business assistance programs, business incentives, use of public/private partnerships to promote business relations, and other programs and/or incentives.

ED-5.1 Understand employment trends and needs of local businesses and link residents and businesses together through an Employment Resources Program.

ED-5.2 Support a local labor force with training programs to provide skill requirements for current and prospective employers. Cooperate with the University and educational organizations within the City to develop job training programs and training for Carson's youth.

ED-5.3 Promote opportunities for research and development incubators within the City.

ED-6.6 Provide technical assistance to small businesses and coordinate with outside business organizations to support the specific needs of small business.

LU-6.5 Coordinate strategies with the County, Southern California Association of Governments (SCAG), South Bay Cities Council of Governments (SBCCG), and other appropriate agencies and/or organizations to meet housing and employment needs.

LU-15.1 Ensure that the City of Carson is a complete and balanced community which contains housing, shops, work places, schools, parks and civic facilities, essential to the daily lives of residents.

LU-15.2 Encourage the location of housing, jobs, shopping, services and other activities within easy walking distance of each other.

LU-15.4 Encourage businesses within the City to provide a range of job types for the community's residents.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.2.4 UNAVOIDABLE SIGNIFICANT IMPACTS

All population, housing and employment impacts associated with implementation of the proposed General Plan would be less than significant with implementation of the policies in the proposed General Plan. The proposed General Plan would not result in any significant or unavoidable population, housing and/or employment impacts.

4.3 TRANSPORTATION/CIRCULATION

The Carson Transportation and Infrastructure Element is the primary resource for circulation decisions. Carson's circulation system includes a hierarchy of local streets and major regional highways and, therefore, must coordinate with other transportation agencies such as the Los Angeles County Metropolitan Transportation Authority (MTA or LACMTA) and Caltrans. Regional coordination is essential to the successful implementation of the Circulation Plan. Thus, regional traffic issues would require close coordination with adjoining cities and other agencies, the County of Los Angeles and other communities within the area. This section is based upon the City of Carson's General Plan Transportation and Infrastructure Element, the County's Congestion Management Program (CMP), the Southern California Association of Governments (SCAG) 1989 Air Quality Management Plan and the Regional Mobility Plan.

4.3.1 ENVIRONMENTAL SETTING

RELATED PLANS AND PROGRAMS

Transportation issues extend beyond the Carson city limits. As a result, regional agencies have developed programs to forecast and manage countywide and region-wide traffic. The City must consider other transportation system planning efforts as it implements the proposed General Plan.

Most transportation-related plans and programs are established with the goal of maintaining acceptable operating Level of Service (LOS) on the City's transportation system. LOS designations are qualitative descriptions of roadway and intersection operations, which range from "A" to "F". Level of Service designations are analogous to letter grades received in school, where "A" is the best and "F" is the worst. Operating conditions at intersections and on street segments are evaluated using standard analysis methodologies which result in number values, which then correspond to Level of Service letter designations. A more detailed description of Level of Service standards is provided in the Traffic Study, Appendix B.

CONGESTION MANAGEMENT PROGRAM

In June 1990, California voters approved Proposition 111 to fund transportation-related improvements statewide. In order to be eligible for the revenues associated with Proposition 111, the Congestion Management Program (CMP) legislation (originally AB 471, amended to AB 1791) requires urbanized counties in California to adopt a Congestion Management Program. For the County of Los Angeles, the authorized CMP agency is the Los Angeles County Metropolitan Transportation Authority (MTA).

The MTA adopted its first CMP in 1992, and in 2002, adopted its sixth plan since the requirement was established in 1990. The goal of the CMP is to promote a more coordinated approach to land use and transportation decisions.

The CMP for Los Angeles County is comprised of a specific system of arterial roadways plus all freeways. A total of 164 intersections are identified for monitoring on the system in the County.

The CMP requires that the traffic impact of individual development projects of a potential regional significance be analyzed. Traffic studies must analyze traffic conditions at all CMP monitoring locations where the proposed project adds 50 or more trips during either the AM or PM peak hours to the arterial. Based on the list of arterial monitoring stations listed in the CMP, there are no arterial stations in the City of Carson.

The CMP also requires traffic studies to analyze all CMP freeway monitoring locations where the proposed project adds 150 or more trips in either direction during the AM or PM peak hours. In the City of Carson, the Artesia Freeway (SR-91), the Harbor Freeway (I-110), the San Diego Freeway (I-405) and the Long Beach Freeway (I-710) are freeways in Carson that are designated for monitoring in the CMP.

Compliance with the CMP provisions include:

- Continued land use coordination through the utilization of standardized traffic impact analysis methodologies;
- Implementation and enforcement of Transportation Demand Management (TDM) strategies,
- Maintenance of transit service standards;
- Demonstrated transportation modeling consistency with the Countywide computer model;
- Monitoring of CMP highway system levels of service;
- Development of level of service deficiency plans where applicable;
- Development of seven-year capital improvement programs; and
- Monitoring and conformance with all CMP provisions.

PLANNING RESPONSIBILITIES

Transportation planning for Los Angeles County at the regional level is the responsibility of the Southern California Association of Governments (SCAG), which is the designated Metropolitan Planning Organization for a six-county region, including Imperial, Orange, Riverside, San Bernardino, Ventura and Los Angeles Counties.

Under Federal law, SCAG must prepare a Regional Transportation Plan (RTP). The RTP demonstrates how the region will meet federal mandates, particularly air quality requirements, and must be approved by federal agencies in order to continue to receive Federal transportation funds. Only projects and programs included in the RTP are eligible for federal funding.

The MTA, as the state-designated planning and programming agency for Los Angeles County, submits recommended projects and program to SCAG for inclusion in the RTP. The MTA proactively identifies the transportation needs and challenges that Los Angeles County will face over the next 25 years through the development of its Long

Range Transportation Plan (LRTP). The plan helps decision-makers understand the options that are available for improving the transportation system, and how different options contribute toward improving mobility. The adopted LRTP becomes the blueprint for implementing future transportation improvements in Los Angeles County.

LONG RANGE TRANSPORTATION PLAN

The LRTP recommends a balanced transportation program with a strong emphasis on public transit to meet growth in travel. Completion of the Eastside and Pasadena light rail projects, busways for the San Fernando Valley, a new project from downtown to West Los Angeles and other fixed guideway projects are included. Expansion of the successful Metro Rapid Bus program is a prominent component of the plan. Increased highway capacity is addressed by completing the countywide system of High Occupancy Vehicle (HOV) lanes and gap closures. Increased funding for arterial streets will be addressed by completing a countywide traffic signal coordination system, interchange improvements and grade separation. The plan encourages more ridesharing, walking and bike riding, telecommuting and improved management of truck traffic.

The LRTP established three goals on mobility, air quality and access.

- Goal #1: Mobility. The MTA shall pursue activities and make investments that improve traffic flow, relieve congestion and enable residents, workers and visitors to travel quickly throughout Los Angeles County. The MTA shall also purse activities and make investments that support and enhance our region's economy by enabling the safe and efficient movement of goods to and from our international seaports and airports.

- Goal #2: Air Quality. The MTA shall pursue activities and make investments that improve air quality by reducing mobile source emissions, increasing the number and percentage of people using public transportation or carpooling and improving the efficiency of the transportation system.

- Goal #3: Access. The MTA shall pursue activities and make investments that enable all residents, workers and visitors to gain access to the many economic, educational, social, medical, cultural, recreational and governmental opportunities and resources in Los Angeles County.

In the LRTP, the MTA seeks to meet these goals through recommending projects that fall within four strategies: maintain the existing transportation system, maximize system efficiency, increase system capacity and manage demand.

REGIONAL MOBILITY PLAN

The primary goal of the Regional Mobility Plan (RMP) is to improve transportation mobility levels. The RMP is part of an overall regional planning process and is linked directly to SCAG's Growth Management Plan, the Housing Allocation Process, and the South Coast Air Quality Management District's Air Quality Management Plan. The RMP consists of four separate elements:

- Growth Management;
- Transportation Demand Management;
- Transportation System Management; and
- Facilities Development.

The intent of the RMP is to give priority to all transit (bus and rail) and ride sharing (HOV) projects over mixed-flow highway capacity expansion projects. Transit and ridesharing facilities are exempt from conformity review. Some other projects exempt from conformity assessment include:

- Modification to ramps/interchanges;
- Ramp metering projects;
- Signals and/or intersection improvements; and
- Primary and interstate system safety projects.

The active participation of local governments in transportation conformity is important to ensure that there is consistency between local general plans and the conformity criteria described in the regional Air Quality Management Plan (AQMP).

SCAG AIR QUALITY MANAGEMENT PLAN

The goal of Southern California Association of Governments (SCAG) 1989 Air Quality Management Plan (AQMP) is to set forth a 20-year action program for meeting improved National Air Quality Standards in the South Coast Air Basin by the year 2007. The South Coast Air Quality Management District (SCAQMD) is the local air quality agency that establishes local air quality goals. A focus on Transportation Demand Management (TDM) throughout the 1980s and early 1990s was designed to reduce peak hour traffic through carpooling, vanpooling, transit and parking incentives, provision of at-work support services, and other programs. As a result of this focus, most cities in Los Angeles County have adopted a Trip Reduction or Emissions Reduction Ordinance.

REGIONAL COORDINATION

As reflected in many of the Transportation and Infrastructure Element components, regional coordination is essential to the successful implementation of the Circulation Plan. Several of the area roadways required to accommodate 2020 traffic flows extend beyond the City's jurisdiction. The solution to this and other regional related traffic problems would require close coordination of traffic issues with adjoining cities and

other agencies, particularly the City of Long Beach, City of Compton, City of Gardena, County of Los Angeles, Caltrans District 7, and other communities within the area.

THE ALAMEDA CORRIDOR

The Alameda Corridor is a 20-mile railroad expressline that connects the Ports of Los Angeles and Long Beach to the transcontinental rail network east of downtown Los Angeles. It will create a faster, more efficient way to move cargo throughout the United States and to overseas markets. Traffic conflicts at approximately 200 street-level railroad crossings will be eliminated as a direct result of this program, allowing trains to travel more quickly and easing traffic congestion. The Corridor generally parallels Alameda Street along most of the route.

KEY PROJECT COMPONENTS

The Alameda Corridor consists of multiple construction projects, which are briefly described in the following paragraphs.

At the north end of the Corridor are three principle projects: 1) the new Los Angeles River Bridge, which was dedicated in 1998, and replaced a single-track bridge with a three-track structure; 2) the Washington Boulevard and Santa Fe Avenue Grade Separation, which will separate rail and street traffic; and 3) the Redondo Junction project, which will elevate Amtrak and Metrolink passenger train lines over the Corridor.

In the mid-Corridor section, freight trains will travel through a 10-mile, 33-foot deep trench between SR-91 and 25th Street. East-west streets will be bridged across the trench.

The south end of the Corridor includes two major projects: 1) the Henry Ford Avenue Grade Separation project, which will separate automobile and train traffic while reconstructing sections of Henry Ford Avenue; and 2) the Compton Creek/Dominguez Channel project, which will replace the current single-track bridge over Compton Creek with a three-track bridge and add a second three-track bridge over Dominguez Channel.

The County and City of Los Angeles are widening Alameda Street south of SR-91 from four to six lanes. North of SR-91, the Alameda Corridor Transportation Authority (ACTA) will install new signals, new pavement and left-turn pockets.

The improvements associated with the Alameda Corridor will produce the following benefits:

- Improve efficiency of cargo distribution;
- Reduce traffic conflicts at 200 rail crossings;
- Significant reductions in train emissions;
- Significant reductions in idling-related and truck emissions; and
- Significant reductions in noise pollution from trains.

Separate environmental review was conducted for the Alameda Corridor. An EIR was certified in 1993 and a subsequent Environmental Impact Statement (EIS) was approved in 1996.

ALAMEDA CORRIDOR IMPACTS[1]

Threshold criteria were defined to determine whether an intersection would be affected by the Alameda Corridor project. The design goal was to provide additional improvements to satisfy the threshold criteria. The Corridor project would assume responsibility for some of these improvements, and other agencies and jurisdictions would be required to assume responsibility for some improvements. The criteria used in that EIR is listed below:

- An intersection would exceed threshold criteria if the 2020 V/C ratio for a project alternative meets both the following:
  - Exceeds 0.90 (LOS E or greater), and
  - Exceeds the No Build condition V/C ratio by 0.02
- The design goal would be to implement additional improvements at intersections such that the 2020 V/C ratio for the project alternative would be reduced to either of the following:
  - Below 0.90, or
  - Within 0.02 of the No Build condition V/C ratio.
- For new intersections, the design goal would be to provide for a V/C ratio less than 0.90.

Affected Streets and Intersections

The streets and intersections that would be affected are those that would have V/C ratios that exceed the threshold criteria (ETC) discussed above. Many of the study intersections would exceed the threshold criteria under the different project alternatives by the year 2020. These intersections are identified in Table 5-31 in the *Alameda Corridor Final EIR*.

Generally, Alternative 1 produces impacts at grade separation access points. The main reason these locations are affected is because demand for turning movements off and onto Alameda Street must be funneled into the access roads. Alternatives 2.1 and 2.2 tend to have more impacts at intersections on Alameda Street and fewer impacts at intersections away from the Corridor, relative to Alternative 1. Alternative 2.2 has fewer improvements on Alameda Street and more impacts on Alameda Street than Alternative 2.1 in segment B-1. However, Alternative 2.1 has more street closures, which tend to affect the east-west streets that remain open.

[1] Source: *Alameda Corridor Final Environmental Impact Report*, January 1993, pages 5-179 – 5-181, 5-186 – 5-190.

Corridor Access Impacts

The three project alternatives (Alternatives 1.0, 2.1, 2.2) propose geometric changes along the Alameda Corridor between downtown Los Angeles and the Ports of Long Beach and Los Angeles. While eliminating conflicts between rail and vehicles, the proposed roadway configurations along and adjacent to the Corridor impose several other geometric problems. Many of these problems relate to Corridor access.

The most substantial impacts from the project alternatives would result from the closure of existing crossings and intersections along the Corridor. The closures would force vehicles that currently cross both roadways of Alameda Street to detour around to an east-west street that would cross the Corridor. This diversion of traffic onto other streets would affect local and collector streets and would add to the traffic on Alameda Street West and East, as well as the east-west crossings.

Impacts to Local Streets

Traffic circulation would change along the Alameda Corridor due to the grade separations, the separation of northbound and southbound lanes and the closure of crossings and streets. With Alternative 1.0, vehicles making turns at existing intersections would be reassigned to access roads or local streets. Although most of these would be new access roads, many of them are existing local roads. Residences and businesses would be affected by increased traffic volumes.

Converting Alameda Street West to a divided highway under Alternatives 2.1A, 2.1S or 2.2 would force right turns to and from the Corridor. The separation between travel directions under Alternatives 2.1 and 2.2 would force vehicles to make u-turns at the intersections along the Corridor. Many vehicles may choose to detour to local streets to avoid making these u-turns. As a result, some local streets would experience a slight increase in traffic.

Impacts to Streets and Intersections in Carson

The following nine intersections in Carson were analyzed in the *Alameda Corridor Final EIR*:

- Proposed Access "Z"/ Alameda Street (#94)
- Greenleaf/Proposed Access "Z" (#95)
- Greenleaf/Alameda (West) (#96)
- Greenleaf/Alameda (East) (#97)
- South Auto Drive/Alameda (West) (#98)
- South Auto Drive/Alameda (East) (#99)
- Sepulveda/Proposed Southbound Ramp (#100)
- Sepulveda/Alameda (#101)
- Sepulveda/Proposed Access "AA" (#102)

The number following the intersection represents the intersection number in the traffic analysis of the *Alameda Corridor Final EIR*.

For the year 2020, the EIR concluded that only one intersection would exceed the threshold criteria: the Sepulveda/Proposed Southbound Ramp. All other intersections with mitigation, improvements or the grade separation would have less than significant impacts in the year 2020.

EXISTING CIRCULATION SYSTEM

The City of Carson is served by the existing network of roadways shown in Exhibit 4.3-1, *Existing Roadway Network*. The existing street network is essentially a modified grid system of north/south and east/west roadways. The primary north/south roadways are Figueroa Street, Broadway, Main Street, Avalon Boulevard, Central Avenue, Wilmington Avenue, Alameda Street, and Santa Fe Avenue. The primary east/west streets are Alondra Boulevard, Gardena Boulevard, Artesia Boulevard, Albertoni Street, Walnut, Victoria Street, University Drive, Del Amo Boulevard, Carson Street, 223rd Street, Sepulveda Boulevard and Lomita Boulevard. The characteristics (Master Plan of Street classifications, number of lanes, roadway widths and right-of-way dimensions) of each of these roadways plus some additional collector streets are described in Table 4.3-1, *Street Classifications and Characteristics*.

RELATION TO THE REGIONAL ROADWAY SYSTEM

The Artesia Freeway (SR-91) to the north, the Long Beach Freeway (I-710) to the east, the Harbor Freeway (I-110) to the west and the San Diego Freeway (I-405) provide regional access to the City of Carson. Access to the freeways is provided via an extensive freeway ramp system connecting the City's major arterials to the freeways.

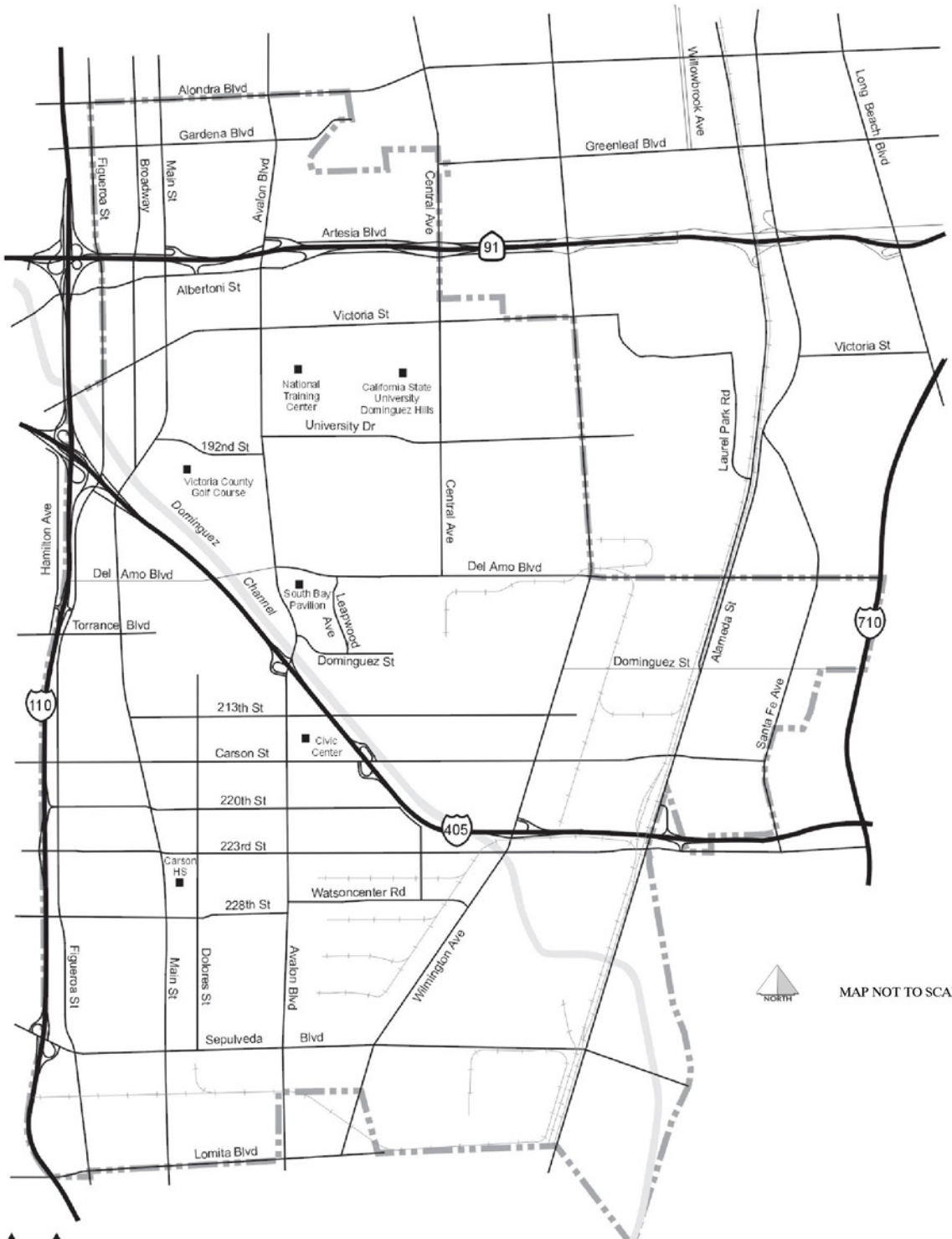
EXISTING DAILY TRAFFIC VOLUME ON EXISTING STREET NETWORK

The characteristics of key arterial roadways in the City of Carson have been summarized in Table 4.3-1 and daily roadway traffic volume and traffic volume flow are shown in Exhibit 4.3-2, *Traffic Flow Map*. The existing daily traffic volumes were obtained by the City of Carson as part of the City's traffic count program. The traffic counts were collected in 2001.

CURRENT MASTER PLAN OF HIGHWAYS

The current Carson Master Plan of Highways was adopted in 1981 as part of the City's General Plan and is shown on Exhibit 4.3-3, *1981 Master Plan of Highways*. The City's Master Plan of Highways designates roadways as one of five street classifications according to function. The five classifications are:

- Local Streets;
- Collector Streets;
- Secondary Highways;
- Major Highways; and
- State Highways.



Meyer, Mohaddes Associates, Inc.

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Existing Roadway Network

EXHIBIT 4.3-1

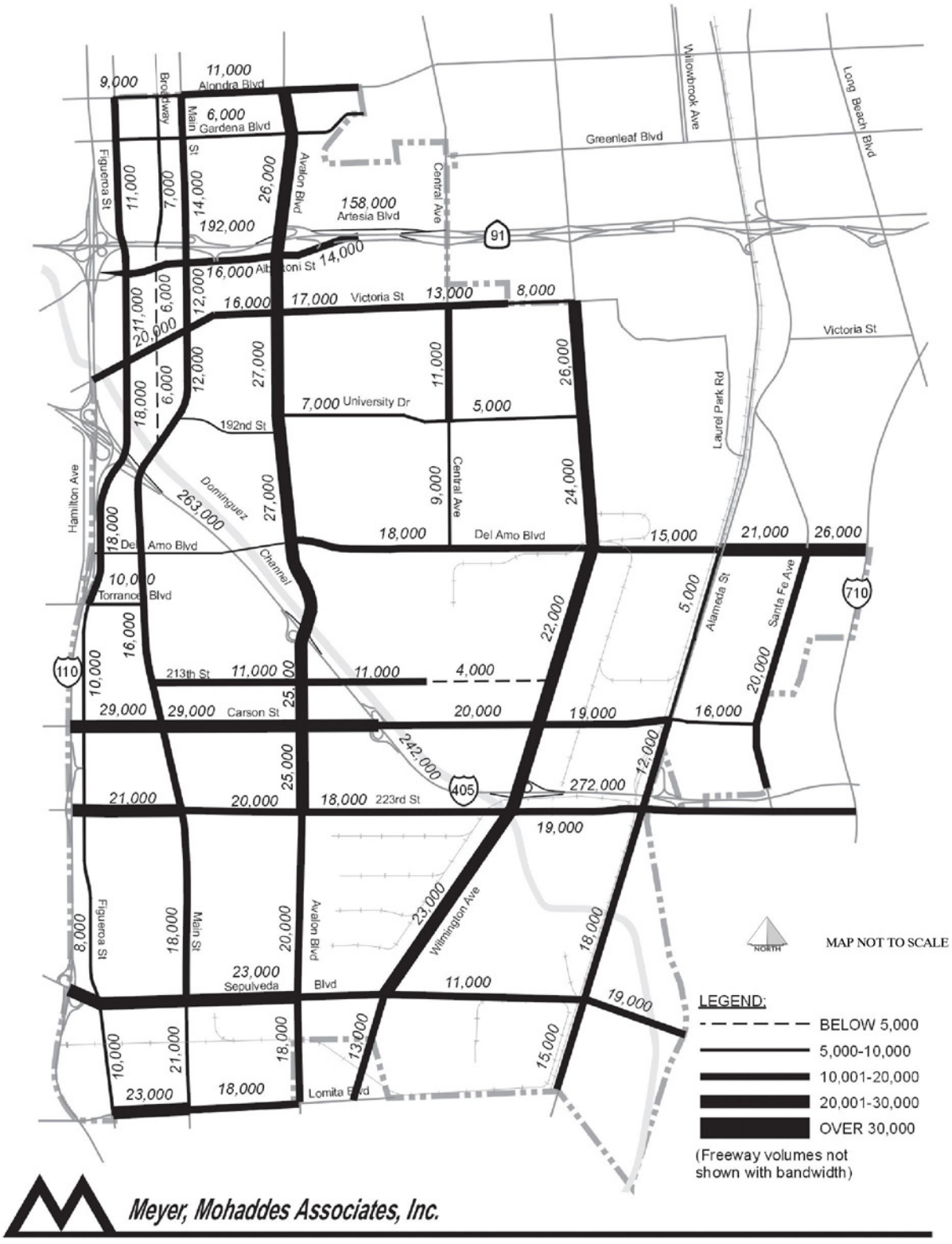
Table 4.3-1
Street Classifications and Characteristics

Street Name	Segment	Classification[1]	No. of Lanes Each Direction[2]	Right-of-way (feet)[3]	Roadway Width (feet)[3]
192nd Street	Main Street to Avalon Boulevard	Collector	1	80	64
213th Street	Main Street to Avalon Boulevard	Collector	1	50 - 60	24-40
213th Street	405 Freeway to Wilmington Avenue	Collector	1	50 - 60	40
213th Street	Avalon Boulevard to 405 Freeway	Secondary Highway	1	50 - 70	24 -30
214th Street	Figueroa Street to Main Street	Collector	1	60	30 -36
220th Street	Vera Street to Wilmington Avenue	Collector	1	50 - 60	24 - 40
220th Street	Figueroa Street to Lucerne Street	Collector	1	46 - 60	32 - 40
223rd Street	West City Limit to East City Limit	Major Highway	2	42 - 116	28 - 84
228th Street	West City Limit to Avalon Boulevard	Collector	1	33 - 60	28 - 40
234th Street	Figueroa Street to Main Street	Collector	1	60	36
Acarus Avenue	Vera Street to Carson Street	Collector	1	60	40
Alameda Street	Lomita Boulevard to Del Amo Boulevard	Major Highway	1	50 - 145	44 - 114
Albertoni Street	Figueroa Street to Sudbury Drive	Secondary Highway	2	100	84
Albertoni Street	Sudbury Drive to Central Avenue	Collector	2	60	34
Alondra Boulevard	Figueroa Street to East City Limit	Major Highway	2, 3[5]	100	80
Artesia Boulevard (East)	Avalon Boulevard to Central Avenue	Collector	1	48	34
Avalon Boulevard	South City Limits to Alondra Boulevard	Major Highway	2	47 - 150	28 - 130
Bonita Street	Watson Center Road to Carson Street	Collector	1	57 - 80	35 - 60
Carson Street	West City Limit to Santa Fe Avenue	Major Highway	2	83 - 100	44 - 86
Central Avenue	Del Amo Boulevard to North City Limits	Major Highway	2	40 - 100	20 - 84
Del Amo Boulevard	West City Limit to East City Limit	Major Highway	1, 2[5]	100 - 108	44 - 90
Dolores Street	Sepulveda Boulevard to 213th Street	Collector	1	50 - 80	18 - 60
Dominguez Street	Wilmington Avenue to Santa Fe Avenue	Collector	1, 2[5]	66 - 84	30 - 68
Figueroa Street	South City Limits to Alondra Boulevard	Major Highway	2	100 - 200	40 - 84
Gardena Boulevard	Figueroa Street to Avalon Boulevard	Secondary Highway	2	60 - 80	16 - 64
Grace Avenue	228th Street to 213th Street	Collector	1	55 - 60	23 - 40
Lomita Boulevard	West City Limit to City West of Avalon Boulevard	Major Highway	2	100 - 182	80 - 84
Lomita Boulevard	Wilmington Avenue to Alameda Street	Major Highway	1	100 - 810	22 - 82
Lucerne Street	Watson Center Road to 220th Street	Collector	1	50 - 80	26 - 60
Main Street	Lomita Boulevard to Alondra Boulevard	Major Highway	2	80 - 100	40 - 84
Martin Street	Carson Street to 213th Street	Collector	1	50 - 60	28 - 40
Moneta Avenue	228th Street to 214th Street	Collector	1	60	40

Table 4.3-1 - Continued
Street Classifications and Characteristics

Street Name	Segment	Classification[1]	No. of Lanes Each Direction[2]	Right-of-way (feet)[3]	Roadway Width (feet)[3]
Santa Fe Avenue	405 Freeway to Del Amo Boulevard	Secondary Highway	2	80 - 112	44 - 84
Sepulveda Boulevard	West City Limit to East City Limit	Major Highway	1, 2, 3[5]	50 -100	36 - 88
University Drive	Avalon Boulevard to Wilmington Avenue	Secondary Highway	1, 2[5]	100	80
Vera Street	Carson Street to 213th Street	Secondary Highway	1	60	21
Victoria Street	West City Limit to Wilmington Avenue	Major Highway	1, 2[5]	66 - 100	20 - 84
Walnut Street [4]	Figueroa Street to Main Street	Collector	1	50	30
Walnut Street (East)	Avalon Boulevard to Central Avenue	Secondary Highway	2	80	64
Watson Center Road	Avalon Boulevard to Wilmington Avenue	Collector	1	80	60
Wilmington Avenue	Lomita Boulevard to Victoria Street	Major Highway	2	66 - 145	26 - 105

Notes:
1 – Source: City of Carson Master Plan of Highways, amended May 17, 1982
2 – Source: South Bay COG Sub regional Model Database and field observation
3 – Source: LA County Roads Department, Classification of road Surfaces Database
4 - Downgraded to Collector Street per Resolution No. 85-020, General Plan Amendment on February 4, 1985.
5 - Number of lanes varies



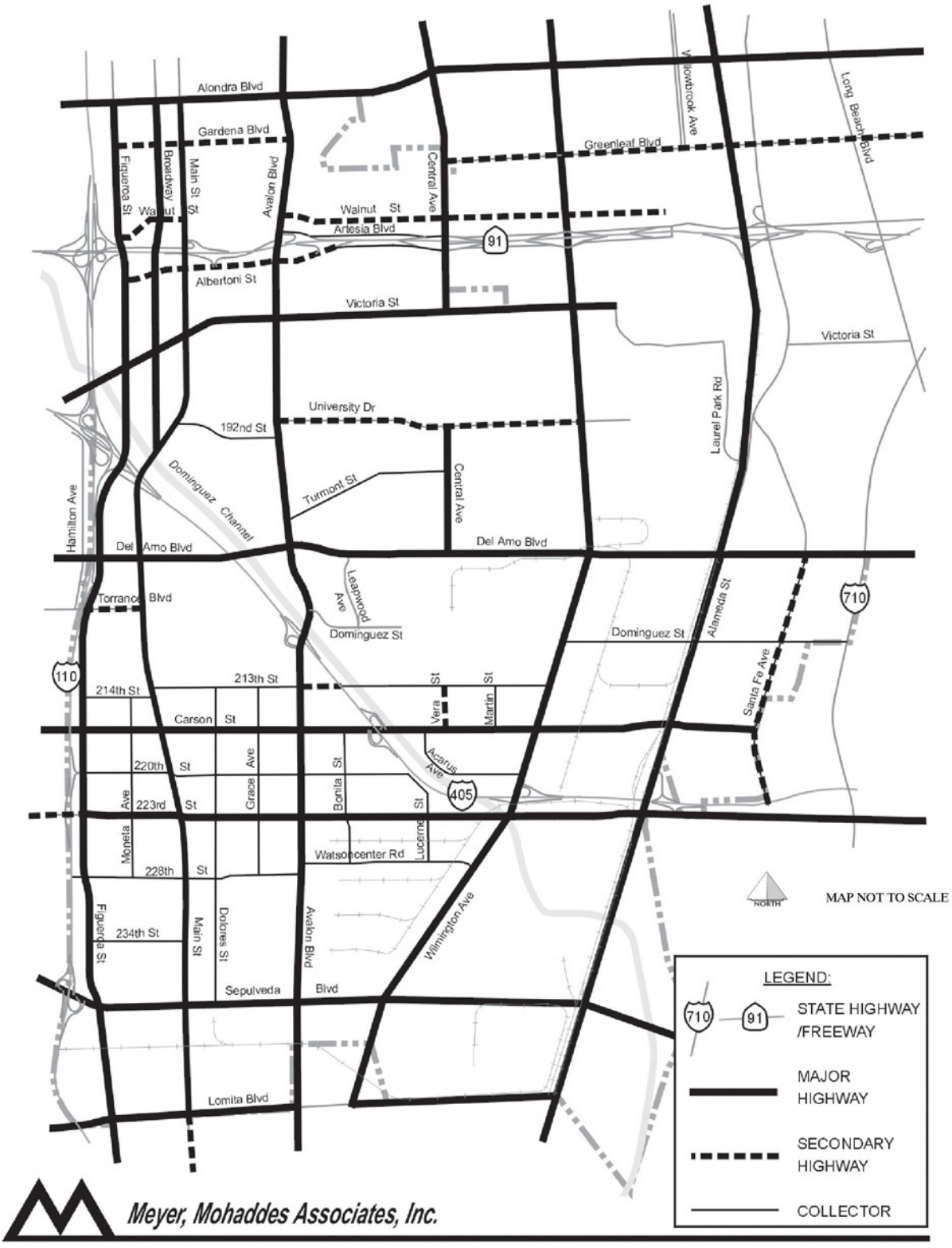
Meyer, Mohaddes Associates, Inc.

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Traffic Flow Map

EXHIBIT 4.3-2



Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

1981 Master Plan of Highways

EXHIBIT 4.3-3

The function and brief description of each classification is provided in the following paragraphs.

Local Streets. Local streets principally provide vehicular, pedestrian, and bicycle access to property abutting the public right-of-way. Cross sections of local streets vary, depending on the abutting land uses, parking requirements, street trees, and other considerations. Where both sides of the street are served equally in residential areas, the common right-of-way width for a local street is from 48 feet to 60 feet with a 36- to 40-foot pavement width.

In multi-family areas, where there is significant parking demand throughout the day, a minimum of 40 feet of pavement may be required, to provide two moving lanes of traffic in addition to street parking on both sides. In commercial and industrial areas, a minimum pavement width of 40 feet is considered necessary. In industrial areas, consideration of the predominant type of trucking, and whether or not maneuvering of trailers must be provided, may require a pavement width of 44 feet or more.

Local streets can be expected to carry less than 1,500 vehicles per day. All other streets in Carson not otherwise classified are local streets.

Collector Streets. The collector street is intended to serve as an intermediate route to handle traffic between local streets and arterials. In addition, collector streets provide access to abutting property. Collector streets are anticipated to carry traffic volumes between 2,000 to 5,000 vehicles per day, but some carry up to 10,000 vehicles per day. A collector street may have one or two through lanes in each direction and curb parking is often provided. The primary function of the collector is to collect vehicles from the local street system and transport them to the arterial system as efficiently as possible. Collector streets in Carson require a minimum right-of-way width of 60 feet.

Secondary Highways. Secondary highways are similar to major highways in function. They connect traffic from collectors to the major freeway system. They move large volumes of automobiles, trucks and buses, and link the principal elements within the City to other adjacent regions. These streets also handle intra-city trips in other adjacent regions. These roadways carry approximately 10,000 to 25,000 vehicles per day. Four to six through lanes are provided along with single or double left-turn lanes at major signalized intersections. Curb parking is often prohibited during peak periods. Bicycle traffic uses paths behind the curb, separate bicycle lanes, or travel in the street with autos, trucks and buses. Secondary highways in Carson require a minimum right-of-way of 80 feet.

Major Highways. Major highways function to connect traffic from collectors to the major freeway system as well as to provide access to adjacent land uses. They move large volumes of automobiles, trucks and buses, and link the principal elements within the City to other adjacent regions. These facilities typically handle inter-city vehicular trips in the magnitude of 25,000 or more vehicles per day. Typically, curb parking is prohibited during peak periods. Bicycle traffic would travel with vehicular flow or be separated by a path behind the curb. Raised medians to separate opposing flows are typical and access control, (i.e., driveways and minor intersecting streets) is often minimized.

Separate left-turn lanes at major signalized intersections are required with double left-turn lanes often provided. Separate right-turn lanes, which may also serve as bus loading areas, are provided at locations where warranted by high turn volumes. Major highways in Carson require rights-of-way of 100 feet or more.

State Highways. Freeways are controlled access, high-speed roadways with grade-separated interchanges intended to expedite movement between distant areas in the region. Planning, design, construction, and maintenance of freeways in California are the responsibility of Caltrans. As a result, they fall outside of the jurisdiction of the City of Carson. The freeway system serving the City of Carson includes the Artesia Freeway (SR-91), Long Beach Freeway (I-710), San Diego Freeway (I-405) and the Harbor Freeway (I-110). Alameda Street will become a State Highway.

STREETS IN INDUSTRIAL AREAS

There are certain collectors which serve industrial areas, including the entrance, interior and loop streets, which generate high traffic volumes by employees during peak hours. Additionally, these streets accommodate industrial truck loading and unloading. Therefore, these industrial streets should provide a minimum right-of-way of 84 feet, with the exception of minor interior industrial streets with less traffic flow, such as industrial cul-de-sacs, which should provide a minimum right-of-way of 64 feet.

BICYCLE ROUTES

The following bicycle route definitions (recognized statewide per Caltrans Standards) were identified in the 1981 Circulation Element, and are presented for informational purposes. These include, in parentheses, the Caltrans standard designation, recognized Statewide.

- Bicycle Path (Class I). This facility is a special path for exclusive use of bicycles which is completely separated from the motor vehicle traffic by space or a physical barrier. They are often provided in recreational areas such as parks or on the beach.

- Bicycle Lane (Class II). A bicycle facility where a portion of the paved roadway area is marked as a lane for use of bicycles. It is identified by BIKE LANE signing, pavement marking and lane line markings. Usually, special ordinances are necessary to legally define the exclusive use of bicycle traffic and to exclude mopeds and infringement by motor vehicles.

- Bicycle Route (Class III). A bicycle way designated within a public right-of-way. The purpose of the bike route is primarily that of transportation, allowing the bicyclist to travel from one point in the City to another. A shared bicycle route is a street identified as a bicycle facility by BIKE ROUTE signing only. No special markings on the pavement are provided.

BICYCLE PLAN

The 1981 Bicycle Plan, shown on Exhibit 4.3-4, *Bicycle Plan*, included the facilities listed below.

The following roadway and other segments are designated Bike Path (Class I) facilities:

- Bonita Street – between Sepulveda Boulevard and Carson Street;
- Central Avenue – between University Drive and 169th Street (existing University to Radbard Street);
- 169th Street – between Billings Drive and Central Avenue;
- Walnut Street – between Figueroa Street and Main Street; and
- Dominguez Channel.

The following roadway segments are designated Bike Lane (Class II) facilities:

- Avalon Boulevard – between Del Amo Boulevard and 169th Street;
- Central Avenue – between Del Amo Boulevard and University Drive (existing);
- Santa Fe – between Del Amo Boulevard and I-405;
- Del Amo Boulevard – between Figueroa Street and Santa Fe Avenue (existing between Wilmington and Avalon);
- Carson Street – between Bonita Street and Alameda Street;
- Chico Street—between 213th Street and Del Amo Boulevard (existing);
- University Drive—between Avalon Boulevard and Wilmington (existing);
- Sepulveda Boulevard—between Figueroa Street and the east City boundary; and
- 192nd Street—between Avalon Boulevard and Main Street.

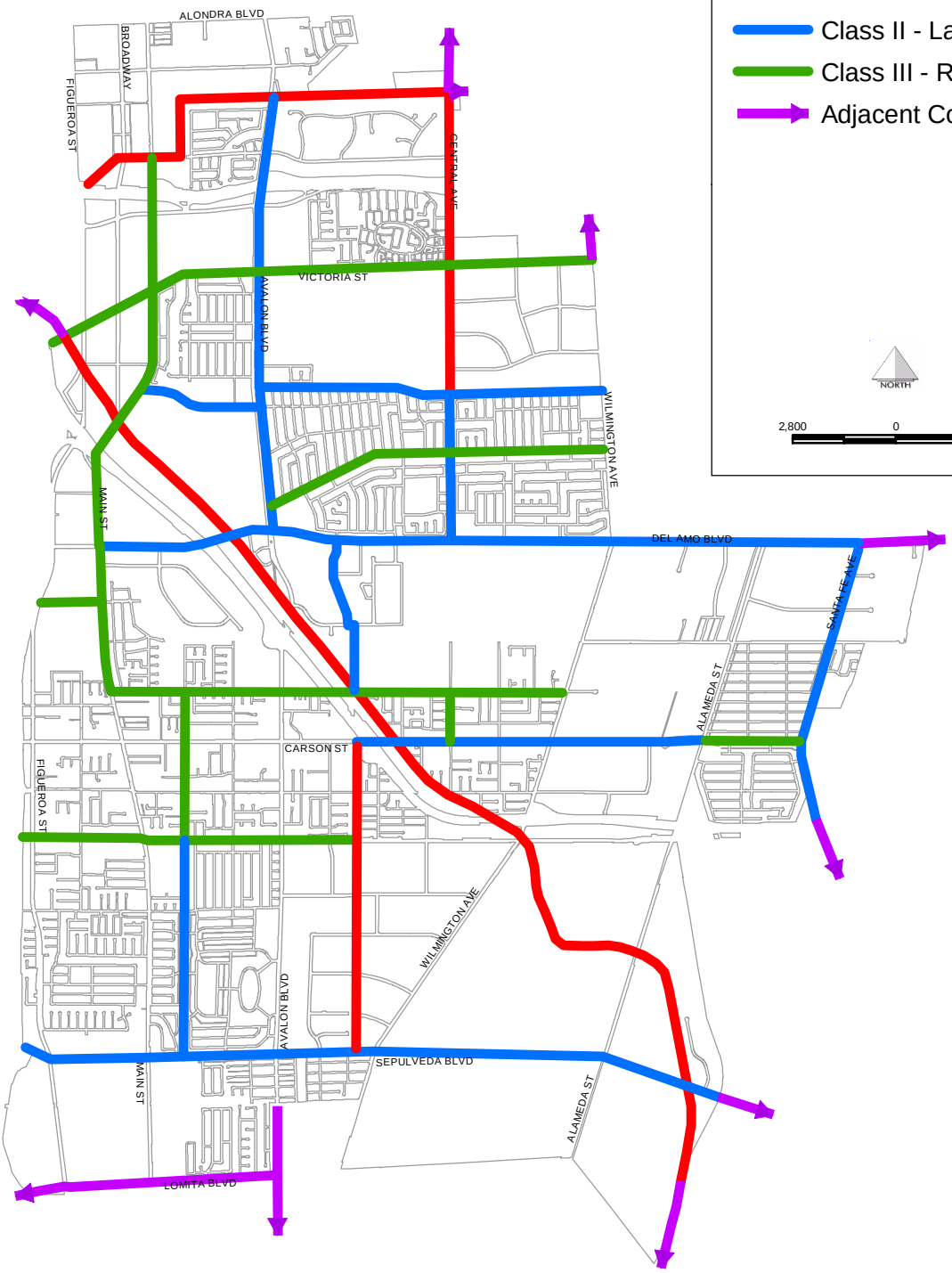
The following roadway segments are designated Bike Route (Class III) facilities:

- Main Street – between 213th Street and Walnut Street;
- Dolores Street – between Sepulveda Boulevard and 213th Street (existing between Sepulveda Boulevard and Carson Street);
- Victoria Street – between Figueroa Street and Wilmington Avenue;
- Turmont Street – between Avalon Boulevard and Wilmington Avenue (existing);
- 213th Street – between Main Street and Wilmington Avenue;
- Carson Street – between Alameda Street and Santa Fe Avenue;
- 223rd Street – between Figueroa Street and Bonita Street;
- Torrance Boulevard—between Main Street and the west City boundary; and
- Vera Street—between Carson Boulevard and 213th Street.

TRUCK ROUTES

CURRENT CITY TRUCK ROUTES

The City has many trucks on its streets due to the types of industrial and commercial uses in the City. There are no specific counts of trucks as opposed to other types of vehicles on City streets, but it is estimated that trucks make up 10 to 25 percent of the



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

BIKE ROUTES

EXHIBIT 4.3-4

vehicles over 24 hours. The volume of trucks, the impacts of truck traffic on land uses, and the conflict between trucks and other vehicles are major issues for the City.

The City of Carson has designated truck routes where vehicles in excess of three tons may travel. These routes are shown in Exhibit 4.3-5, *Truck Routes.* The purpose of regulating truck routes is to provide access for large trucks on streets designed to accommodate them and to protect residential streets from unwanted truck traffic.

TRANSIT FACILITIES

Public transportation in the City of Carson is provided primarily by the Carson Circuit, Torrance Transit, and the Los Angeles County Metropolitan Transportation Authority (MTA) bus lines. There is also limited service from Long Beach Transit and Gardena Municipal Bus Lines. Following are brief descriptions of the major lines and routes in the project area, which are illustrated on Exhibit 4.3-6, *Bus Routes*.

CARSON CIRCUIT TRANSIT SYSTEM

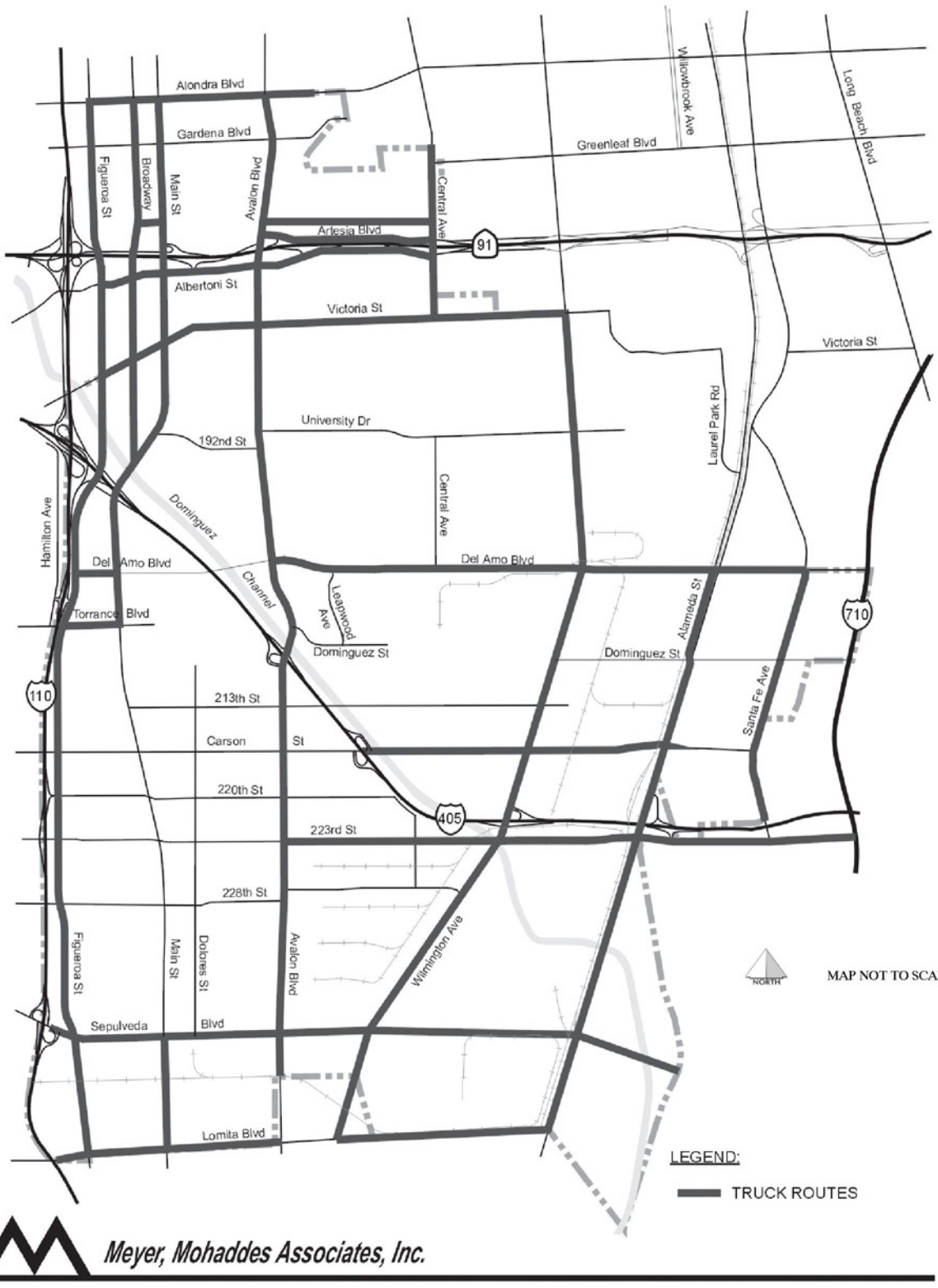
Route A (Cal State Dominguez Hills) serves the northern Carson area in the vicinity of Cal State Dominguez Hills. Route A operates around Dominguez Hills Village and on Victoria Street between Avalon Boulevard and Central Avenue, Avalon Boulevard between Victoria Street and Del Amo Boulevard, Del Amo Boulevard between Avalon Boulevard and Wilmington Avenue, University Avenue between Avalon Boulevard and Wilmington Avenue, and Turmont Street between Leapwood Avenue and Wilmington Avenue.

Route B (Keystone) serves the southwestern Carson area in the vicinity of Carson High School. Primary routes served by Route B include Main Street between Carson Street and 234th Street, Moneta Street between Carson Street and 228th Street, and Carson Street between Moneta Avenue and Avalon Boulevard.

Route C (Scottsdale) primarily serves the Avalon Boulevard corridor between Del Amo Boulevard to the north and Sepulveda Boulevard to the south.

Route D (Metro Blue Line 1) and Route G (Metro Blue Line 2) serve the central Carson area from Avalon Boulevard to the eastern City border. Route D travels in a clockwise pattern while Route G travels in a counterclockwise route. Both lines operate on Del Amo Boulevard between Avalon Boulevard and Santa Fe Avenue, in a circuitous pattern from Del Amo Boulevard to the Avalon Boulevard/Carson Street intersection, and Avalon Boulevard from Del Amo Boulevard to Carson Street.

Route E (Turmont) serves the area just south, east and west of Cal State Dominguez Hills. Primary routes served by Route E include Avalon Boulevard between Victoria Street and Del Amo Boulevard, University Drive between Avalon Boulevard and Wilmington Avenue, and Turmont Street between Avalon Boulevard and Wilmington Avenue.



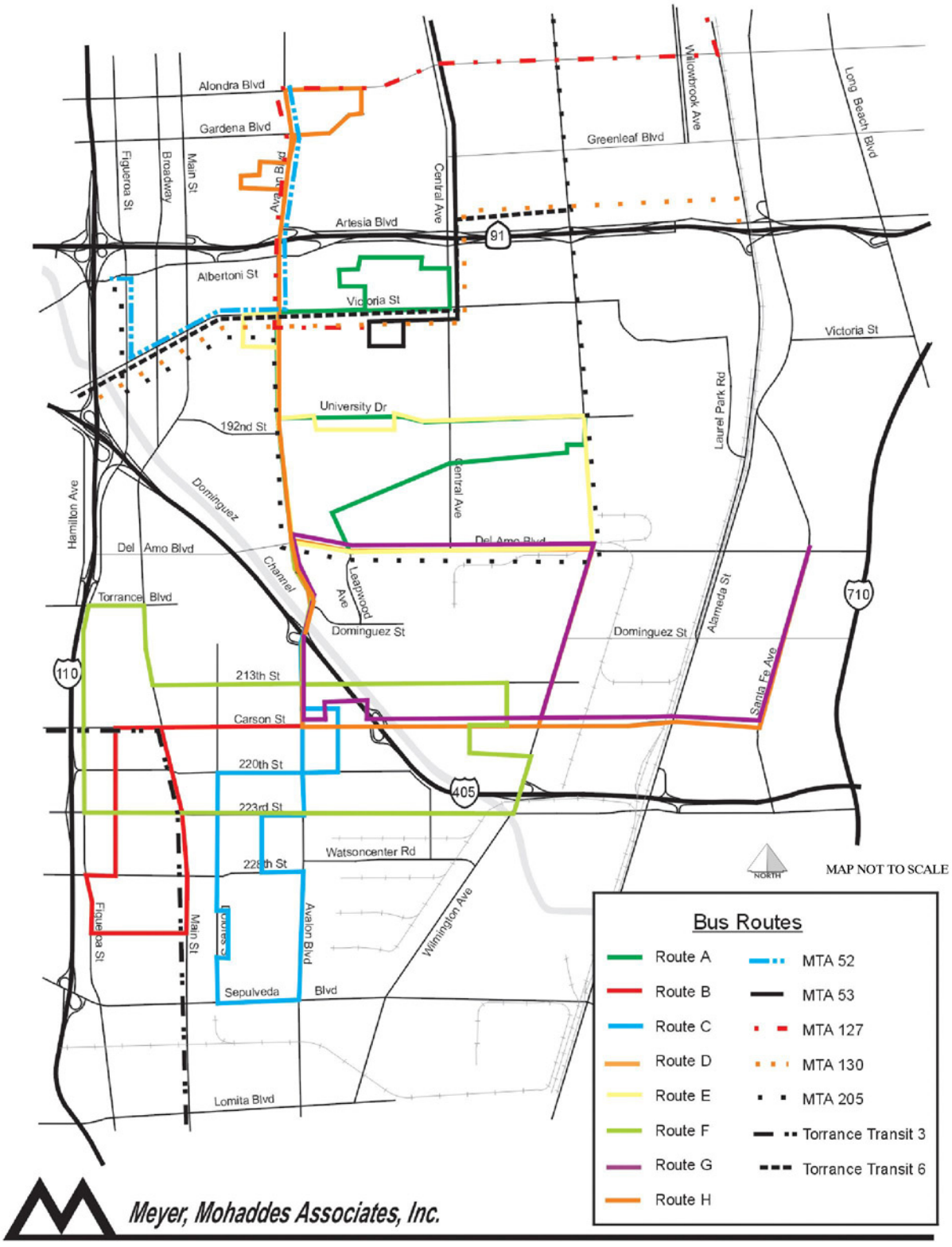
Meyer, Mohaddes Associates, Inc.

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Truck Routes

EXHIBIT 4.3-5



Meyer, Mohaddes Associates, Inc.

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Bus Routes

EXHIBIT 4.3-6

Route F (Business Center South) serves the south central Carson area. Primary routes served by Route F include Bonita Street between 213th Street and Watson Center Road, 213th Street between Avalon Boulevard and Martin Street, and Wilmington Avenue between Watson Center Road and 233rd Street.

Route H (Hemingway Park) serves the north central Carson area. Primary routes served by Route H include Avalon Boulevard between Alondra Boulevard and Del Amo Boulevard and Alondra Boulevard between Avalon Boulevard and the northeastern City border.

All Carson Circuit routes converge on the South Bay Pavilion so transfers are easy. Senior and disabled citizens ride free and the regular fare is $0.50 with free transfers to other Circuit routes.

TORRANCE TRANSIT BUS LINES

Route 3 operates between downtown Long Beach and the Redondo Beach Pier. In the Carson area, primary routes served by Route 3 include Carson Street between Vermont Avenue and Avalon Boulevard, Avalon Boulevard between Carson Street and 223rd Street, 223rd Street between Avalon Boulevard and Dolores Street, Dolores Street between 223rd Street and Sepulveda Boulevard, and Sepulveda Boulevard between Dolores Street and Wilmington Boulevard.

Route 6 operates between the Metro Blue Line Artesia Station and the Del Amo Center Transit Terminal Park and Ride. In the Carson area, primary routes served by Route 6 include Victoria Street between Vermont Avenue and Central Avenue, Central Avenue between Victoria Street and Walnut Street, and Walnut Street from Central Avenue east to the Metro Blue Line Artesia Station.

Senior and disabled citizens ride for $0.45.

MTA BUS LINES

MTA Line 53 operates between Cal State Dominguez Hills and Downtown Los Angeles. In the Carson area, the primary route served by Line 53 is Central Avenue near Cal State Dominguez Hills.

MTA Line 127 operates between Cal State Dominguez Hills, Compton, Paramount, Bellflower and Downey. In the Carson area, the primary route served by Line 127 is Avalon Boulevard between Cal State Dominguez Hills and Alondra Boulevard, and Alondra Boulevard between Avalon Boulevard and Wilmington Avenue.

MTA Line 130 operates between Redondo Beach and the Fullerton park and ride lot located on Orangethorpe Avenue. In the Carson area, Line 130 traverses Victoria Street between Vermont Avenue to the west and Central Avenue to the east.

MTA Line 202 operates between Wilmington and the Rosa Parks/Imperial/Wilmington Station in Willowbrook. In the Carson area, the primary route served by Line 202 is

Avalon Boulevard between Lomita Boulevard and Carson Street, Carson Street between Avalon Boulevard and Alameda Street, and Alameda Street between Carson Street and Del Amo Boulevard.

MTA Line 205 operates between Willowbrook and San Pedro. In the Carson area, Line 205 runs along 192nd Street between Main Street and Avalon Boulevard, Avalon Boulevard between 192nd Street and Del Amo Boulevard, Del Amo Boulevard between Avalon Boulevard and Wilmington Avenue, and Wilmington Avenue between Del Amo Boulevard and the SR-91 Freeway.

MTA Lines 446/447 operate between downtown Los Angeles and San Pedro. In the Carson area, Lines 446/447 travel along Avalon Boulevard between the northern and southern borders of the City.

Senior and disabled citizens ride for $0.45.

MTA METRO RAIL LINES

Metro Blue Line operates between Long Beach and Downtown Los Angeles. In the Carson area, the closest Blue Line stations are Artesia and Del Amo. The Artesia station is located at 1920-1/2 Acacia Avenue in Compton. The Del Amo station is located at 20220 Santa Fe Avenue in Los Angeles.

Metro Green Line operates between Redondo Beach and Norwalk. While the Green Line does not run through Carson, the Green Line does connect with the Blue Line at the Rosa Parks (Imperial/Wilmington) station located at 11651 Wilmington Avenue in Los Angeles.

LONG BEACH TRANSIT

Routes 191, 192, 193, and 194 all serve the far east side of the City of Carson, connecting the Del Amo Blue Line Station via Santa Fe Avenue to the Long Beach Civic Center.

Senior and disabled citizens ride for $0.45.

GARDENA MUNICIPAL BUS LINES

Line 3 operates between Compton and the South Bay Center in Torrance. In the Carson area, the primary routes served by Line 3 include Gardena Boulevard between Vermont Avenue and Avalon Boulevard, Avalon Boulevard between Alondra Boulevard and Gardena Boulevard, and Alondra Boulevard between Avalon Boulevard and Wilmington Avenue.

Senior and disabled citizens ride for $0.25.

SPECIALIZED SHUTTLE SERVICES

CARSON NORTH/SOUTH SHUTTLE

The City of Carson North/South Shuttle runs in one direction every 40 minutes from Super K-Mart on Figueroa Avenue and Torrance Boulevard, north on Main Street to Victoria Street, back south on Main Street to Sepulveda Boulevard, and loops back north on Figueroa Street to Super K-Mart. It connects to the Carson Circuit, Torrance Transit and MTA bus lines. Senior and disabled citizens ride free and the regular fare is $0.50.

DIAL-A-RIDE SERVICE

Economical taxi service is available to Carson seniors and/or disabled citizens 24 hours a day, seven days a week. Accessible mini-vans are available for wheelchair users. Service is provided anywhere within the City limits and to specific medical and social service appointments at satellite locations outside the City in Torrance, San Pedro, Gardena, Harbor City, Long Beach, Wilmington and Lomita. The cost is $1.00 per one-way trip, $2.00 per round-trip.

ACCESS SERVICES

Access Services is another dial-a-ride specialized transportation service for disabled citizens throughout Los Angeles County. It is not administered by the City of Carson. It has a fleet of specially equipped vans and taxis offering curb-to-curb services. A trip costs $1.50 to $4.00 each way.

EXISTING OPERATING CONDITIONS

LEVEL OF SERVICE DEFINITION FOR ROADWAYS

Ground traffic counts were utilized to provide the roadway segment volumes used to determine the volume-to-capacity ratio for the roadway level of service. The assumed capacities on roadway links were based on the standards used by the County of Los Angeles and modified for special conditions in Carson. The capacities reflect the maximum number of vehicles per hour which can reasonably be carried on the roadway under prevailing traffic conditions. The capacities reflect the presence of intersections that reduce link capacities by assigning traffic signal time to each intersection street. The assumed roadway capacities of each type of facility are shown in Table 4.3-2, *Hourly Capacity by Roadway Type*.

Table 4.3-2
Hourly Capacity by Roadway Type

Facility Type	Hourly Capacity (vehicle/lane/hour)
Two way major arterial	750
Two way secondary arterial	600
Collector and local streets	450

Level of Service (LOS) terms are used to qualitatively describe prevailing conditions and their effect on traffic. Broadly interpreted, the LOS concept denotes any one of a number of differing combinations of operating conditions that may take place as a roadway is accommodating various traffic volumes. The LOS is related to the volume-to-capacity ratio (V/C). To determine the V/C ratio, the peak hourly traffic volume on a particular roadway link is divided by the link capacity. There are six defined Levels of Service, A through F which describe conditions ranging from "ideal" to "worst" as defined in Table 4.3-3, *Level of Service Descriptions*.

Table 4.3-3
Level of Service Descriptions

Level of Service	Description of Operation	Range of V/C Ratios
A	Describes primarily free-flow conditions at average travel speeds. Vehicles are seldom impeded in their ability to maneuver in the traffic stream. Delay at intersections are minimal.	0.00 - 0.60
B	Represents reasonably unimpeded operations at average travel speeds. The ability to maneuver in the traffic stream is slightly restricted and delays are not bothersome	0.61 - 0.70
C	Represents stable operations, however, ability to change lanes and maneuver may be more restricted than LOS B and longer queues are experienced at intersections.	0.71 - 0.80
D	Congestion occurs and a small change in volumes increases delays substantially.	0.81 - 0.90
E	Severe congestion occurs with extensive delays and low travel speeds occur.	0.91 - 1.00
F	Characterizes arterial flow at extremely low speeds and intersection congestion occurs with high delays and extensive queuing.	> 1.00

As shown on Table 4.3-3, traffic conditions are best when the daily traffic volumes on a roadway are less than 60 or 70 percent of the theoretical capacity of the roadway, while extreme congestion and delays can be expected when the daily traffic volumes approach or exceed 100 percent of the roadway capacity. The threshold Level of Service for the City of Carson is LOS "D" for planning purposes.

EXISTING TRAFFIC CONDITIONS ON ROADWAYS

The analysis of the existing AM and PM peak volumes on arterial operating conditions was conducted by comparing the peak traffic volumes and estimated capacity for each roadway. The results of this analysis are summarized in Table 4.3-4, *Existing AM Peak Hour Level of Service*, and 4.3-5, *Existing PM Peak Hour Level of Service* and presented graphically on Exhibit 4.3-7, *Existing Level of Service*. Tables 4.3-4 and 4.3-5 reveal that the majority of roadways in the City of Carson operate at LOS "D" or better. The following three roadway segments currently operate at LOS E or F:

- Wilmington Avenue from 223rd Street to I-405 Freeway (AM/PM Peak);
- Wilmington Avenue from Carson Street to 213th Street (AM Peak);
- 223rd Street from Wilmington Avenue to Alameda Street (PM Peak).

Table 4.3-4
Existing AM Peak Hour Level of Service

Street	Segment		Class	Capacity per Lane	Number of Lanes		Existing Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
213th St	Main St	Avalon Blvd	Collector	750	1	1	350	286	0.47	0.38	A	A
213th St	Avalon St	Chico St	Collector	750	1	1	283	281	0.38	0.37	A	A
213th St	Chico St	Wilmington Ave	Collector	750	1	1	117	90	0.16	0.12	A	A
220th St	Main St	Avalon Blvd	Collector	750	1	1	135	242	0.18	0.32	A	A
223rd St	Figueroa St	Main St	Major	750	2	2	646	857	0.43	0.57	A	A
223rd St	Main St	Avalon Blvd	Major	750	2	2	762	795	0.51	0.53	A	A
223rd St	Avalon St	Wilmington Ave	Major	750	2	2	594	669	0.40	0.45	A	A
223rd St	Wilmington Ave	Alameda St	Major	750	2	2	688	745	0.46	0.50	A	A
228th St	Main St	Avalon Blvd	Collector	750	1	1	127	149	0.17	0.20	A	A
Alameda St	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	314	584	0.21	0.39	A	A
Alameda St	Sepulveda Blvd	223rd St	Major	750	2	2	451	689	0.30	0.46	A	A
Alameda St	I-405 Fwy	Carson St	Major	750	2	2	525	472	0.35	0.31	A	A
Alameda St	Carson St	Dominguez St	Major	750	2	2	340	395	0.23	0.26	A	A
Albertoni St	Figueroa St	Main St	Secondary	750	2	2	390	451	0.26	0.30	A	A
Albertoni St	Main St	Avalon Blvd	Secondary	750	2	2	506	654	0.34	0.44	A	A
Albertoni St	Avalon St	SR-91 Fwy	Secondary	750	2	2	530	319	0.35	0.21	A	A
Alondra Blvd	Figueroa St	Main St	Major	750	3	3	309	444	0.14	0.20	A	A
Alondra Blvd	Main St	Avalon Blvd	Major	750	3	3	339	512	0.15	0.23	A	A
Avalon Blvd	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	471	399	0.31	0.27	A	A
Avalon Blvd	Sepulveda Blvd	223rd St	Major	750	2	2	875	509	0.58	0.34	A	A
Avalon Blvd	223rd St	Carson St	Major	750	2	2	891	727	0.59	0.48	A	A
Avalon Blvd	Carson St	213th St	Major	750	3	3	960	786	0.43	0.35	A	A
Avalon Blvd	213th St	I-405 Fwy	Major	750	3	3	976	900	0.43	0.40	A	A
Avalon Blvd	Dominguez St	Del Amo Blvd	Major	750	3	3	900	932	0.40	0.41	A	A
Avalon Blvd	Del Amo Blvd	University Dr	Major	750	3	3	752	652	0.33	0.29	A	A
Avalon Blvd	University Dr	Victoria St	Major	750	3	3	737	991	0.33	0.44	A	A
Avalon Blvd	Victoria St	Albertoni St	Major	750	3	3	898	765	0.40	0.34	A	A
Avalon Blvd	SR-91 Fwy	Gardena Blvd	Major	750	3	3	943	759	0.42	0.34	A	A
Avalon Blvd	Gardena Blvd	Alondra Blvd	Major	750	3	3	819	699	0.36	0.31	A	A
Broadway	Main St	Victoria St	Major	750	2	2	307	131	0.20	0.09	A	A
Broadway	Victoria St	Albertoni St	Major	750	2	2	351	194	0.23	0.13	A	A
Broadway	SR-91 Fwy	Gardena Blvd	Major	750	2	2	351	255	0.23	0.17	A	A
Broadway	Gardena Blvd	Alondra Blvd	Major	750	2	2	366	262	0.24	0.17	A	A
Carson St	Figueroa St	Main St	Major	750	2	2	769	865	0.51	0.58	A	A
Carson St	Main St	Avalon Blvd	Major	750	2	2	790	958	0.53	0.64	A	B
Carson St	Avalon St	I-405 Fwy	Major	750	2	2	1155	1054	0.77	0.70	C	C
Carson St	I-405 Fwy	Wilmington Ave	Major	750	2	2	776	579	0.52	0.39	A	A
Carson St	Wilmington Ave	Alameda St	Major	750	2	2	561	949	0.37	0.63	A	B
Carson St	Alameda St	Santa Fe Ave	Major	750	2	2	446	846	0.30	0.56	A	A

Table 4.3-4 - Continued
Existing AM Peak Hour Level of Service

Street	Segment		Class	Capacity per Lane	Number of Lanes		Existing Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
Central Ave	Del Amo Blvd	Turmont St	Major	750	2	2	272	338	0.18	0.23	A	A
Central Ave	Turmont St	University Dr	Major	750	2	2	397	316	0.26	0.21	A	A
Central Ave	University Dr	Victoria St	Secondary	750	2	2	612	360	0.41	0.24	A	A
Del Amo Blvd	Figueroa St	Main St	Major	750	2	2	153	279	0.10	0.19	A	A
Del Amo Blvd	Main St	Avalon Blvd	Major	750	2	2	0	0	0.00	0.00	A	A
Del Amo Blvd	Avalon St	Central Ave	Major	750	2	2	459	678	0.31	0.45	A	A
Del Amo Blvd	Central Ave	Wilmington Ave	Major	750	2	2	420	379	0.28	0.25	A	A
Dolores St	Sepulveda Blvd	228th St	Collector	750	1	1	64	143	0.09	0.19	A	A
Figueroa St	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	261	270	0.17	0.18	A	A
Figueroa St	Sepulveda Blvd	223rd St	Major	750	2	2	173	203	0.12	0.14	A	A
Figueroa St	223rd St	Carson St	Major	750	2	2	762	189	0.51	0.13	A	A
Figueroa St	Carson St	Torrance Blvd	Major	750	2	2	646	196	0.43	0.13	A	A
Figueroa St	Torrance Blvd	Del Amo Blvd	Major	750	2	2	1226	446	0.82	0.30	D	A
Figueroa St	Del Amo Blvd	I-405 Fwy	Major	750	2	2	782	670	0.52	0.45	A	A
Figueroa St	I-405 Fwy	Victoria St	Major	750	2	2	900	584	0.60	0.39	A	A
Figueroa St	Victoria St	SR-91 Fwy	Major	750	2	2	533	441	0.36	0.29	A	A
Figueroa St	SR-91 Fwy	Gardena Blvd	Major	750	2	2	477	422	0.32	0.28	A	A
Figueroa St	Gardena Blvd	Alondra Blvd	Major	750	2	2	475	470	0.32	0.31	A	A
Gardena Blvd	Figueroa St	Main St	Secondary	750	2	2	176	297	0.12	0.20	A	A
Gardena Blvd	Main St	Avalon Blvd	Secondary	750	2	2	213	151	0.14	0.10	A	A
Lomita Blvd	Figueroa St	Main St	Major	750	2	2	838	973	0.56	0.65	A	B
Lomita Blvd	Main St	Avalon Blvd	Major	750	2	2	736	826	0.49	0.55	A	A
Lomita Blvd	Wilmington Ave	Alameda St	Major	750	1	1	324	305	0.43	0.41	A	A
Main St	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	937	637	0.62	0.42	B	A
Main St	Sepulveda Blvd	223rd St	Major	750	2	2	633	515	0.42	0.34	A	A
Main St	223rd St	Carson St	Major	750	2	2	850	672	0.57	0.45	A	A
Main St	Carson St	213th St	Major	750	2	2	855	637	0.57	0.42	A	A
Main St	213th St	Torrance Blvd	Major	750	2	2	830	521	0.55	0.35	A	A
Main St	Torrance Blvd	Del Amo Blvd	Major	750	2	2	720	490	0.48	0.33	A	A
Main St	Del Amo Blvd	I-405 Fwy	Major	750	2	2	727	603	0.48	0.40	A	A
Main St	I-405 Fwy	Broadway	Major	750	2	2	841	619	0.56	0.41	A	A
Main St	Broadway	Victoria St	Major	750	2	2	501	421	0.33	0.28	A	A
Main St	Victoria St	Albertoni St	Major	750	2	2	544	377	0.36	0.25	A	A
Main St	SR-91 Fwy	Gardena Blvd	Major	750	2	2	685	451	0.46	0.30	A	A
Main St	Gardena Blvd	Alondra Blvd	Major	750	2	2	516	477	0.34	0.32	A	A
Moneta Ave	228th St	223rd St	Collector	750	1	1	146	112	0.19	0.15	A	A
Santa Fe Ave	Carson St	Dominguez St	Secondary	750	2	2	718	793	0.48	0.53	A	A
Santa Fe Ave	Dominguez St	Del Amo Blvd	Secondary	750	2	2	688	833	0.46	0.56	A	A
Sepulveda Blvd	Figueroa St	Main St	Major	750	2	2	728	832	0.49	0.55	A	A
Sepulveda Blvd	Main St	Avalon Blvd	Major	750	2	2	932	720	0.62	0.48	B	A

Table 4.3-4 - Continued
Existing AM Peak Hour Level of Service

Street	Segment		Class	Capacity per Lane	Number of Lanes		Existing Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
Sepulveda Blvd	Avalon St	Wilmington Ave	Major	750	2	2	794	634	0.53	0.42	A	A
Sepulveda Blvd	Wilmington Ave	Alameda St	Major	750	2	2	410	359	0.27	0.24	A	A
Sepulveda Blvd	Alameda St	Intermodal	Major	750	2	2	458	558	0.31	0.37	A	A
Torrance Blvd	Figueroa St	Main St	Secondary	750	2	2	297	427	0.20	0.28	A	A
University Dr	Avalon St	Central Ave	Secondary	750	2	2	277	303	0.18	0.20	A	A
University Dr	Central Ave	Wilmington Ave	Secondary	750	2	2	301	166	0.20	0.11	A	A
Victoria St	Figueroa St	Main St	Major	750	2	2	765	824	0.51	0.55	A	A
Victoria St	Main St	Avalon Blvd	Major	750	2	2	613	618	0.41	0.41	A	A
Victoria St	Avalon St	Tamcliff Ave	Major	750	2	2	595	491	0.40	0.33	A	A
Victoria St	Tamcliff Ave	Central Ave	Major	750	2	2	324	376	0.22	0.25	A	A
Victoria St	Central Ave	Wilmington Ave	Major	750	1	1	395	262	0.53	0.35	A	A
Wilmington Ave	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	495	496	0.33	0.33	A	A
Wilmington Ave	Sepulveda Blvd	223rd St	Major	750	2	2	841	768	0.56	0.51	A	A
Wilmington Ave	223rd St	I-405 Fwy	Major	750	2	2	1107	1507	0.74	1.00	C	**F**
Wilmington Ave	I-405 Fwy	Carson St	Major	750	2	2	892	692	0.59	0.46	A	A
Wilmington Ave	Carson St	213th St	Major	750	2	2	1359	775	0.91	0.52	**E**	A
Wilmington Ave	213th St	Del Amo Blvd	Major	750	2	2	1003	684	0.67	0.46	B	A
Wilmington Ave	Del Amo Blvd	University Dr	Major	750	2	2	880	917	0.59	0.61	A	B
Wilmington Ave	University Dr	Victoria St	Major	750	3	3	810	1183	0.36	0.53	A	A

Table 4.3-5
Existing PM Peak Hour Level of Service

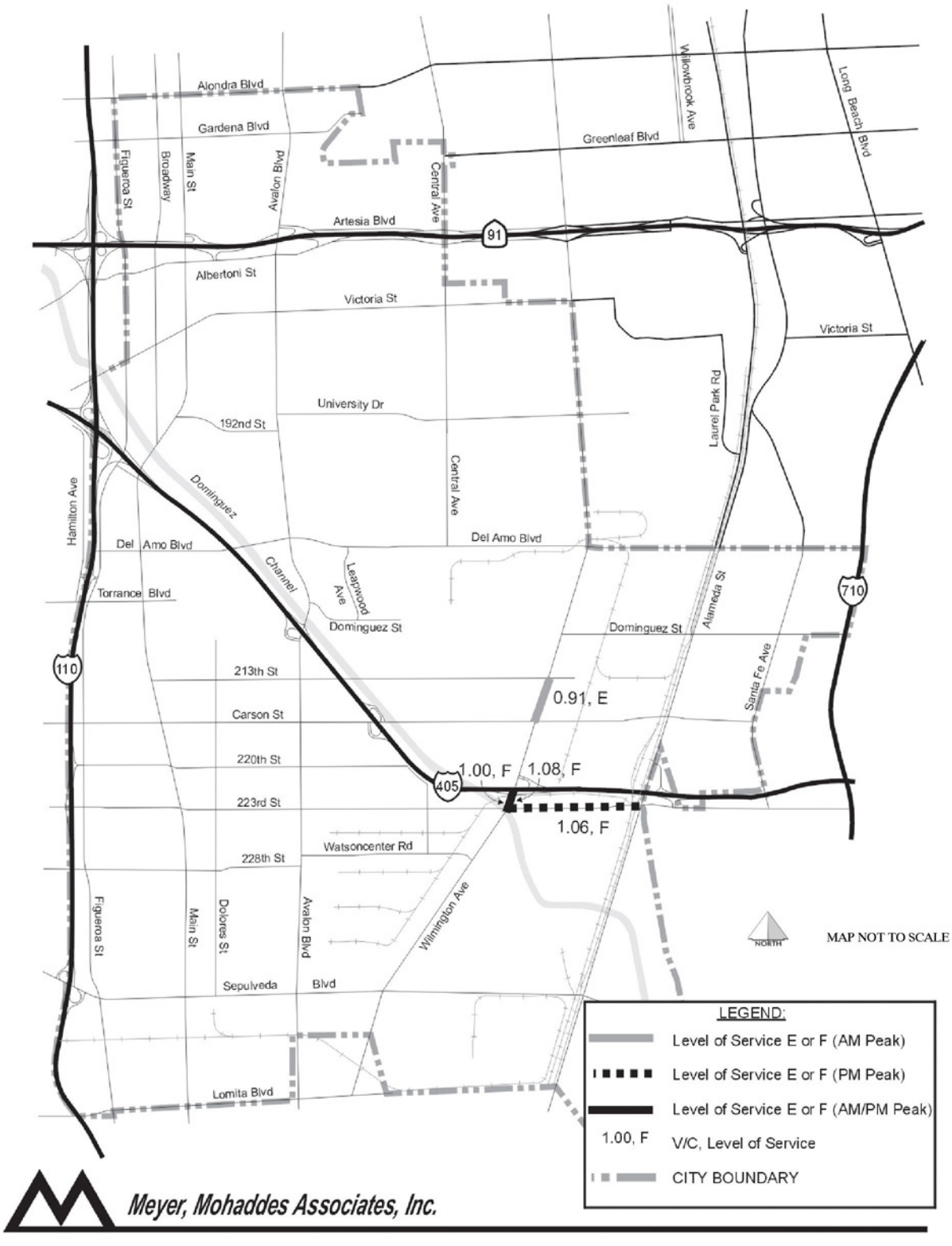
Street	Segment		Class	Capacity per Lane	Number of Lanes		Existing Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
213th St	Main St	Avalon Blvd	Collector	750	1	1	364	398	0.49	0.53	A	A
213th St	Avalon St	Chico St	Collector	750	1	1	418	337	0.56	0.45	A	A
213th St	Chico St	Wilmington Ave	Collector	750	1	1	124	217	0.17	0.29	A	A
220th St	Main St	Avalon Blvd	Collector	750	1	1	271	224	0.36	0.30	A	A
223rd St	Figueroa St	Main St	Major	750	2	2	1025	614	0.68	0.41	B	A
223rd St	Main St	Avalon Blvd	Major	750	2	2	971	647	0.65	0.43	B	A
223rd St	Avalon St	Wilmington Ave	Major	750	2	2	836	689	0.56	0.46	A	A
223rd St	Wilmington Ave	Alameda St	Major	750	2	2	1587	517	1.06	0.34	**F**	A
228th St	Main St	Avalon Blvd	Collector	750	1	1	127	117	0.17	0.16	A	A
Alameda St	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	607	527	0.40	0.35	A	A
Alameda St	Sepulveda Blvd	223rd St	Major	750	2	2	873	545	0.58	0.36	A	A
Alameda St	I-405 Fwy	Carson St	Major	750	2	2	524	499	0.35	0.33	A	A
Alameda St	Carson St	Dominguez St	Major	750	2	2	427	438	0.28	0.29	A	A
Albertoni St	Figueroa St	Main St	Secondary	750	2	2	541	325	0.36	0.22	A	A
Albertoni St	Main St	Avalon Blvd	Secondary	750	2	2	1004	303	0.67	0.20	B	A
Albertoni St	Avalon St	SR-91 Fwy	Secondary	750	2	2	883	258	0.59	0.17	A	A
Alondra Blvd	Figueroa St	Main St	Major	750	3	3	396	399	0.18	0.18	A	A
Alondra Blvd	Main St	Avalon Blvd	Major	750	3	3	552	419	0.25	0.19	A	A
Avalon Blvd	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	476	591	0.32	0.39	A	A
Avalon Blvd	Sepulveda Blvd	223rd St	Major	750	2	2	668	881	0.45	0.59	A	A
Avalon Blvd	223rd St	Carson St	Major	750	2	2	922	1003	0.61	0.67	B	B
Avalon Blvd	Carson St	213th St	Major	750	3	3	1076	1266	0.48	0.56	A	A
Avalon Blvd	213th St	I-405 Fwy	Major	750	3	3	1201	1369	0.53	0.61	A	B
Avalon Blvd	Dominguez St	Del Amo Blvd	Major	750	3	3	1087	1156	0.48	0.51	A	A
Avalon Blvd	Del Amo Blvd	University Dr	Major	750	3	3	919	918	0.41	0.41	A	A
Avalon Blvd	University Dr	Victoria St	Major	750	3	3	1142	1015	0.51	0.45	A	A
Avalon Blvd	Victoria St	Albertoni St	Major	750	3	3	852	1060	0.38	0.47	A	A
Avalon Blvd	SR-91 Fwy	Gardena Blvd	Major	750	3	3	1005	1074	0.45	0.48	A	A
Avalon Blvd	Gardena Blvd	Alondra Blvd	Major	750	3	3	1013	901	0.45	0.40	A	A
Broadway	Main St	Victoria St	Major	750	2	2	120	377	0.08	0.25	A	A
Broadway	Victoria St	Albertoni St	Major	750	2	2	232	331	0.15	0.22	A	A
Broadway	SR-91 Fwy	Gardena Blvd	Major	750	2	2	276	317	0.18	0.21	A	A
Broadway	Gardena Blvd	Alondra Blvd	Major	750	2	2	315	333	0.21	0.22	A	A
Carson St	Figueroa St	Main St	Major	750	2	2	1270	935	0.85	0.62	D	B
Carson St	Main St	Avalon Blvd	Major	750	2	2	1234	968	0.82	0.65	D	B
Carson St	Avalon St	I-405 Fwy	Major	750	2	2	1346	1033	0.90	0.69	D	B
Carson St	I-405 Fwy	Wilmington Ave	Major	750	2	2	864	714	0.58	0.48	A	A
Carson St	Wilmington Ave	Alameda St	Major	750	2	2	829	649	0.55	0.43	A	A
Carson St	Alameda St	Santa Fe Ave	Major	750	2	2	871	515	0.58	0.34	A	A
Central Ave	Del Amo Blvd	Turmont St	Major	750	2	2	380	356	0.25	0.24	A	A
Central Ave	Turmont St	University Dr	Major	750	2	2	287	426	0.19	0.28	A	A
Central Ave	University Dr	Victoria St	Secondary	750	2	2	395	399	0.26	0.27	A	A

Table 4.3-5 - Continued
Existing PM Peak Hour Level of Service

Street	Segment		Class	Capacity per Lane	Number of Lanes		Existing Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
Del Amo Blvd	Figueroa St	Main St	Major	750	2	2	309	205	0.21	0.14	A	A
Del Amo Blvd	Main St	Avalon Blvd	Major	750	2	2	0	0	0.00	0.00	A	A
Del Amo Blvd	Avalon St	Central Ave	Major	750	2	2	691	740	0.46	0.49	A	A
Del Amo Blvd	Central Ave	Wilmington Ave	Major	750	2	2	477	554	0.32	0.37	A	A
Dolores St	Sepulveda Blvd	228th St	Collector	750	1	1	128	99	0.17	0.13	A	A
Figueroa St	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	286	256	0.19	0.17	A	A
Figueroa St	Sepulveda Blvd	223rd St	Major	750	2	2	363	316	0.24	0.21	A	A
Figueroa St	223rd St	Carson St	Major	750	2	2	602	283	0.40	0.19	A	A
Figueroa St	Carson St	Torrance Blvd	Major	750	2	2	410	346	0.27	0.23	A	A
Figueroa St	Torrance Blvd	Del Amo Blvd	Major	750	2	2	1078	499	0.72	0.33	C	A
Figueroa St	Del Amo Blvd	I-405 Fwy	Major	750	2	2	381	1152	0.25	0.77	A	C
Figueroa St	I-405 Fwy	Victoria St	Major	750	2	2	663	733	0.44	0.49	A	A
Figueroa St	Victoria St	SR-91 Fwy	Major	750	2	2	459	511	0.31	0.34	A	A
Figueroa St	SR-91 Fwy	Gardena Blvd	Major	750	2	2	465	534	0.31	0.36	A	A
Figueroa St	Gardena Blvd	Alondra Blvd	Major	750	2	2	559	509	0.37	0.34	A	A
Gardena Blvd	Figueroa St	Main St	Secondary	750	2	2	269	302	0.18	0.20	A	A
Gardena Blvd	Main St	Avalon Blvd	Secondary	750	2	2	250	250	0.17	0.17	A	A
Lomita Blvd	Figueroa St	Main St	Major	750	2	2	1285	702	0.86	0.47	D	A
Lomita Blvd	Main St	Avalon Blvd	Major	750	2	2	812	753	0.54	0.50	A	A
Lomita Blvd	Wilmington Ave	Alameda St	Major	750	1	1	417	335	0.56	0.45	A	A
Main St	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	780	691	0.52	0.46	A	A
Main St	Sepulveda Blvd	223rd St	Major	750	2	2	658	755	0.44	0.50	A	A
Main St	223rd St	Carson St	Major	750	2	2	697	1023	0.46	0.68	A	B
Main St	Carson St	213th St	Major	750	2	2	695	922	0.46	0.61	A	B
Main St	213th St	Torrance Blvd	Major	750	2	2	250	953	0.17	0.64	A	B
Main St	Torrance Blvd	Del Amo Blvd	Major	750	2	2	491	828	0.33	0.55	A	A
Main St	Del Amo Blvd	I-405 Fwy	Major	750	2	2	679	774	0.45	0.52	A	A
Main St	I-405 Fwy	Broadway	Major	750	2	2	603	1017	0.40	0.68	A	B
Main St	Broadway	Victoria St	Major	750	2	2	458	599	0.31	0.40	A	A
Main St	Victoria St	Albertoni St	Major	750	2	2	398	640	0.27	0.43	A	A
Main St	SR-91 Fwy	Gardena Blvd	Major	750	2	2	516	653	0.34	0.44	A	A
Main St	Gardena Blvd	Alondra Blvd	Major	750	2	2	494	515	0.33	0.34	A	A
Moneta Ave	228th St	223rd St	Collector	750	1	1	105	138	0.14	0.18	A	A
Santa Fe Ave	Carson St	Dominguez St	Secondary	750	2	2	933	911	0.62	0.61	B	B
Santa Fe Ave	Dominguez St	Del Amo Blvd	Secondary	750	2	2	1042	832	0.69	0.55	B	A
Sepulveda Blvd	Figueroa St	Main St	Major	750	2	2	838	855	0.56	0.57	A	A
Sepulveda Blvd	Main St	Avalon Blvd	Major	750	2	2	837	860	0.56	0.57	A	A
Sepulveda Blvd	Avalon St	Wilmington Ave	Major	750	2	2	713	778	0.48	0.52	A	A
Sepulveda Blvd	Wilmington Ave	Alameda St	Major	750	2	2	373	415	0.25	0.28	A	A
Sepulveda Blvd	Alameda St	Intermodal	Major	750	2	2	738	812	0.49	0.54	A	A

Table 4.3-5 - Continued
Existing PM Peak Hour Level of Service

Street	Segment		Class	Capacity per Lane	Number of Lanes		Existing Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
Torrance Blvd	Figueroa St	Main St	Secondary	750	2	2	532	353	0.35	0.24	A	A
University Dr	Avalon St	Central Ave	Secondary	750	2	2	326	275	0.22	0.18	A	A
University Dr	Central Ave	Wilmington Ave	Secondary	750	2	2	172	319	0.11	0.21	A	A
Victoria St	Figueroa St	Main St	Major	750	2	2	1093	732	0.73	0.49	C	A
Victoria St	Main St	Avalon Blvd	Major	750	2	2	913	541	0.61	0.36	B	A
Victoria St	Avalon St	Tamcliff Ave	Major	750	2	2	812	726	0.54	0.48	A	A
Victoria St	Tamcliff Ave	Central Ave	Major	750	2	2	653	595	0.44	0.40	A	A
Victoria St	Central Ave	Wilmington Ave	Major	750	1	1	325	480	0.43	0.64	A	B
Wilmington Ave	Lomita Blvd	Sepulveda Blvd	Major	750	2	2	372	659	0.25	0.44	A	A
Wilmington Ave	Sepulveda Blvd	223rd St	Major	750	2	2	801	930	0.53	0.62	A	B
Wilmington Ave	223rd St	I-405 Fwy	Major	750	2	2	1174	1616	0.78	1.08	C	**F**
Wilmington Ave	I-405 Fwy	Carson St	Major	750	2	2	719	947	0.48	0.63	A	B
Wilmington Ave	Carson St	213th St	Major	750	2	2	938	1325	0.63	0.88	B	D
Wilmington Ave	213th St	Del Amo Blvd	Major	750	2	2	885	1006	0.59	0.67	A	B
Wilmington Ave	Del Amo Blvd	University Dr	Major	750	2	2	1013	933	0.68	0.62	B	B
Wilmington Ave	University Dr	Victoria St	Major	750	3	3	1106	851	0.49	0.38	A	A



Meyer, Mohaddes Associates, Inc.

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Existing Level of Service

EXHIBIT 4.3-7

4.3.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a proposed project are evaluated to determine if they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and other mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Transportation/Circulation impacts resulting from the implementation of the proposed General Plan could be considered significant if they cause the following results:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of street system (i.e., result in a substantial increase in either the number of vehicle trips, to the volume to capacity ratio on roads, or congestion at intersections);

- Exceed, either individually or cumulatively, a level of service standard established by the county congestion/management agency for designated roads or highways;

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (refer to Section 7.0, *Effects Found Not To Be Significant)*;

- Substantially increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (refer to Section 7.0, *Effects Found Not To Be Significant)*;

- Result in inadequate emergency access (refer to Section 7.0, *Effects Found Not To Be Significant)*;

- Result in inadequate parking capacity (refer to Section 7.0, *Effects Found Not To Be Significant)*; and/or

- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.3.3 IMPACTS AND MITIGATION MEASURES

2020 TRAFFIC VOLUMES/ROADWAY CAPACITIES

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN WOULD RESULT IN AN INCREASE IN TRAFFIC VOLUMES FOR THE PLANNING HORIZON YEAR OF 2020, WHICH WOULD IMPACT THE CAPACITIES OF ROADWAYS WITHIN THE CITY OF CARSON.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis:

Trip Distribution

Short-term traffic growth is growth due to recently approved development projects in the City. City staff provided the information on projects approved but not completed as of December 2000. Table 4.3-6, *Short-Term Growth Trip Generation in Carson*, summarizes the trip generation estimates for these projects. Individual approved project trip generation estimates are presented in Appendix B.

Table 4.3-6
Short-Term Growth Trip Generation in Carson

Land Use Type	Size (Units/Square Feet)	Estimated New Trips	
		AM Peak Hour	PM Peak Hour
Development Status Report Project Trips			
Low Density Residential	215	161	217
High Density Residential	978	491	597
Light Industrial	2,294,147	1,173	1,207
Heavy Industrial	197,336	101	134
Commercial	256,000	210	876
Office/Business Park	1,480,000	1,854	2,717
Other (Training Center, Church, Daycare, Tech.)	1,897,238	2,420	2,628
Trips for Development Status Report Projects		6,410	8,376

Additionally, ambient traffic growth would occur in the City due to general employment growth, housing growth and growth in regional through trips in southern California. Even if there was no change in housing or employment in the City of Carson, there would be some background (ambient) traffic growth in the region. Per discussions with the City staff, an ambient growth rate of 0.25 percent per year for over the next 20 years is utilized, which represents a total of 5 percent ambient growth over 20 years.

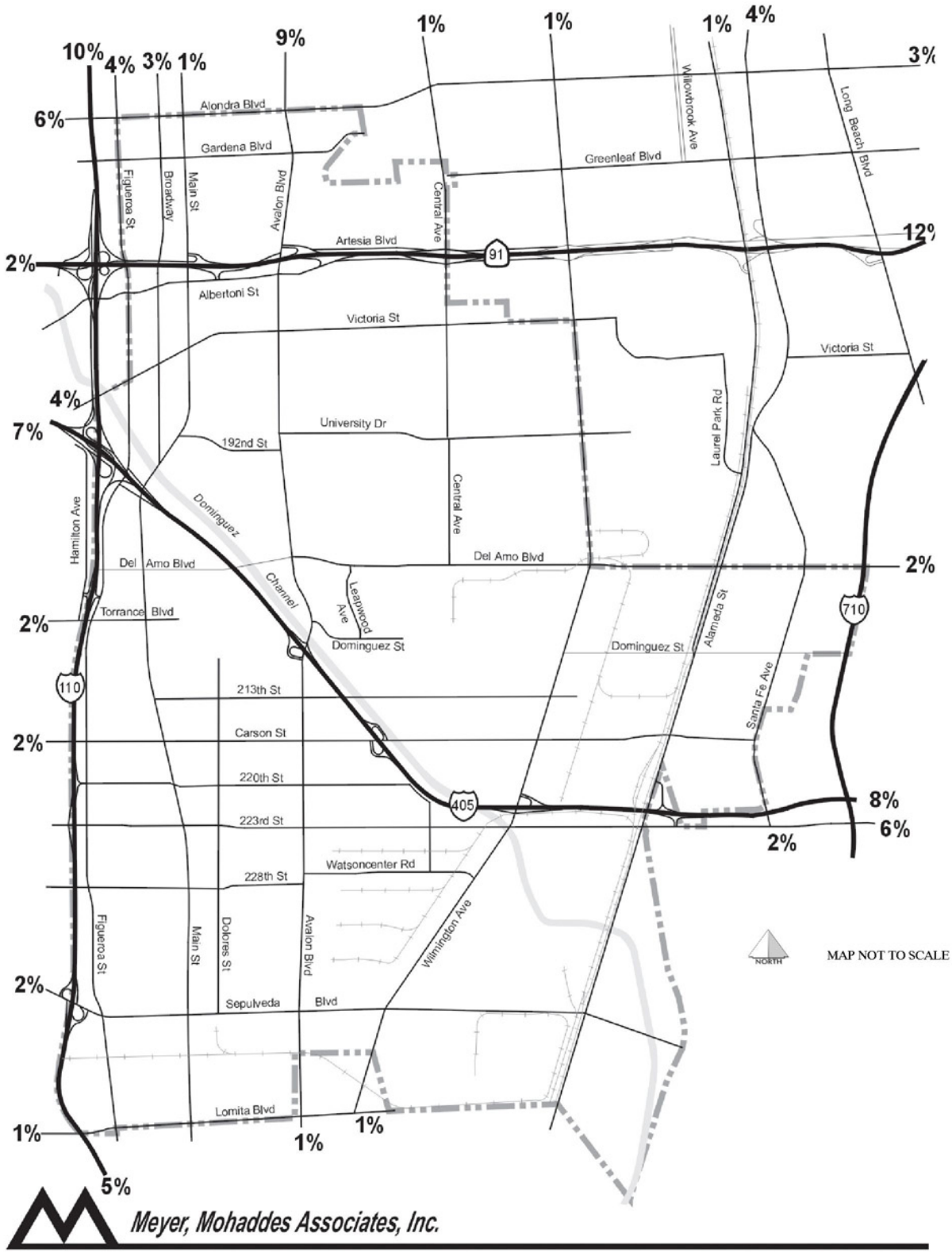
Year 2020 traffic conditions were determined by utilizing the Institute of Transportation Engineers (ITE) published trip generation rates for land uses in "Trip Generation 6th Edition," which has been adopted as a standard by nearly all agencies and cities in southern California. The Los Angeles County CMP guidelines also recommend the use of ITE trip generation data, but allow other rates to be used in special cases if sufficient empirical data is provided and documented.

Trips were calculated based on ITE's trip rates for the proposed General Plan horizon year of 2020. Future trip generation rates are described in Table 4.3-7, *Forecast Trip Generation on Carson*. As shown in Table 4.3-7, the greatest number of new trips would occur due to development in light industrial land uses, which accounts for approximately 61 percent of all new trips during the AM peak hour and 46 percent of all new trips during the PM peak hour, followed by development of residential, heavy industrial, and office. Pass-by trips were assumed to be 25 percent of all retail commercial trips (consistent with ITE standards).

Table 4.3-7
Forecast Future Trip Generation in Carson

Land Use Type	Size (Units/ Square Feet)	Estimated New Trips	
		AM Peak Hour	PM Peak Hour
Low Density Residential	271	204	273
High Density Residential	521	425	513
Light Industrial	10,023,200	8,955	9,628
Commercial	3,041,506	1,704	7,387
Office/Business Park	2,111,700	3,268	2,892
Other (Hotel)	300,000	168	183
Total Trips		14,565	20,682

The distribution of future trips describes the paths taken by new trips to and from the buildout locations. The traffic model that was developed for the Transportation and Infrastructure Element includes a series of trip destination points around the City of Carson where trips would enter and leave the City on their way to the cumulative project driveways. The amount of traffic using each access route is an important variable in the overall traffic analysis. To determine the likely trip origins and destinations, the regional traffic model developed by the Southern California Association of Governments (SCAG) was reviewed. The SCAG model includes trip patterns for Traffic Analysis Zones (TAZs) within Carson. Those patterns are based on origin/destination surveys that were developed by SCAG. The model was used to determine the share of traffic for each cumulative project using the key arterial facilities in the City. The data was then refined for the City of Carson based on the location of the City and its accessibility to regional freeways and roadway systems. Exhibit 4.3-8, *Project Trip Distribution*, illustrates the assumed trip distribution patterns that were developed for the Transportation and Infrastructure Element. These patterns were varied, as appropriate, based on the location of individual project areas. For example, project areas closer to I-405 were more heavily weighed to use the I-405 freeway, and similarly for those areas near the I-110 and SR-91, etc.



Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Project Trip Distribution

EXHIBIT 4.3-8

Future Traffic Volumes

Future traffic volumes with the proposed General Plan were estimated by assigning project traffic to the City roadway network based on the trip distribution previously described. The results were then evaluated for potential deficiencies (LOS E or F conditions with implementation of the proposed General Plan). Table 4.3-8, *Future AM Peak Hour Level of Service With General Plan Growth*, and Table 4.3-9, *Future PM Peak Hour Level of Service With General Plan Growth*, present the Future Conditions traffic volumes and levels of service with the proposed General Plan in 2020. The bold locations indicate forecast deficiencies in the future. Exhibits 4.3-9, *Future AM Peak Hour Deficient Segments*, and 4.3-10, *Future PM Peak Hour Deficient Segments*, graphically depict the locations of the deficient roadway segments.

Traffic Redistribution Due to Del Amo Over-Crossing of I-405 Freeway

In 2002, the Del Amo over-crossing of the I-405 freeway was under construction, but is anticipated to be completed by May 2003. It would be in place and would be able to serve much of the new traffic generated as a resulting of implementing the proposed General Plan. Also, the new link in the circulation system would result in traffic redistribution on parallel and connecting roadways of existing traffic volumes. The new facility would enable motorists to make the freeway crossing on Del Amo Boulevard, if desired, in place of using Carson Street, Avalon Boulevard, Main Street, Figueroa Street or Victoria Street. The new crossing would result in shorter path trips for some motorists.

The redistributed traffic was estimated using the SCAG regional model. The model was run with and without the new Del Amo over-crossing and the resulting differences in traffic loading were assessed. For both the AM and PM peak hours, adjustments to link volumes were applied to reflect the affects of the new over-crossing. As expected, the model results indicated that parallel route traffic volumes would decrease, while Del Amo Boulevard would increase in the vicinity of the new crossing. Additionally, some of the connecting routes to Del Amo Boulevard would experience an increase in traffic. The over-crossing was also included in the traffic model for future project-added trips. The new crossing was assumed in the local area traffic model, and future project trips were assigned to the over-crossing as if it were in place today. Using this methodology, the impacts and benefits of the new over-crossing were fully accounted for in the traffic analysis.

Roadway Impacts in the Year 2020

The following 17 roadway segments would operate at LOS E or F in 2020:

- 223rd Street from Wilmington Avenue to Alameda Street (PM Peak)*
- Carson Street from Figueroa Street to Main Street (AM/PM Peak)
- Carson Street from Main Street to Avalon Boulevard (AM/PM Peak)
- Carson Street from Avalon Boulevard to I-405 (AM/PM Peak)
- Central Avenue from University Drive to Victoria Street (AM/PM Peak)

Table 4.3-8
Future AM Peak Hour Level of Service With General Plan Growth

Street	Segment		Class	Capacity per Lane	Number of Lanes		Future Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
213th St	Main St	Avalon Blvd	Collector	750	1	1	385	417	0.51	0.56	A	A
213th St	Avalon St	Chico St	Collector	750	1	1	322	365	0.43	0.49	A	A
213th St	Chico St	Wilmington Ave	Collector	750	1	1	148	165	0.20	0.22	A	A
220th St	Main St	Avalon Blvd	Collector	750	1	1	310	273	0.41	0.36	A	A
223rd St	Figueroa St	Main St	Major	750	3	3	763	1006	0.34	0.45	A	A
223rd St	Main St	Avalon Blvd	Major	750	3	3	939	1024	0.42	0.46	A	A
223rd St	Avalon St	Wilmington Ave	Major	750	3	3	1031	932	0.46	0.41	A	A
223rd St	Wilmington Ave	Alameda St	Major	750	3	3	886	1161	0.39	0.52	A	A
228th St	Main St	Avalon Blvd	Collector	750	1	1	157	167	0.21	0.22	A	A
Alameda St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	455	645	0.20	0.29	A	A
Alameda St	Sepulveda Blvd	223rd St	Major	750	3	3	614	912	0.27	0.41	A	A
Alameda St	I-405 Fwy	Carson St	Major	750	3	3	733	793	0.33	0.35	A	A
Alameda St	Carson St	Dominguez St	Major	750	3	3	523	615	0.23	0.27	A	A
Albertoni St	Figueroa St	Main St	Secondary	750	2	2	426	501	0.28	0.33	A	A
Albertoni St	Main St	Avalon Blvd	Secondary	750	2	2	692	845	0.46	0.56	A	A
Albertoni St	Avalon St	SR-91 Fwy	Secondary	750	2	2	585	358	0.39	0.24	A	A
Alondra Blvd	Figueroa St	Main St	Major	750	3	3	396	481	0.18	0.21	A	A
Alondra Blvd	Main St	Avalon Blvd	Major	750	3	3	471	722	0.21	0.32	A	A
Avalon Blvd	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	730	477	0.32	0.21	A	A
Avalon Blvd	Sepulveda Blvd	223rd St	Major	750	3	3	1239	730	0.55	0.32	A	A
Avalon Blvd	223rd St	Carson St	Major	750	3	3	1258	982	0.56	0.44	A	A
Avalon Blvd	Carson St	213th St	Major	750	3	3	1308	947	0.58	0.42	A	A
Avalon Blvd	213th St	I-405 Fwy	Major	750	3	3	1314	1112	0.58	0.49	A	A
Avalon Blvd	Dominguez St	Del Amo Blvd	Major	750	3	3	2002	1247	0.89	0.55	D	A
Avalon Blvd	Del Amo Blvd	University Dr	Major	750	3	3	1111	949	0.49	0.42	A	A
Avalon Blvd	University Dr	Victoria St	Major	750	3	3	998	1338	0.44	0.59	A	A
Avalon Blvd	Victoria St	Albertoni St	Major	750	3	3	1053	1076	0.47	0.48	A	A
Avalon Blvd	SR-91 Fwy	Gardena Blvd	Major	750	3	3	1167	980	0.52	0.44	A	A
Avalon Blvd	Gardena Blvd	Alondra Blvd	Major	750	3	3	1009	1071	0.45	0.48	A	A
Broadway	Main St	Victoria St	Major	750	3	3	578	436	0.26	0.19	A	A
Broadway	Victoria St	Albertoni St	Major	750	3	3	581	444	0.26	0.20	A	A
Broadway	SR-91 Fwy	Gardena Blvd	Major	750	3	3	440	486	0.20	0.22	A	A
Broadway	Gardena Blvd	Alondra Blvd	Major	750	3	3	447	532	0.20	0.24	A	A
Carson St	Figueroa St	Main St	Secondary	750	2	2	1779	1319	1.19	0.88	**F**	D
Carson St	Main St	Avalon Blvd	Secondary	750	2	2	1293	1610	0.86	1.07	D	**F**
Carson St	Avalon St	I-405 Fwy	Major	750	3	3	1626	1575	0.72	0.70	C	B
Carson St	I-405 Fwy	Wilmington Ave	Major	750	3	3	1060	764	0.47	0.34	A	A
Carson St	Wilmington Ave	Alameda St	Major	750	3	3	734	1714	0.33	0.76	A	C
Carson St	Alameda St	Santa Fe Ave	Major	750	3	3	571	1456	0.25	0.65	A	B
Central Ave	Del Amo Blvd	Turmont St	Major	750	3	3	597	652	0.27	0.29	A	A
Central Ave	Turmont St	University Dr	Major	750	3	3	728	629	0.32	0.28	A	A
Central Ave	University Dr	Victoria St	Secondary	750	2	2	999	1528	0.67	1.02	B	**F**

Table 4.3-8 - Continued
Future AM Peak Hour Level of Service With General Plan Growth

Street	Segment		Class	Capacity per Lane	Number of Lanes		Future Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
Del Amo Blvd	Figueroa St	Main St	Major	750	3	3	845	410	0.38	0.18	A	A
Del Amo Blvd	Main St	Avalon Blvd	Major	750	3	3	447	257	0.20	0.11	A	A
Del Amo Blvd	Avalon St	Central Ave	Major	750	3	3	1875	1600	0.83	0.71	D	C
Del Amo Blvd	Central Ave	Wilmington Ave	Major	750	3	3	640	1222	0.28	0.54	A	A
Dolores St	Sepulveda Blvd	228th St	Collector	750	1	1	69	152	0.09	0.20	A	A
Figueroa St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	350	341	0.16	0.15	A	A
Figueroa St	Sepulveda Blvd	223rd St	Major	750	3	3	413	305	0.18	0.14	A	A
Figueroa St	223rd St	Carson St	Major	750	3	3	1079	356	0.48	0.16	A	A
Figueroa St	Carson St	Torrance Blvd	Major	750	3	3	1670	474	0.74	0.21	C	A
Figueroa St	Torrance Blvd	Del Amo Blvd	Major	750	3	3	1930	795	0.86	0.35	D	A
Figueroa St	Del Amo Blvd	I-405 Fwy	Major	750	3	3	1009	1057	0.45	0.47	A	A
Figueroa St	I-405 Fwy	Victoria St	Major	750	3	3	1133	966	0.50	0.43	A	A
Figueroa St	Victoria St	SR-91 Fwy	Major	750	3	3	665	621	0.30	0.28	A	A
Figueroa St	SR-91 Fwy	Gardena Blvd	Major	750	3	3	576	663	0.26	0.29	A	A
Figueroa St	Gardena Blvd	Alondra Blvd	Major	750	3	3	560	730	0.25	0.32	A	A
Gardena Blvd	Figueroa St	Main St	Secondary	750	2	2	207	315	0.14	0.21	A	A
Gardena Blvd	Main St	Avalon Blvd	Secondary	750	2	2	313	283	0.21	0.19	A	A
Lomita Blvd	Figueroa St	Main St	Major	750	3	3	1021	1050	0.45	0.47	A	A
Lomita Blvd	Main St	Avalon Blvd	Major	750	3	3	835	894	0.37	0.40	A	A
Lomita Blvd	Wilmington Ave	Alameda St	Major	750	3	3	355	330	0.16	0.15	A	A
Main St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	1259	1131	0.56	0.50	A	A
Main St	Sepulveda Blvd	223rd St	Major	750	3	3	924	758	0.41	0.34	A	A
Main St	223rd St	Carson St	Major	750	3	3	1248	966	0.55	0.43	A	A
Main St	Carson St	213th St	Major	750	3	3	2275	1147	1.01	0.51	**F**	A
Main St	213th St	Torrance Blvd	Major	750	3	3	2126	1025	0.94	0.46	**E**	A
Main St	Torrance Blvd	Del Amo Blvd	Major	750	3	3	2323	1264	1.03	0.56	**F**	A
Main St	Del Amo Blvd	I-405 Fwy	Major	750	3	3	1253	1120	0.56	0.50	A	A
Main St	I-405 Fwy	Broadway	Major	750	3	3	1193	1167	0.53	0.52	A	A
Main St	Broadway	Victoria St	Major	750	3	3	648	670	0.29	0.30	A	A
Main St	Victoria St	Albertoni St	Major	750	3	3	801	887	0.36	0.39	A	A
Main St	SR-91 Fwy	Gardena Blvd	Major	750	3	3	939	934	0.42	0.41	A	A
Main St	Gardena Blvd	Alondra Blvd	Major	750	3	3	635	955	0.28	0.42	A	A
Moneta Ave	228th St	223rd St	Collector	750	1	1	170	170	0.23	0.23	A	A
Santa Fe Ave	Carson St	Dominguez St	Secondary	750	2	2	1039	1077	0.69	0.72	B	C
Santa Fe Ave	Dominguez St	Del Amo Blvd	Secondary	750	2	2	848	1108	0.57	0.74	A	C
Sepulveda Blvd	Figueroa St	Main St	Major	750	3	3	1416	1119	0.63	0.50	B	A
Sepulveda Blvd	Main St	Avalon Blvd	Major	750	3	3	1323	1046	0.59	0.46	A	A
Sepulveda Blvd	Avalon St	Wilmington Ave	Major	750	3	3	1212	863	0.54	0.38	A	A
Sepulveda Blvd	Wilmington Ave	Alameda St	Major	750	3	3	706	534	0.31	0.24	A	A
Sepulveda Blvd	Alameda St	Intermodal	Major	750	3	3	781	651	0.35	0.29	A	A

Table 4.3-8 - Continued
Future AM Peak Hour Level of Service With General Plan Growth

Street	Segment		Class	Capacity per Lane	Number of Lanes		Future Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
Torrance Blvd	Figueroa St	Main St	Secondary	750	2	2	1597	795	1.06	0.53	**F**	A
University Dr	Avalon St	Central Ave	Secondary	750	2	2	412	339	0.27	0.23	A	A
University Dr	Central Ave	Wilmington Ave	Secondary	750	2	2	407	430	0.27	0.29	A	A
Victoria St	Figueroa St	Main St	Major	750	3	3	917	945	0.41	0.42	A	A
Victoria St	Main St	Avalon Blvd	Major	750	3	3	786	812	0.35	0.36	A	A
Victoria St	Avalon St	Tamcliff Ave	Major	750	3	3	819	642	0.36	0.29	A	A
Victoria St	Tamcliff Ave	Central Ave	Major	750	3	3	534	521	0.24	0.23	A	A
Victoria St	Central Ave	Wilmington Ave	Major	750	3	3	609	548	0.27	0.24	A	A
Wilmington Ave	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	1136	639	0.50	0.28	A	A
Wilmington Ave	Sepulveda Blvd	223rd St	Major	750	3	3	1606	967	0.71	0.43	C	A
Wilmington Ave	223rd St	I-405 Fwy	Major	750	3	3	2173	1873	0.97	0.83	**E**	D
Wilmington Ave	I-405 Fwy	Carson St	Major	750	3	3	2328	1481	1.03	0.66	**F**	B
Wilmington Ave	Carson St	213th St	Major	750	3	3	2898	1172	1.29	0.52	**F**	A
Wilmington Ave	213th St	Del Amo Blvd	Major	750	3	3	2537	1497	1.13	0.67	**F**	B
Wilmington Ave	Del Amo Blvd	University Dr	Major	750	3	3	1529	1251	0.68	0.56	B	A
Wilmington Ave	University Dr	Victoria St	Major	750	3	3	1321	2643	0.59	1.17	A	**F**

Table 4.3-9
Future PM Peak Hour Level of Service With General Plan Growth

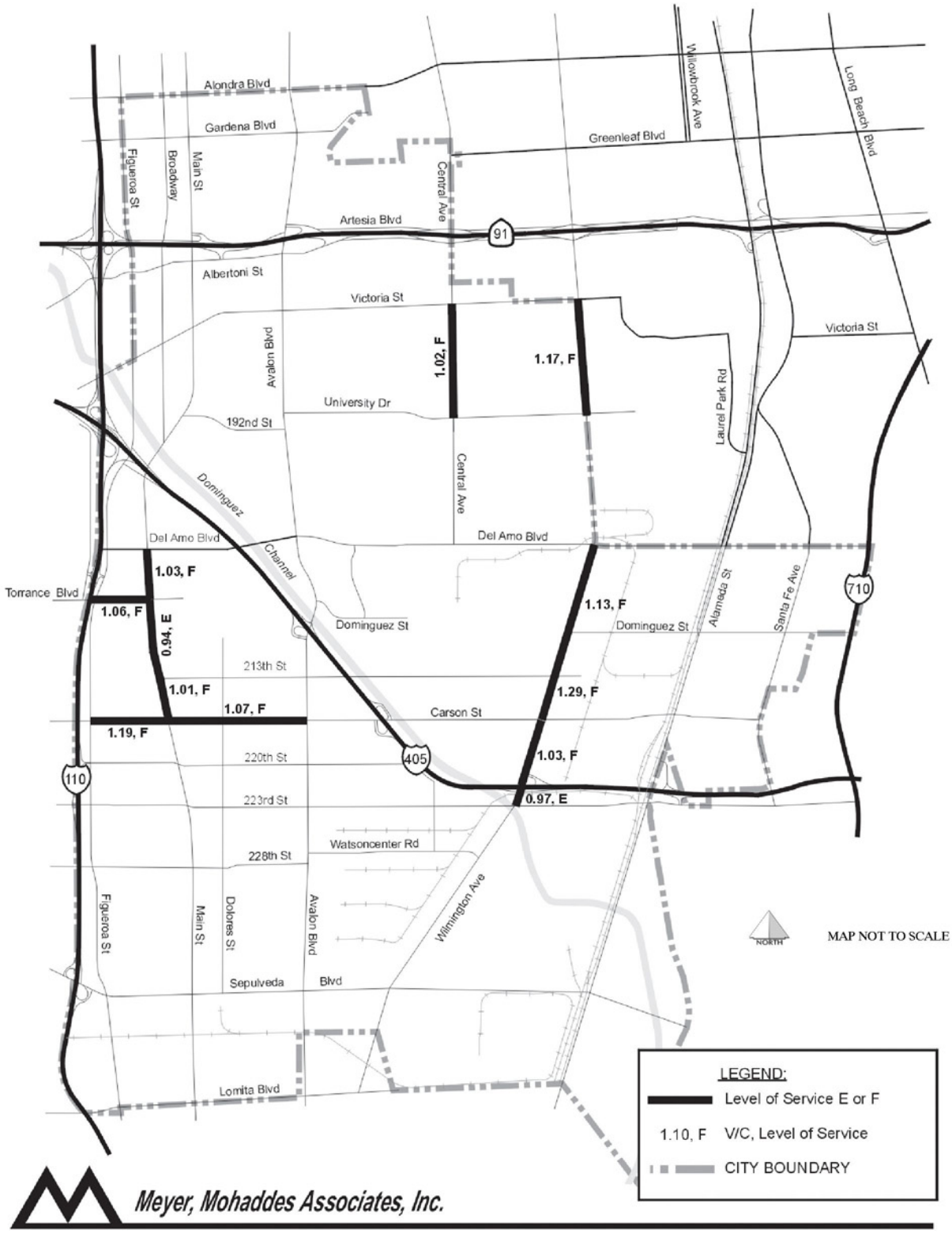
Street	Segment		Class	Capacity per Lane	Number of Lanes		Future Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
213th St	Main St	Avalon Blvd	Collector	750	1	1	465	445	0.62	0.59	B	A
213th St	Avalon St	Chico St	Collector	750	1	1	524	391	0.70	0.52	B	A
213th St	Chico St	Wilmington Ave	Collector	750	1	1	215	265	0.29	0.35	A	A
220th St	Main St	Avalon Blvd	Collector	750	1	1	391	305	0.52	0.41	A	A
223rd St	Figueroa St	Main St	Major	750	3	3	1200	949	0.53	0.42	A	A
223rd St	Main St	Avalon Blvd	Major	750	3	3	1279	1099	0.57	0.49	A	A
223rd St	Avalon St	Wilmington Ave	Major	750	3	3	1257	1298	0.56	0.58	A	A
223rd St	Wilmington Ave	Alameda St	Major	750	3	3	2322	1033	1.03	0.46	**F**	A
228th St	Main St	Avalon Blvd	Collector	750	1	1	151	153	0.20	0.20	A	A
Alameda St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	702	715	0.31	0.32	A	A
Alameda St	Sepulveda Blvd	223rd St	Major	750	3	3	1155	755	0.51	0.34	A	A
Alameda St	I-405 Fwy	Carson St	Major	750	3	3	866	825	0.38	0.37	A	A
Alameda St	Carson St	Dominguez St	Major	750	3	3	694	661	0.31	0.29	A	A
Albertoni St	Figueroa St	Main St	Secondary	750	2	2	630	370	0.42	0.25	A	A
Albertoni St	Main St	Avalon Blvd	Secondary	750	2	2	1268	407	0.85	0.27	D	A
Albertoni St	Avalon St	SR-91 Fwy	Secondary	750	2	2	1077	292	0.72	0.19	C	A
Alondra Blvd	Figueroa St	Main St	Major	750	3	3	434	491	0.19	0.22	A	A
Alondra Blvd	Main St	Avalon Blvd	Major	750	3	3	782	544	0.35	0.24	A	A
Avalon Blvd	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	611	905	0.27	0.40	A	A
Avalon Blvd	Sepulveda Blvd	223rd St	Major	750	3	3	931	1395	0.41	0.62	A	B
Avalon Blvd	223rd St	Carson St	Major	750	3	3	1206	1498	0.54	0.67	A	B
Avalon Blvd	Carson St	213th St	Major	750	3	3	1297	1741	0.58	0.77	A	C
Avalon Blvd	213th St	I-405 Fwy	Major	750	3	3	1442	1852	0.64	0.82	B	D
Avalon Blvd	Dominguez St	Del Amo Blvd	Major	750	3	3	1492	2423	0.66	1.08	B	**F**
Avalon Blvd	Del Amo Blvd	University Dr	Major	750	3	3	1401	1555	0.62	0.69	B	B
Avalon Blvd	University Dr	Victoria St	Major	750	3	3	1686	1546	0.75	0.69	C	B
Avalon Blvd	Victoria St	Albertoni St	Major	750	3	3	1361	1479	0.60	0.66	B	B
Avalon Blvd	SR-91 Fwy	Gardena Blvd	Major	750	3	3	1277	1372	0.57	0.61	A	B
Avalon Blvd	Gardena Blvd	Alondra Blvd	Major	750	3	3	1445	1134	0.64	0.50	B	A
Broadway	Main St	Victoria St	Major	750	3	3	561	708	0.25	0.31	A	A
Broadway	Victoria St	Albertoni St	Major	750	3	3	588	583	0.26	0.26	A	A
Broadway	SR-91 Fwy	Gardena Blvd	Major	750	3	3	599	453	0.27	0.20	A	A
Broadway	Gardena Blvd	Alondra Blvd	Major	750	3	3	657	476	0.29	0.21	A	A
Carson St	Figueroa St	Main St	Secondary	750	2	2	2282	1882	1.52	1.25	**F**	**F**
Carson St	Main St	Avalon Blvd	Secondary	750	2	2	2261	1869	1.51	1.25	**F**	**F**
Carson St	Avalon St	I-405 Fwy	Major	750	3	3	2120	1762	0.94	0.78	**E**	C
Carson St	I-405 Fwy	Wilmington Ave	Major	750	3	3	1137	1098	0.51	0.49	A	A
Carson St	Wilmington Ave	Alameda St	Major	750	3	3	1707	926	0.76	0.41	C	A
Carson St	Alameda St	Santa Fe Ave	Major	750	3	3	1566	716	0.70	0.32	B	A
Central Ave	Del Amo Blvd	Turmont St	Major	750	3	3	746	764	0.33	0.34	A	A
Central Ave	Turmont St	University Dr	Major	750	3	3	648	837	0.29	0.37	A	A
Central Ave	University Dr	Victoria St	Secondary	750	2	2	1484	948	0.99	0.63	**E**	B

Table 4.3-9 - Continued
Future PM Peak Hour Level of Service With General Plan Growth

Street	Segment		Class	Capacity per Lane	Number of Lanes		Future Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
Del Amo Blvd	Figueroa St	Main St	Major	750	3	3	558	978	0.25	0.43	A	A
Del Amo Blvd	Main St	Avalon Blvd	Major	750	3	3	203	535	0.09	0.24	A	A
Del Amo Blvd	Avalon St	Central Ave	Major	750	3	3	1384	2136	0.61	0.95	B	**E**
Del Amo Blvd	Central Ave	Wilmington Ave	Major	750	3	3	1444	863	0.64	0.38	B	A
Dolores St	Sepulveda Blvd	228th St	Collector	750	1	1	137	107	0.18	0.14	A	A
Figueroa St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	357	361	0.16	0.16	A	A
Figueroa St	Sepulveda Blvd	223rd St	Major	750	3	3	597	689	0.27	0.31	A	A
Figueroa St	223rd St	Carson St	Major	750	3	3	985	723	0.44	0.32	A	A
Figueroa St	Carson St	Torrance Blvd	Major	750	3	3	1047	1530	0.47	0.68	A	B
Figueroa St	Torrance Blvd	Del Amo Blvd	Major	750	3	3	1973	1289	0.88	0.57	D	A
Figueroa St	Del Amo Blvd	I-405 Fwy	Major	750	3	3	898	1570	0.40	0.70	A	B
Figueroa St	I-405 Fwy	Victoria St	Major	750	3	3	1193	1130	0.53	0.50	A	A
Figueroa St	Victoria St	SR-91 Fwy	Major	750	3	3	704	707	0.31	0.31	A	A
Figueroa St	SR-91 Fwy	Gardena Blvd	Major	750	3	3	759	703	0.34	0.31	A	A
Figueroa St	Gardena Blvd	Alondra Blvd	Major	750	3	3	895	660	0.40	0.29	A	A
Gardena Blvd	Figueroa St	Main St	Secondary	750	2	2	287	349	0.19	0.23	A	A
Gardena Blvd	Main St	Avalon Blvd	Secondary	750	2	2	431	363	0.29	0.24	A	A
Lomita Blvd	Figueroa St	Main St	Major	750	3	3	1407	899	0.63	0.40	B	A
Lomita Blvd	Main St	Avalon Blvd	Major	750	3	3	890	866	0.40	0.38	A	A
Lomita Blvd	Wilmington Ave	Alameda St	Major	750	3	3	455	376	0.20	0.17	A	A
Main St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	1477	1084	0.66	0.48	B	A
Main St	Sepulveda Blvd	223rd St	Major	750	3	3	1078	1213	0.48	0.54	A	A
Main St	223rd St	Carson St	Major	750	3	3	1207	1614	0.54	0.72	A	C
Main St	Carson St	213th St	Major	750	3	3	1790	2664	0.80	1.18	C	**F**
Main St	213th St	Torrance Blvd	Major	750	3	3	1348	2473	0.60	1.10	A	**F**
Main St	Torrance Blvd	Del Amo Blvd	Major	750	3	3	1795	2563	0.80	1.14	C	**F**
Main St	Del Amo Blvd	I-405 Fwy	Major	750	3	3	1381	1291	0.61	0.57	B	A
Main St	I-405 Fwy	Broadway	Major	750	3	3	1340	1532	0.60	0.68	A	B
Main St	Broadway	Victoria St	Major	750	3	3	773	859	0.34	0.38	A	A
Main St	Victoria St	Albertoni St	Major	750	3	3	954	1012	0.42	0.45	A	A
Main St	SR-91 Fwy	Gardena Blvd	Major	750	3	3	1128	959	0.50	0.43	A	A
Main St	Gardena Blvd	Alondra Blvd	Major	750	3	3	1055	704	0.47	0.31	A	A
Moneta Ave	228th St	223rd St	Collector	750	1	1	170	179	0.23	0.24	A	A
Santa Fe Ave	Carson St	Dominguez St	Secondary	750	2	2	1253	1281	0.84	0.85	D	D
Santa Fe Ave	Dominguez St	Del Amo Blvd	Secondary	750	2	2	1348	1024	0.90	0.68	D	B
Sepulveda Blvd	Figueroa St	Main St	Major	750	3	3	1539	2036	0.68	0.90	B	**E**
Sepulveda Blvd	Main St	Avalon Blvd	Major	750	3	3	1468	1664	0.65	0.74	B	C
Sepulveda Blvd	Avalon St	Wilmington Ave	Major	750	3	3	1161	1299	0.52	0.58	A	A
Sepulveda Blvd	Wilmington Ave	Alameda St	Major	750	3	3	597	765	0.27	0.34	A	A
Sepulveda Blvd	Alameda St	Intermodal	Major	750	3	3	893	1188	0.40	0.53	A	A

Table 4.3-9 - Continued
Future PM Peak Hour Level of Service With General Plan Growth

Street	Segment		Class	Capacity per Lane	Number of Lanes		Future Volume		V/C Ratio		Level of Service	
	From	To			NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
Torrance Blvd	Figueroa St	Main St	Secondary	750	2	2	1190	1889	0.79	1.26	C	**F**
University Dr	Avalon St	Central Ave	Secondary	750	2	2	375	416	0.25	0.28	A	A
University Dr	Central Ave	Wilmington Ave	Secondary	750	2	2	370	476	0.25	0.32	A	A
Victoria St	Figueroa St	Main St	Major	750	3	3	1300	927	0.58	0.41	A	A
Victoria St	Main St	Avalon Blvd	Major	750	3	3	1167	761	0.52	0.34	A	A
Victoria St	Avalon St	Tamcliff Ave	Major	750	3	3	1041	1026	0.46	0.46	A	A
Victoria St	Tamcliff Ave	Central Ave	Major	750	3	3	859	871	0.38	0.39	A	A
Victoria St	Central Ave	Wilmington Ave	Major	750	3	3	658	1389	0.29	0.62	A	B
Wilmington Ave	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	547	1348	0.24	0.60	A	A
Wilmington Ave	Sepulveda Blvd	223rd St	Major	750	3	3	1207	1790	0.54	0.80	A	C
Wilmington Ave	223rd St	I-405 Fwy	Major	750	3	3	1708	2981	0.76	1.32	C	**F**
Wilmington Ave	I-405 Fwy	Carson St	Major	750	3	3	1382	2626	0.61	1.17	B	**F**
Wilmington Ave	Carson St	213th St	Major	750	3	3	1465	2999	0.65	1.33	B	**F**
Wilmington Ave	213th St	Del Amo Blvd	Major	750	3	3	1885	2675	0.84	1.19	D	**F**
Wilmington Ave	Del Amo Blvd	University Dr	Major	750	3	3	1441	1674	0.64	0.74	B	C
Wilmington Ave	University Dr	Victoria St	Major	750	3	3	2624	1507	1.17	0.67	**F**	B



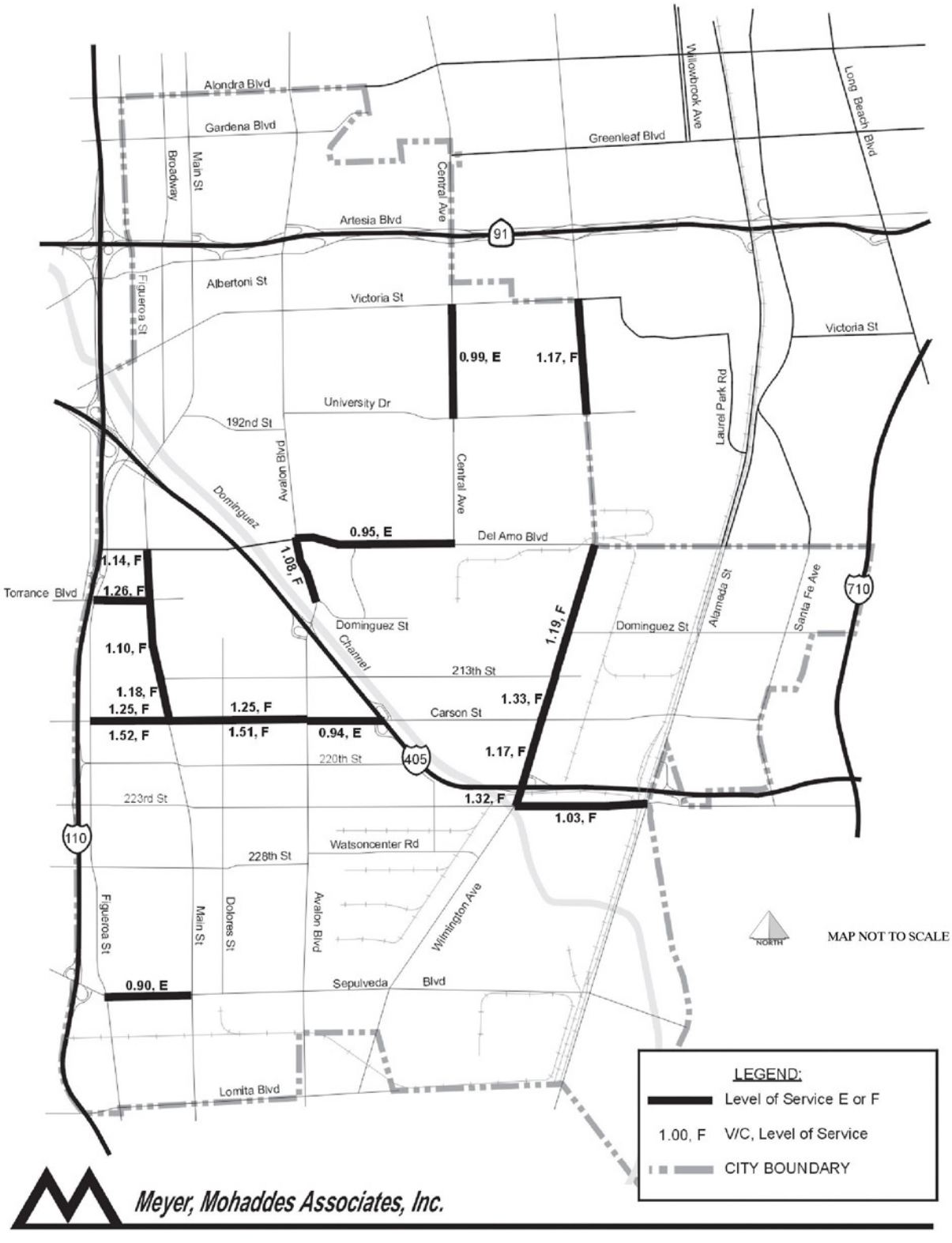
Meyer, Mohaddes Associates, Inc.

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Future AM Peak Hour Deficient Segments

EXHIBIT 4.3-9



Meyer, Mohaddes Associates, Inc.

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Future PM Peak Hour Deficient Segments

EXHIBIT 4.3-10

- Del Amo Boulevard from Avalon Boulevard to Central Avenue (AM/PM Peak)
- Main Street from Carson Street to 213th Street (AM/PM Peak)
- Main Street from 213th Street to Torrance Boulevard (AM/PM Peak)
- Main Street from Torrance Boulevard to Del Amo Boulevard (AM/PM Peak)
- Sepulveda Boulevard from Figueroa Street to Main Street (AM/PM Peak)
- Torrance Boulevard from Figueroa Street to Main Street (AM/PM Peak)
- Wilmington Avenue from 223rd Street to I-405 (AM/PM Peak)*
- Wilmington Avenue from I-405 to Carson Street (AM/PM Peak)
- Wilmington Avenue from Carson Street to 213th Street (AM/PM Peak)*
- Wilmington Avenue from 213th Street to Del Amo Boulevard (AM/PM Peak)
- Wilmington Avenue from Del Amo Boulevard to University Drive (AM/PM Peak)

Those noted with an asterisk (*) operated at an acceptable service level under existing conditions, as well. Implementation of the proposed General Plan would result in an additional 14 roadway segments operating at an unacceptable service levels over existing conditions.

Transportation System Improvements

It has been determined that several transportation system deficiencies would remain with buildout of the current Master Plan of Highways (1981). This section discusses potential additional roadway system improvements to consider in order to maintain adequate service levels in the future.

Plan of Streets and Highways

The proposed Plan of Streets and Highways, shown as Exhibit 4.3-11, *Plan of Streets and Highways*, has few changes from the 1981 Plan. It is proposed that:

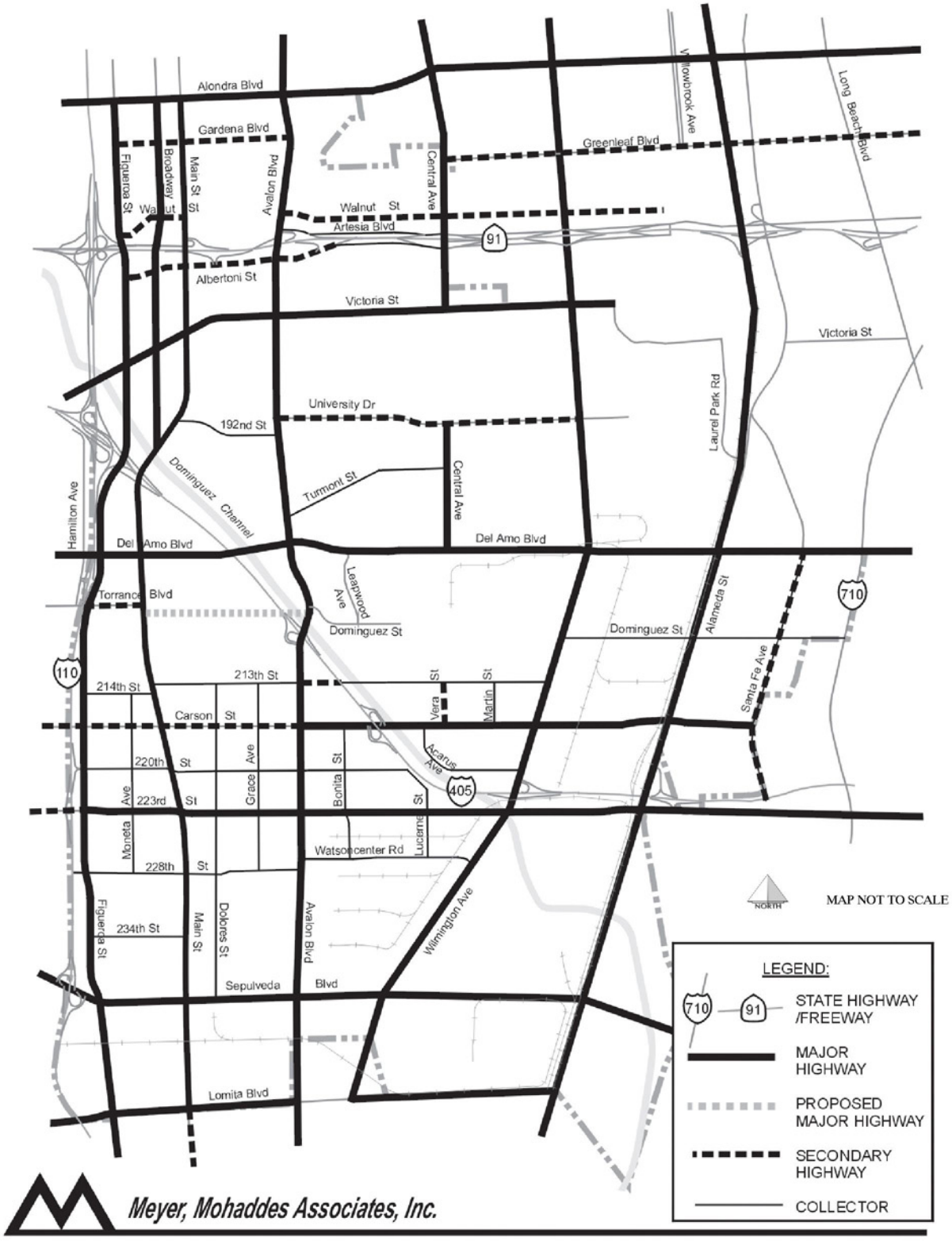
- Carson Street between the western City boundary and Avalon Boulevard be made a Modified Major Street;

- A new roadway of Secondary Highway capacity be required through the 157 acre site at Avalon and I-405; and

- An improved interchange at Avalon and I-405 be required prior to use of the 157 acre site.

These changes are all needed by the type of land use that is planned for the abutting areas.

Carson Street is planned for Mixed Use and to be a new "Main Street" for the City. As such, it needs to be more pedestrian and business friendly with various traffic control measures including, not expanding the current number of travel lanes. Carson Street will retain its 100-foot right-of-way, but will not retain its parking lanes.



Meyer, Mohaddes Associates, Inc.

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Plan of Streets and Highways

EXHIBIT 4.3-11

The ability to develop the 157-acre site, as well as other sites in the area of Del Amo, Main, and Avalon, is predicated on the two traffic improvement measures proposed.

The cross sections for roadways required by the Plan of Streets and Highways are shown in Exhibit 4.3-12, *Street Cross Sections*.

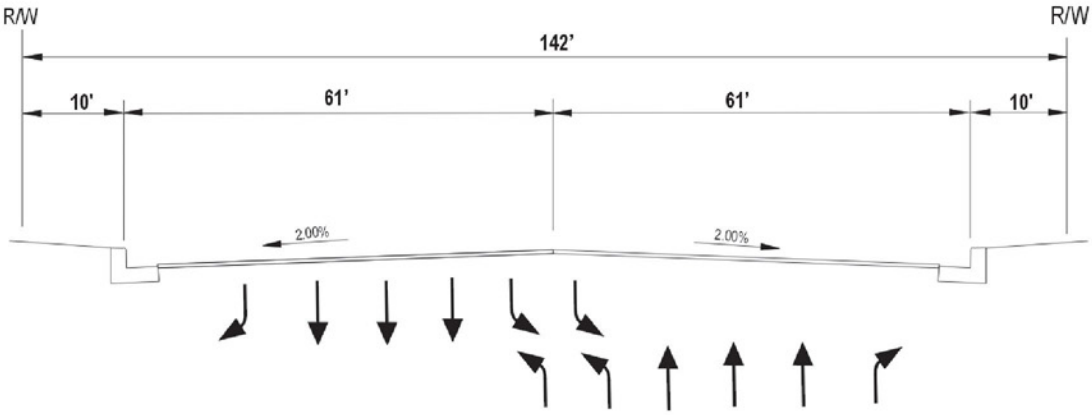
Other Improvements Beyond the Master Plan of Highways

The analysis presented in this report demonstrates that several roadway segments are forecast to experience congestion and level of service E or F conditions even with the completion of the Master Plan of Highways. Therefore, in addition to the designated street system in the Master Plan, further transportation system enhancements are warranted to maintain adequate service levels. Those improvements to the transportation system are described below.

Intelligent Transportation Systems (ITS). Nearly every jurisdiction in southern California has experienced roadway congestion problems that cannot be solved simply by adding roadway capacity. This occurs for several reasons, including the lack of right-of-way to accomplish various widening projects, as well as the environmental impacts associated with major roadway enhancements. As an alternative, many local agencies are implementing Intelligent Transportation Systems projects using advanced computer and communication technologies. The ITS projects being implemented provide improved traveler information, manage the flow of traffic, and utilize existing transportation systems more efficiently.

The goals of ITS are to reduce travel times, provide more reliable travel times, improve safety, reduce delay and reduce congestion. The high concentration of industrial employment in some areas of Carson makes it a City that is well suited for application of advanced technology to accomplish the goals of ITS. This is because of the high density of employment, the large number of peak hour trips, truck trips, the potentially high growth rate and the constraints on physical improvements. Examples of ITS system components include a centralized computer transportation management center, advanced transportation monitoring systems such as closed circuit TV (CCTV), transit traveler information, dynamic information displays at activity centers, bus priority treatment, real-time traffic management, coordination of local circulators, corporate Intranet information and other elements. In other jurisdictions, these types of improvements have resulted in significant savings in vehicle and motorist delay, significant travel time reductions and significant environmental benefits all without major roadway widening or reconstruction projects. Recent deployment of ITS technologies has occurred throughout Los Angeles (ATSAC and other systems), Orange County (SMART STREETS), the South Bay, Santa Monica and many other jurisdictions. Due to its many benefits and cost effectiveness, ITS should be considered an integral part of the future transportation system of Carson.

Typically, cities have applied a 5 to 10 percent mitigation factor for ITS implementation. In other words, ITS yields the equivalent of a 5 to 10 percent improvement in traffic flow and reduction in delays.



MAJOR STREET - Maximum Feasible Intersection

Meyer, Mohaddes Associates, Inc.

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Street Cross Sections

EXHIBIT 4.3-12

Maximum Feasible Intersection Concept. As described earlier in this section, even with the Master Plan of Highways fully built out, there would still be some roadway segments operating at level of service E or F (considered to be deficient). In those cases, additional enhancements beyond the Master Plan have been investigated. The types of improvements that have been investigated include the following: ITS signal system and real time monitoring system (see previous discussion), dual left-turn lanes, exclusive right-turn lanes and right-turn overlap phases, and additional through lanes beyond the Master Plan of Highways. These changes would only apply to arterials classified as Major Highway. Intersections are the critical bottleneck locations in an urban arterial roadway system. This is due to the fact that they allocate right-of-way in both directions; therefore, there is less capacity for each intersecting roadway than at mid-block locations. Typically, intersections are often improved beyond the standard for mid-block locations to allow for expanded capacity and to reduce congestion. Additional lanes for through traffic or turning movements may be added to eliminate bottlenecks. In Carson, it would be necessary to expand some critical intersections in the future to provide adequate capacity. The concept of the "Maximum Feasible Intersection" has been developed to describe potential intersection improvements beyond the standard cross section. Exhibit 4.3-13, *Maximum Feasible Intersection Concept*, graphically depicts a cross section of a maximum feasible intersection. As shown, a Maximum Feasible Intersection would have up to six through lanes, dual left-turn lanes, and right-turn lanes in each direction. This would require up to 122 feet curb-to-curb, whereas the City standard for a major highway is 100 feet curb-to-curb.

Policies in the Proposed General Plan: The Transportation and Infrastructure Element includes the following policies:

TI-1.1 Enforce the City's revised truck route system.

TI-1.2 Devise strategies to protect residential neighborhoods from truck traffic.

TI-1.3 Ensure that the City's designated truck routes provide efficient access to and from the I-405, I-110 and Route-91 Freeways, as well as the Alameda Corridor.

TI-1.4 Ensure that all new commercial projects have properly designed truck loading facilities.

TI-1.5 Require that all new construction or reconstruction of streets or corridors that are designated as truck routes, accommodate projected truck volumes and weights.

TI-2.1 Require that new projects not cause the Level of Service for intersections to drop more than one level if it is at Level A, B or C, and not drop at all if it is at D or below, except when necessary to achieve substantial City development goals.

TI-2.2 Pursue and protect adequate right-of-way to accommodate future circulation system improvements.

TI-2.3 Widen substandard streets and alleys to meet City standards wherever feasible.

TI-2.4 Provide up-to-date safety devices and lighting on City streets where appropriate.

TI-2.5 Facilitate cooperation between the City and the transportation agencies serving the region in order to provide adequate regional vehicular traffic volumes and movements on freeways, streets and through intersections.

TI-2.6 Establish a comprehensive traffic impact fee program and other programs/actions to provide for "fair-share" funding from new development for transportation improvements to accommodate growth.

TI-2.7 Provide all residential, commercial and industrial areas with efficient and safe access to major regional transportation facilities.

TI-2.8 Provide traffic calming, landscape and pedestrian improvements in all non-truck route streets and other streets as appropriate.

TI-3.1 Monitor traffic intrusion on local residential streets and establish a formalized mechanism to respond to resident complaints and requests regarding residential street traffic problems.

TI-3.2 Where feasible, create disincentives for cut-through traffic through neighborhoods, without impacting adjacent residential streets.

TI-3.3 Prioritize circulation improvements that enhance through traffic flow on Major and Secondary Highways providing parallel routes to residential streets, in order to reduce through traffic during peak commute periods.

TI-3.4 Adopt Neighborhood Traffic Control Guidelines to address all aspects of residential requests, complaints, and traffic calming alternatives.

TI-5.1 Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.

TI-6.2 Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

TI-6.3 Ensure that new roadway links are constructed as designated in the Circulation Element, and link with existing roadways in neighboring jurisdictions to allow efficient access into and out of the City.

TI-6.4 Assess local agencies' plans to ensure compatibility across jurisdictional boundaries.

TI-6.5 Encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization.

Additional Policies to be Included in the Proposed General Plan: The Transportation and Infrastructure Element of the proposed General Plan shall address the application of Intelligent Transportation Systems (ITS) and the Maximum Feasible Intersection Concept. Policies regarding these types of transportation improvements shall be formulated and incorporated into the Transportation and Infrastructure Element.

Mitigation Measures: No mitigation measures beyond the policies identified and the policies to be added in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

CONSISTENCY WITH CMP STANDARDS

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN THE EXCEEDANCE OF LOS STANDARDS ESTABLISHED BY THE CMP AT CARSON FREEWAY MONITORING LOCATIONS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Development activity related to implementation of the proposed General Plan would affect the regional transportation facilities in addition to the transportation system within Carson. In particular, the freeway system would be used for regional access for all types of development in the City. The regional roadway system is controlled by the State of California Department of Transportation (Caltrans). As such, the City does not have jurisdiction over improvements on the freeway system; however, the City works cooperatively with Caltrans on improvement projects such as freeway/arterial ramp system improvements. The State, along with regional agencies, has a series of programs aimed at addressing congestion on the regional system.

The Congestion Management Program (CMP) was created statewide and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (LACMTA). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. A specific system of arterial roadways plus all freeways comprise the CMP system. This section describes the analysis of project-related impacts on the CMP system.

The CMP requires traffic studies to analyze CMP freeway monitoring locations where the proposed project adds 150 or more in either direction during the AM or PM peak hours. The number of project trips that are likely to travel along the CMP monitoring stations has been calculated from the proposed project trip generation.

It is important to note that detailed CMP system analysis at the intersection level *"are largely geared toward analysis of projects where land use types and design details are known. Where likely land uses are not defined (such as where project descriptions are limited to zoning designation and parcel size with no information on access location), the level of detail in the transportation impact analysis may be adjusted accordingly. This may apply, for example, to some development area and citywide general plans, or to community level specific plans. In such cases, where project definition is insufficient for meaningful intersection level of service analysis, CMP arterial segment analysis may substitute for intersection analysis."* (*2002 Congestion Management Program for Los Angeles County, LACMTA*, April 2002, Appendix D, page D-2).

The trip generation analysis determined that the proposed General Plan would add 150 or more trips during the AM and/or PM peak hours along the I-405 Freeway, along the I-710 Freeway, and along the SR-91 Freeway at adjacent CMP monitoring stations. The analysis of these locations is presented in Tables 4.3-10 and 4.3-11, which show the existing conditions, the future base conditions, and the future with project conditions. Per CMP guidelines, an increase of 0.02 or more in demand to capacity (d/c) ratio with a resulting level of service F is deemed a significant project impact.

As identified on the tables, the results of the analysis indicate that implementation of the proposed General Plan would result in a significant impact (according to CMP guidelines) along the I-405 freeway at two monitoring locations, along the SR-91 at one monitoring location, and along the I-710 freeway at one monitoring location. Mitigation would be determined as actual development occurs and greater detail is known such as specific land uses, specific intensities of development and project access locations.

As mentioned, there are many future regional improvement projects on the freeway system that are proposed as part of State and regional funding programs. These include freeway improvements such as HOV lanes, interchange improvements and auxiliary lanes. Two projects of special interest to Carson include the I-710 Major Project Study and the Alameda Corridor Expressway project. Although neither project is fully funded, both are undergoing extensive review and analysis at this time. The I-710 project studies are investigating future needs and potential improvements along the freeway from the Port of Long Beach to downtown Los Angeles. That project is investigating a range of alternative improvements including adding mixed flow lanes, HOV lanes, truck lanes, or other improvements. The I-710 project would likely result in some type of capacity enhancement in the freeway corridor, which could benefit Carson residents and businesses by providing improved regional access to the City. The Alameda Corridor Expressway project is investigating a potential grade-separated connection of the SR-47/103 Freeway to Alameda Street via a viaduct structure. This project would facilitate travel from the Port area to Alameda Street by providing a series of grade separations over existing rail tracks, and by eliminating intersections that would delay traffic. This project would result in a net increase in traffic on Alameda Street through the City, but it would also facilitate easier access from the Port area to Carson and the surrounding area. It will be important for the City to continue to monitor the technical studies associated with both of these regional projects which affect Carson.

Table 4.3-10
CMP Freeway Analysis Results for General Plan – AM Peak

Northbound/ Eastbound – AM Peak Hour														
Station	Route	Location	Capacity	Existing Conditions			Future Base Conditions			Future with General Plan Buildout				
				Demand	D/ C	LOS	Demand	D/C	LOS	Demand	D/C	LOS	Change in D/C	Significant Impact
1033	SR-91	East of Alameda/ Santa Fe Ave	12,000	6,714	0.56	C	7,290	0.61	C	7,463	0.62	F	0.01	
1065	I-405	Santa Fe	8,000	8,080	1.01	F	8,836	1.10	F	10,530	1.32	F	0.22	Yes
1066	I-405	South of I-110 at Carson Scales	10,000	10,100	1.01	F	10,762	1.08	F	11,040	1.10	F	0.02	Yes
1077	I-710	North of PCH/ south of Willow St	6,000	5,932	0.99	E	6,235	1.04	F	6,291	1.05	F	0.01	
1078	I-710	North of I-405/ south of Del Amo	8,000	7,912	0.99	E	8,430	1.05	F	8,641	1.08	F	0.03	Yes
Southbound/ Westbound – AM Peak Hour														
Station	Route	Location	Capacity	Existing Conditions			Future Base Conditions			Future with General Plan Buildout				
				Demand	D/ C	LOS	Demand	D/C	LOS	Demand	D/C	LOS	Change in D/C	Significant Impact
1033	SR-91	East of Alameda/ Santa Fe Ave	12,000	12,120	1.01	F	13,878	1.16	F	14,692	1.22	F	0.06	Yes
1065	I-405	Santa Fe	8,000	7,534	0.94	E	8,062	1.01	F	8,450	1.06	F	0.05	Yes
1066	I-405	South of I-110 at Carson Scales	10,000	8,731	0.87	D	9,674	0.97	E	10,948	1.09	F	0.12	Yes
1077	I-710	North of PCH/ south of Willow St	6,000	5,973	1.00	E	6,276	1.05	F	6,276	1.05	F	0.00	
1078	I-710	North of I-405/ south of Del Amo	8,000	7,987	1.00	E	8,961	1.12	F	8,961	1.12	F	0.00	

Table 4.3-11
CMP Freeway Analysis Results for Proposed General Plan – PM Peak

Northbound/ Eastbound – PM Peak Hour														
Station	Route	Location	Capacity	Existing Conditions			Future Base Conditions			Future with General Plan Buildout				
				Demand	D/ C	LOS	Demand	D/C	LOS	Demand	D/C	LOS	Change in D/C	Significant Impact
1033	SR-91	East of Alameda/ Santa Fe Ave	12,000	16,320	1.36	F	18,486	1.54	F	19,481	1.62	F	0.08	Yes
1065	I-405	Santa Fe	8,000	6,935	0.87	D	7,588	0.95	E	8,463	1.06	F	0.11	Yes
1066	I-405	South of I-110 at Carson Scales	10,000	8,691	0.87	D	9,732	0.97	E	11,327	1.13	F	0.16	Yes
1077	I-710	North of PCH/ south of Willow St	6,000	5,651	0.94	E	5,942	0.99	E	5,985	1.00	F	0.01	
1078	I-710	North of I-405/ south of Del Amo	8,000	7,847	0.98	E	8,860	1.11	F	10,013	1.25	F	0.14	Yes
Southbound/ Westbound – PM Peak Hour														
Station	Route	Location	Capacity	Existing Conditions			Future Base Conditions			Future with General Plan Buildout				
				Demand	D/ C	LOS	Demand	D/C	LOS	Demand	D/C	LOS	Change in D/C	Significant Impact
1033	SR-91	East of Alameda/ Santa Fe Ave	12,000	6,394	0.53	B	7,152	0.60	C	7,514	0.63	C	0.03	
1065	I-405	Santa Fe	8,000	8,080	1.01	F	9,031	1.13	F	11,192	1.40	F	0.27	Yes
1066	I-405	South of I-110 at Carson Scales	10,000	10,100	1.01	F	10,848	1.08	F	11,447	1.14	F	0.06	Yes
1077	I-710	North of PCH/ south of Willow St	6,000	5,236	0.87	D	5,508	0.92	F	5,508	0.92	D	0.00	
1078	I-710	North of I-405/ south of Del Amo	8,000	7,418	0.93	D	7,965	1.00	E	7,965	1.00	E	0.00	

Policies in the Proposed General Plan: The Transportation and Infrastructure Element includes the following policies:

TI-6.1 Actively participate in various intergovernmental committees and other planning forums associated with County, Regional and State Congestion Management Programs.

TI-6.2 Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

TI-6.3 Ensure that new roadway links are constructed as designated in the Circulation Element, and link with existing roadways in neighboring jurisdictions to allow efficient access into and out of the City.

TI-6.4 Assess local agencies' plans to ensure compatibility across jurisdictional boundaries.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

CONSISTENCY WITH CMP, AQMP AND RMP

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN INCONSISTENCIES WITH THE CMP, AQMP AND RMP.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: The City of Carson would be required to show compliance with the Congestion Management Program (CMP). The CMP is directly linked to transportation issues, with requirements that all new developments mitigate their traffic impacts on the surrounding street or freeway system. The CMP includes issues such as LOS standards, coordination with other jurisdictions, TDM ordinances and application, monitoring of conditions, and mitigation of impacts. The AQMP supplements the CMP program, although its primary focus is on achieving and maintaining air quality standards. The goal of the Regional Mobility Plan (RMP) is to improve transportation mobility levels, with the intent of giving priority to all transit (bus and rail) and ride sharing (HOV) projects over mixed-flow highway capacity expansion projects.

Overall, these programs acknowledge that land use, transportation, and air quality issues are all interrelated. The requirements under each of these programs serve to ensure a safe and efficient transportation system, which is the primary goal of the Transportation and Infrastructure Element of the proposed General Plan. Implementation of the proposed General Plan therefore, would not result in significant

impacts to the CMP, AQMP and RMP. In addition, policies proposed in the General Plan would enhance the support of the CMP, AQMP and RMP.

Policies in the Proposed General Plan: The Transportation and Infrastructure and Air Quality Elements include the following policies:

TI-2.6 Establish a comprehensive traffic impact fee program and other programs/actions to provide for "fair-share" funding from new development for transportation improvements to accommodate growth.

TI-5.1 Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.

TI-6.2 Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

TI-6.3 Ensure that new roadway links are constructed as designated in the Circulation Element, and link with existing roadways in neighboring jurisdictions to allow efficient access into and out of the City.

TI-6.4 Assess local agencies' plans to ensure compatibility across jurisdictional boundaries.

TI-6.5 Encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization.

AQ-2.1 Coordinate with other agencies in the region, particularly the south coast air quality management district (SCAQMD) and the Southern California Association of Governments (SCAG), to implement provisions of the regions' Air Quality Management Plan (AQMP), as amended.

AQ-2.2 Utilize incentives, regulations and implement the transportation demand management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.

AQ-2.3 Cooperate and participate in regional air quality management plans, programs and enforcement measures.

AQ-2.4 Continue to work to relieve congestion on major arterials and thereby reduce emissions.

AQ-2.5 Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

AQ-2.7 Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.

AQ-3.1 Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric or other non-polluting fuels for Carson circuit buses and other city vehicles.

AQ-3.2 Continue to promote ridership on the Carson circuit and Los Angeles County Metropolitan Transportation Authority (MTA) bus and metro rail lines.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

ALTERNATIVE TRANSPORTATION

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN AN INCREMENTAL INCREASE IN DEMAND FOR TRANSIT SERVICE AND MAY ENHANCE POLICIES SUPPORTING ALTERNATIVE TRANSPORTATION.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: Public transportation in the City of Carson is provided primarily by the Carson Circuit, Torrance Transit and the Los Angeles County Metropolitan Transportation Authority (MTA) bus lines. Brief descriptions of the lines and routes that serve the City are provided in the environmental setting section. Other forms of public transportation included the MTA Red Line, Blue Line and Green Lines. Ridership on these routes has increased by approximately 19, 24 and 13 percent, respectively, during the period between 2000 and 2002. However, bus ridership decreased by approximately one percent. Despite the decrease in bus ridership over the past two years, over time, as future development occurs and the population and employment of the City increases, there is expected to be an increase in public transit ridership and a resulting increase in the demand for transit service. Transit service is viewed as a supplement to automobile transportation within Carson and is expected to become an increasingly important alternative mode of transportation as the City continues to grow. It is anticipated that the MTA would increase their public transit fleet of vehicles/trains as demand for public transit services increases. Furthermore, implementation of the MTA Long Range Transportation Plan would serve as a guide to transportation planning in Los Angeles County through the year 2025. Thus, the proposed General Plan would not result in significant impacts to the transit system within the City.

Besides the bus and light rail lines, alternative forms of transportation available in the City include bicycle and pedestrian paths. Generally, the existing bicycle and sidewalk systems serve most areas of the City. Although the City does not have a Pedestrian Plan, the existing bicycle and sidewalk systems link together schools, community civic centers, service areas, parks, employment centers and regional bike paths. The system also provides an additional access to recreation and open space resources within the City.

The goals and policies in the Transportation and Infrastructure Element would enhance the use of alternative forms of transportation in the City. Therefore, no significant alternative transportation impacts would occur with implementation of the proposed General Plan.

Policies in the Proposed General Plan: The Transportation and Infrastructure and Air Quality Elements include the following policies:

TI-4.1 Promote the use of public transit.

TI-4.2 Provide appropriate pedestrian access throughout the City. Develop a system of pedestrian walkways, alleviating the conflict between pedestrians, automobiles and bicyclists where feasible.

TI-4.3 Provide appropriate bicycle access throughout the City of Carson by implementing the Bicycle Plan.

TI-5.1 Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.

TI-5.2 Encourage the provision of preferential parking for high occupancy vehicles wherever possible.

AQ-2.5 Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

AQ-3.2 Continue to promote ridership on the Carson circuit and Los Angeles County Metropolitan Transportation Authority (MTA) bus and metro rail lines.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.3.4 UNAVOIDABLE SIGNIFICANT IMPACTS

Two significant and unavoidable impacts are associated with implementation of the proposed General Plan with respect to traffic and circulation.

One, most traffic impacts (traffic volumes/roadway capacities) resulting from the proposed General Plan would be less than significant in 2020, except for 17 roadway segments. The 17 deficient segments that would operate at LOS E or F in 2020 are listed on pages 4.3-36 and 4.3-35.

Two, implementation of the proposed General Plan would result in inconsistencies with the CMP standards. Six freeway ramps in the AM or PM peak hours would have increases of 0.02 or more in demand to capacity with a resulting level of service of F.

4.4 AIR QUALITY

This section evaluates air quality associated with short-and long-term impacts resulting from implementation of the proposed General Plan. Information in this section is based primarily on the *CEQA Air Quality Handbook*, prepared by the South Coast Air Quality Management District (SCAQMD), April 1993 (as revised through November 1993), Air Quality Data (SCAQMD 1997 through 2001); and the SCAQMD *Final Air Quality Management Plan* (January 1997).

4.4.1 ENVIRONMENTAL SETTING

SOUTH COAST AIR BASIN

The City of Carson is located in the South Coast Air Basin (Basin), characterized as having a "Mediterranean" climate (a semi-arid environment with mild winters, warm summers and moderate rainfall). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and south and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. Its terrain and geographical location determine the distinctive climate of the Basin, as the Basin is a coastal plain with connecting broad valleys and low hills.

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

CLIMATE

Moderate temperatures and comfortable humidities characterize the climate with precipitation limited to a few storms during the winter season (November through April). The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit. However, with a less pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100 degrees in recent years. January is usually the coldest month at all locations, while July and August are usually the hottest months of the year. Although the Basin has a semi-arid climate, the air near the surface is moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by off-shore winds, the ocean effect is dominant. Periods with heavy fog are frequent; and low stratus clouds, occasionally referred to as "high fog" are a

characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin.

WIND

One of the most important climatic factors is the direction and intensity of the prevailing winds. With very light average wind speeds (five to seven miles per hour), the Basin has a limited capability to disperse air contaminants horizontally. Typically, the net transport of air on-shore is greater in the summer, while the net off-shore transport is greater in the winter. Whether there is air movement or stagnation during the morning and evening hours (before these dominant patterns take effect) is one of the critical factors in determining the smog situation on any given day.

Carson's location with respect to these flow patterns and the Pacific Ocean results in relatively good air quality. For the most part, the on-shore winds transport pollutants inland. Since the night drainage winds are less intense, only a limited amount of this pollution is returned to the coastal areas during the summer, leaving a significant amount of pollutants in the inland areas.

SUNLIGHT

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original, or "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind from the emission sources. Because of the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California. However, Carson and other cities that are moderately close in proximity to the coast are not exempt on those days with early morning easterly winds.

TEMPERATURE INVERSIONS

A temperature inversion is a reversal in the normal decrease of temperature as altitude increases. In most parts of the country, air near ground level is warmer than the air above it. However, Southern California's daily summertime sunshine and high barometric pressure reverse that pattern, creating warmer air at high elevations which trap pollutants by preventing cooler air from rising to the upper atmosphere. The height of the base of the inversion is known as the "mixing height" and controls the volume of air available for the mixing and dispersion of air pollutants.

The interrelationship of air pollutants and climatic factors are most critical on days of greatly reduced atmospheric ventilation. On days such as these, air pollutants accumulate because of the simultaneous occurrence of three unfavorable factors: low inversions, low maximum mixing heights and low wind speeds. Although these conditions may occur throughout the year, the months of July, August, and September generally account for more than 40 percent of these occurrences.

The potential for high contaminant levels varies seasonally for many contaminants. During late spring, summer and early fall, light winds, low mixing heights and sunshine combine to produce conditions favorable for the maximum production of oxidants, mainly ozone. When fairly deep marine layers frequent the Air Basin during spring and summer, sulfate concentrations achieve yearly peak concentrations. When strong surface inversions are formed on winter nights, especially during the hours before sunrise, coupled with near-calm winds, carbon monoxide from automobile exhausts becomes highly concentrated. The highest yearly concentrations of carbon monoxide, oxides of nitrogen and nitrates are measured during November, December and January.

RAINFALL

Winter storms that bring rainfall benefit air quality, since they tend to "scrub" gaseous or particulate pollutants from the air. Precipitation is typically 9 to 14 inches annually in the Basin and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

AMBIENT AIR QUALITY STANDARDS

AIR QUALITY STANDARDS

Ambient air quality is described in terms of compliance with Federal and State standards. Ambient air quality standards are the levels of air pollutant concentration considered safe to protect the public health and welfare. They are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. National Ambient Air Quality Standards (NAAQS) were established by the United States (U.S.) Environmental Protection Agency (EPA) in 1971 for six air pollutants. States have the option of adding other pollutants, to require more stringent compliance, or to include different exposure periods. California Ambient Air Quality Standards (CAAAQS) for these pollutants and NAAQS are included in Table 4.4-1, *Local Air Quality Levels for Source Receptor Area Four*.

The California Air Resource Board (CARB) is required to designate areas of the State as attainment, non-attainment, or unclassified for any State standard. An "attainment" designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A "non-attainment" designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An "unclassified" designation signifies that the data does not support either an attainment or non-attainment status.

State and Federal ambient air quality standards have been established for the following pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), fine particulate matter (PM_{10} and $PM_{2.5}$) and lead (Pb). For some of these pollutants, notably O_3 and PM_{10}, the State standards are more stringent than the Federal standards. The State has also established ambient air quality standards for

Table 4.4-1
Local Air Quality Levels for Source Receptor Area 4[1]

Pollutant	California Standard	Federal Primary Standard	Year	Maximum[2] Concentration	Days (Samples) State/Federal Std. Exceeded
Carbon Monoxide	20 ppm for 1 hour	35 ppm for 1 hour	1997 1998 1999 2000 2001	8.6 8.1 7.5 9.7 6.0	0/0 0/0 0/0 0/0 0/0
	9 ppm for 8 hour	9 ppm for 8 hour	1997 1998 1999 2000 2001	6.63 6.46 5.49 5.73 4.74	0/0 0/0 0/0 0/0 0/0
Ozone	0.09 ppm for 1 hour	0.12 ppm for 1 hour	1997 1998 1999 2000 2001	.095 .116 .131 .118 .091	1/0 2/0 2/1 3/0 1/0
Nitrogen Dioxide	0.25 ppm for 1 hour	0.053 ppm annual average	1997 1998 1999 2000 2001	.200 .160 .151 .140 .122	0/0 0/0 0/0 0/0 0/0
Sulfur Dioxide	0.25 ppm for 1 hour	0.14 ppm for 24 hours or 80 µg/m^3 (0.03 ppm) annual average	1997 1998 1999 2000 2001	.044 .083 .050 .047 .047	0/0 0/0 0/0 0/0 0/0
PM_{10}[3,4]	50 g/m^3 for 24 hours	150 µg/m^3 for 24 hours	1997 1998 1999 2000 2001	87.0 69.0 79.0 105.0 74.0	10/0 6/0 13/0 13/0 11/0
$PM_{2.5}$[4]	N/A	65 µg/m^3 for 24 hours	1997 1998 1999 2000 2001	N/M N/M 66.9 74.5 72.9	N/A N/A N/A/1 N/A/3 N/A/1

ppm = parts per million
µg/m^3 = micrograms per cubic meter
N/M = not measured
PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less

NOTES:
1. Data is based on measurements taken at the North Long Beach monitoring station located at 3648 North Long Beach Boulevard, Long Beach, California.
2. Maximum concentration is measured over the same period as the California Standard.
3. PM_{10} exceedances are based on state thresholds established prior to amendments adopted on June 20, 2002.
4. PM_{10} and $PM_{2.,5}$ exceedances are derived from the number of samples exceeded, not days.

Source: Data obtained from the California Air Resources Board ADAM Data Summaries Website, www.arb.ca.gov/adam/welcome.html.

sulfates, hydrogen sulfide, and vinyl chloride. The above-mentioned pollutants are generally known are "criteria pollutants."

ATTAINMENT STATUS

Despite implementing many strict controls, the SCAQMD portion of the Basin still fails to meet both Federal and State air quality standards for three of the six criteria pollutants: ozone (O_3), carbon monoxide (CO) and fine particulate matter (PM_{10}). Because these pollution standards have not been achieved, the Los Angeles County portion of the Basin is considered a non-attainment area for Federal and State standards for these pollutants.

LOCAL AMBIENT AIR QUALITY

The SCAQMD operates several air quality monitoring stations within the Basin. The City of Carson is located within Source Receptor Area (SRA) 4, one of 28 areas under the jurisdiction of the SCAQMD. The communities within an SRA are expected to have similar climatology and subsequently, similar ambient air pollutant concentrations. The ambient air monitoring station within SRA 4 is within the northern portion of the City of Long Beach. The following air quality information briefly describes the various types of pollutants that are found within SRA 4.

Ozone

O_3 is a colorless toxic gas that can irritate the lungs and damage materials and vegetation. Levels of O_3 exceed Federal and State standards throughout the Basin. Because O_3 formation is the result of photochemical reactions between NO_X and reactive organic compounds (ROC), typically produced by combustion sources, peak concentrations of O_3 occur downwind of precursor emission sources. The entire Air Basin is designated as a non-attainment area for State and Federal O_3 standards. As indicated in Table 4.4-1, some exceedances of State standards for O_3 occurred at local air monitoring stations from 1997 through 2001. The State O_3 standard was exceeded between one and three times over this period. The Federal O_3 standard was exceeded once during the last five years.

Carbon Monoxide

CO is an odorless, colorless toxic gas, produced almost entirely from combustion sources (automobiles). This pollutant interferes with the transfer of oxygen to the brain and it is generally associated with areas of high traffic density. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, unconsciousness, and even death. CO also can aggravate cardiovascular disease. The Los Angeles County portion of the Basin is designated a non-attainment area for Federal and State CO standards. The 8-hour and 1-hour Federal and State standard have not been exceeded at the North Long Beach station in the last five years.

Nitrogen Oxides

Nitrogen oxides (NO_x), the term used to describe the sum of nitrogen oxide (NO), nitrogen dioxide (NO_2), and other oxides of nitrogen, are produced by high-temperature combustion processes (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).[1] NO_2, a term often used interchangeably with NO_x, is a reddish-brown gas that can cause breathing difficulties at high levels. The entire Basin is designated as an Unclassified/Attainment area for Federal and State NO_2 standards. The Basin was redesignated from Federal non-attainment to Unclassified/Attainment on July 24, 1998. The NO_x standard was not exceeded at the North Long Beach station over the last five years.

Fine Particulate Matter

On July 1, 1987, the EPA replaced the total suspended particulate (TSP) standard with a new particulate standard known as PM_{10}. PM_{10} includes particulate matter 10 microns or less in diameter (a micron is one millionth of a meter). Sources of PM_{10} include agricultural operations, industrial processes, combustion of fossil fuels, construction and demolition, and windblown dust and wildfires. The entire Air Basin is designated as a non-attainment area for State and Federal PM_{10} standards. Particulates substantially reduce visibility and adversely affect the respiratory tract. As indicated in Table 4.4-1, some exceedances of State standards for PM_{10} occurred at local air monitoring stations from 1997 through 2001, ranging from six to 13 times in a given year. State standards for $PM_{2.5}$ did not exist during the monitoring period of 1997 through 2001 as shown in Table 4.4 -1, *Local Air Quality Levels for the City of Carson*.

Due to recent increased concerns over health impacts due to fine particulate matter, both State and Federal $PM_{2.5}$ standards have been created. In 1997, the EPA announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards. Beginning in 2002, based on three years of monitoring data, the EPA will designate areas as non-attainment that do not meet the new $PM_{2.5}$ standards.[2]

Following the announcement of the new national standards, the SCAQMD began collecting monitoring data to determine the region's attainment status with respect to the new standards. On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. The ambient annual PM_{10} standard was lowered from 30 micrograms per cubic meter ($\mu g/m^3$) to 20 $\mu g/m^3$. As no ambient annual state standard existed for $PM_{2.5}$, a new annual standard was established at 12 $\mu g/m^3$. A 24-hour average standard for both PM_{10} and $PM_{2.5}$ was retained. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State PM_{10} standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was

[1] Environmental Protection Agency Website, www.epa.gov/oar/aqtrnd97/brochure/no2.html.

[2] Environmental Protection Agency Website, http://www.epa.gov/air/aqtrnd97/brochure/pm10.html

determined to be large and wide-ranging.[3] Particulate matter impacts primarily effect infants, children, the elderly, and those with pre-existing cardiopulmonary disease.

Sulfur Dioxide and Lead

Sulfur dioxide (SO_2), often used interchangeably with sulfur oxides (SO_X), and lead (Pb) levels in all areas of the Basin do not exceed Federal or State standards. The SoCAB is designated as attainment for both State and Federal SO_2 standards. There is no NAAQS for lead. The North Long Beach Station did not exceed State standards for SO_X during the last five years.

REGULATORY FRAMEWORK

Federal Clean Air Act of 1970 and 1990 Clean Air Act Amendments

The Federal Clean Air Act of 1970 (CAA) was the first legislation that gave the U.S. Environmental Protection Agency (EPA) authority to set federal primary and secondary ambient air quality standards. Primary or health-based standards are set at levels necessary to protect the public health. Secondary standards are set to protect the public from air pollution effects such as crop damage, visibility reduction, soiling, nuisances, etc. The resultant national ambient air quality standards (NAAQS) included six pollutants: CO (carbon monoxide), O_3 (ozone), PM_{10} (fine particulate matter), NO_2 (nitrogen dioxide), SO_2 (sulfur dioxide), and Pb (lead). The Act required states that exceeded the NAAQS to prepare air quality plans showing how they would meet the standards by December 1987. The Act was amended in 1977 and again in 1990 to extend the deadline for compliance and to require that revised State Implementation Programs (SIPs) be prepared. The 1990 Clean Air Act Amendments established categories of air pollution severity for non-attainment areas ("marginal" to "extreme"). SIP requirements varied based on the degree of severity.

The 1988 California Clean Air Act

This legislation was signed into law on September 30, 1988, became effective on January 1, 1989, and was amended in 1992. Also known as the "Sher Bill" (Assembly Bill 2595), the California Clean Air Act (CCAA) observes the requirements of the Federal Clean Air Act and adds three other pollutants to be regulated, including: H_2S (hydrogen sulfide), SO (sulfates), and vinyl chloride. The CCAA established a legal mandate to achieve health-based State air quality standards at the earliest practicable date, and that air districts focus particular attention on reducing the emissions from transportation and area-wide emission sources. Additionally, it also gives air districts such as the SCAQMD new authority to regulate indirect sources.

Each district plan is to achieve a five-percent annual reduction (averaged over consecutive three-year periods) in district-wide emissions of each non-attainment pollutant or its precursors including the effect of any additional development within the

[3] Staff Report: Public Hearing to Consider Amendments to the Ambient Air Quality Standards for Particulate Matter and Sulfates. California Environmental Protection Agency, Air Resources Board, May 3, 2002.

region. A strict interpretation of the CCAA "no net" increase prohibition suggests that any general development within the region, no matter how large or small, may have a significant, project-specific air quality impact unless the development-related emissions are offset by concurrent emissions reductions elsewhere within the airshed. Any planning effort for air quality attainment would thus need to consider both State and Federal planning requirements.

1997 Air Quality Management Plan

The SCAQMD has prepared multiple Air Quality Management Plans (AQMPs) to accomplish the five percent annual reduction goal. The most recent AQMP was published in 1997. To accomplish its task, the AQMP relies on a multi-level partnership of governmental agencies at the Federal, State, regional and local level. These agencies (EPA, CARB, local governments, Southern California Association of Governments (SCAG), and the SCAQMD) are the cornerstones that implement the AQMP programs.

1997 AQMP. A 1997 AQMP was prepared by the SCAQMD and adopted by the District on November 15, 1996. The 1997 AQMP was then adopted by CARB on January 23, 1997. The 1997 Plan contains two tiers of control measures. Short- and intermediate-term measures are scheduled to be adopted between 1997 and the year 2005. These measures rely on known technologies and other actions to be taken by several agencies that currently have the statutory authority to implement the measures. They are designed to satisfy the Federal CAA requirement of Reasonably Available Control Technology (RACT) and the CCAA requirement of Best Available Retrofit Control Technology (BARCT). There are 37 stationary source and 24 mobile source control measures in this group.

The 1997 AQMP continues to include most of the control measures outlined in the previous 1994 Ozone Plan with minor exceptions, but postpones many marginal measures found to be less cost-effective, drops future indirect-source rules that are now deemed infeasible, and focuses the SCAQMD's efforts on about ten major emission-reduction rules over the next two years. The SCAQMD will focus its efforts on seven major rules to reduce reactive organic compounds (ROC), a key ingredient in smog; and the Plan includes new market-based measures giving businesses greater flexibility in meeting emission-reduction requirements, such as intercredit trading and additional credits for mobile source emission reductions.

The 1997 AQMP shows that measures outlined in the 1994 Ozone Plan are more than sufficient to attain the Federal health standards for the two most difficult ingredients in smog, PM_{10} and ground-level O_3, by the years 2006 and 2010, respectively. Although the AQMP states that the Federal CO standard will be met by 2000, the SoCAB is still designated as a Federal non-attainment area (Orange County, however, is considered an attainment area for State CO standards). The region already has met the three other Federal health standards for Pb, SO_2, and NO_2.

To help reduce PM_{10} pollution, the 1997 Plan outlines seven control measures for directly emitted particulates which will reduce emissions from agricultural areas, livestock wastes, wood-working operations, construction, and restaurants. The

measures will also help control dust from paved and unpaved roads, which accounts for two-thirds of the directly-emitted particulates.

The 1997 Plan shows that both emissions and ambient pollution levels have continued their downward path toward healthful levels. The number of Stage I smog episodes for O_3 declined from 41 days in 1990 to just 14 days in 1995. CO also has declined, with the number of days over the standard down from 42 in 1990 to 13 in 1995. The average number of days exceeding the Federal 24-hour PM_{10} standard also declined between 1990 and 1995 by 9 percent.[4]

1997 AQMP Control Strategies. The 1997 AQMP includes two tiers of emission reduction measures (short/intermediate and long-term measures), based on availability and readiness of technology. Short- and intermediate-term measures include the application of available technologies and management practices between 1994 and the year 2005. These short- and intermediate-term measures are designed to satisfy the Federal CAA requirement of RACT, and the CCAA requirements of BARCT.

To ultimately achieve ambient air quality standards, further development and refinement of known low- and zero-emission control technologies, in addition to technological breakthroughs, would be necessary. Long-term measures rely on the advancement of technologies and control methods that can reasonably be expected to occur between 1994 and 2010.

Because of the EPA's principal authority over many off-road sources, the 1997 AQMP's off-road mobile source control measures are based on the EPA's proposed Federal Implementation Plan (FIP) for the SoCAB. The FIP's proposed control measures are based on a combination of stringent emission standards, declining caps on emission levels and emission/user fees.

In December 1999, the SCAQMD amended the 1997 AQMP. The 1999 Amendment provides revisions to the ozone portion of the 1997 AQMP specifically in the area of short-term stationary source control measures. In addition, the Amendment revises the adoption and implementation schedule for the short-term stationary source control measures that AQMD is responsible to implement. The 1999 Amendment does not revise the PM_{10} portion of the 1997 AQMP, emission inventories, the mobile source portions of the 1997 Ozone SIP Revision, or the ozone attainment demonstration. Specifically, the 1999 Amendment includes new short-term stationary source control measures:

- Revises the adoption/implementation schedule for 13 short-term volatile organic compounds (VOCs), nitrogen oxides (NOx), and stationary source control measures from the 1997 Ozone SIP Revision;

- Provides further VOC emission reductions in the near-term; and

[4] Article entitled "AQMD Sees Progress in Attaining Federal Clean Air Standards," *AQMD Advisor*, Volume 3, Number 7, September 1996.

- Revises the emission reduction commitments for the long-term control measures in the 1997 Ozone SIP Revision for long-term stationary source control measures that the SCAQMD is responsible to implement.

TOXIC AIR CONTAMINANTS (TACs)

In addition to the criteria pollutants previously discussed, toxic air contaminants (TACs) are another group of pollutants of concern in Southern California. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset conditions. Health effects of TACs include cancer, birth defects, neurological damage and death.

The SCAQMD implements TAC controls through Federal, State and local programs. Federally, TACs are regulated by EPA under Title III of the CAA. At the State level, the CARB has designated the Federal hazardous air pollutants as TACs, under the authority of AB 1807. The Air Toxic Hot Spots Information and Assessment Act (AB 2588) requires inventories and public notices for facilities that emit TACs. Senate Bill 1731 amended AB 2588 to require facilities with "significant risks" to prepare a risk reduction plan (reflected in SCAQMD Rule 1402). SCAQMD also regulates source-specific TACs.

Diesel exhaust is a growing concern in the Basin area and throughout California. The CARB in 1998 identified diesel engine particulate matter as a TAC. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Many of these toxic compounds adhere to the particles, and because diesel particles are very small, they penetrate deeply into the lungs. Diesel engine particulate matter has been identified as a human carcinogen. Mobile sources (including trucks, buses, automobiles, trains, ships and farm equipment) are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections. The cancer risk from exposure to diesel exhaust may be much higher that the risk associated with any other toxic air pollutant routinely measures in the region.[5]

Prior to the listing of diesel exhaust as a TAC, California had already adopted various regulations that would reduce diesel emissions. These regulations include new standards for diesel fuel, emission standards for new diesel trucks, buses, autos, and utility equipment, and inspection and maintenance requirements for health duty vehicles. Following the listing of diesel engine particulate matter as a TAC, the ARB is evaluating what additional regulatory action is needed to reduce public exposure. The ARB does not plan on banning diesel fuel or engines, but may consider additional requirements for diesel fuel and engines, as well as other measures to reduce public exposure.

[5] *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, Bay Area Air Quality Management District, Revised December 1999, page 6.

Other air quality issues of concern in the SCAB include nuisance impacts of odors and dust. Objectionable odors may be associated with a variety of pollutants. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries, and chemical plants. Similarly, nuisance dust may be generated by a variety of sources including quarries, agriculture, grading and construction. Odors rarely have direct health impacts, but they can be unpleasant and can lead to anger and concern over possible health effects among the public. Each year, the SCAQMD receives thousands of citizen complaints about objectionable odors. Dust emissions can contribute to increased ambient concentrations of PM_{10}, particularly when dust settles on roadways where it can be pulverized and re-suspended by traffic. Dust emissions also contribute to reduced visibility and soiling of exposed surfaces.

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than are the general population. Sensitive populations (sensitive receptors) who are in proximity to localized sources of toxics and carbon monoxide are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent center, and retirement homes.

A total of four health care facilities, 41 childcare centers, 11 pre-kindergarten schools, 15 elementary/junior high/high schools, 26 churches, and four senior centers exist within the City of Carson. These facilities are situated throughout the City.

4.4.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Air quality impacts resulting from the implementation of the proposed General Plan could be considered significant if they cause any of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Exposes sensitive receptors to substantial pollutant concentrations; and/or

- Create objectionable odors affecting a substantial number of people (refer to Section 7.0, *Effects Found Not To Be Significant*).

Based on these standards, the effects of the proposed General Plan have been categorized as either a "less than significant" or a "potentially significant impact." Mitigation measures are recommended for a potentially significant impact. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.4.3 IMPACTS AND MITIGATION MEASURES

CONSTRUCTION EMISSIONS

❍ **CITYWIDE CONSTRUCTION ACTIVITY UNDER THE PROPOSED GENERAL PLAN MAY RESULT IN A CUMULATIVELY CONSIDERABLE INCREASE OF CRITERIA POLLUTANTS, AND THUS MAY VIOLATE AIR QUALITY STANDARDS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Short-term impacts to air quality would occur during the grading and construction activities required to implement the proposed General Plan (primarily construction associated with new development or redevelopment and related infrastructure). These temporary impacts would include:

- Particulate (fugitive dust) emissions from demolition, clearing and grading activities;

- Off-site air pollutant emissions at the power plant serving the construction site, while temporary power lines are needed to operate construction equipment and provide lighting;

- Exhaust emissions and potential odors from construction equipment used on the construction site as well as the vehicles used to transport materials to and from the site;

- Exhaust emissions from the motor vehicles of the construction crew; and

- Potential release of asbestos from building demolition.

The SCAQMD *CEQA Air Quality Handbook* establishes thresholds for pollutant emissions generated during construction. Each construction project that would occur with General Plan implementation would be required to implement control measures during construction activities in order to reduce the amount of emissions to below the significance thresholds, when possible. As previously stated, the Los Angeles County portion of the SCAB is designated non-attainment for O_3 (State and Federal standards), CO (State and Federal standards), and PM_{10} (State and Federal standards). Any increase in these pollutants would create a significant and unavoidable air quality impact.

The proposed General Plan includes Air Quality, Transportation and Infrastructure, and Safety Elements. The intent of the Air Quality Element is to protect the public's health and welfare by implementing measures that allow the South Coast Air Basin to attain Federal and State air quality standards. The intent of the Transportation and Infrastructure Element is to document the methods and results of the analysis of the existing and projected future conditions in the City of Carson, and to describe the future circulation system needed to support the Land Use Element. The purpose of the Safety Element is to provide goals, policies, and implementation actions designed to reduce the impacts of natural and man-made hazards that have the potential to endanger the welfare and safety of the general public and aims to reduce the potential risk resulting from them. Relevant goals and policies within these elements address such construction-related impacts as disruption, regulatory compliance with appropriate air resource agencies, odor/dust control and hazardous emissions.

Policies in the Proposed General Plan: The Air Quality, Transportation and Infrastructure, and Safety Elements include the following policies:

AQ-1.1 Continue to enforce ordinances which address dust generation and mandate the use of dust control measures to minimize this nuisance.

AQ-1.3 Adopt incentives, regulations, and/or procedures to minimize particulate emissions.

TI-1.1 Enforce the City's revised truck route system.

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan or SCAQMD regulations are available to reduce this impact to a less than significant level.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

VEHICLE MILES TRAVELED AND STATIONARY SOURCE EMISSIONS

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN AN OVERALL INCREASE IN MOBILE AND STATIONARY SOURCE EMISSIONS WITHIN THE CITY WHICH MAY EXCEED SCAQMD AIR QUALITY STANDARDS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: In 2020, the proposed General Plan would permit a maximum of 1,839 additional dwelling units and 14,943,068 additional square feet of non-residential uses beyond existing conditions to be constructed throughout the City. Ultimately, the proposed General Plan would result in a total of 2,669 residential units and 59,447,538 square feet of non-residential uses.

Projected population increases in the City associated with the proposed General Plan would result in a corresponding increase in the number of automobiles and vehicular pollutants. The primary method of reducing pollutants that result either directly or indirectly from vehicular exhaust (including ozone), is to reduce both the number of vehicular trips and the miles traveled each day by local workers and residents. A large fraction of the remaining stationary pollutants (from electricity and gas consumption) can be reduced through energy conservation. In order to minimize the number of vehicle miles traveled (VMT), land uses could encourage the location of jobs, housing, and shopping areas in such a way as to minimize extra automobile trips. Reductions in vehicular trips as well as vehicular miles can be accomplished over time through the application of wise, long-range planning of land uses that provide comprehensive support for residents and workers, such as shopping and employment.

Mobile Sources

Table 4.4-2, *Mobile Source Emissions*, cites the amount of mobile source emissions expected in 2020 with implementation of the proposed General Plan. Mobile source emissions are the major source of air pollution in the City of Carson. At the source level (a single vehicle), mobile source emissions are expected to decrease during the next 20 years due to technological improvements to engine emission systems, alternative fuels and propulsion systems. Additionally, Transportation Demand Management (TDM) would play an increasingly important role. However, with implementation of appropriate policies and technological improvements during the next 20 years, mobile source emissions are still anticipated to increase, mainly due to the increase in population.

Table 4.4-2
Mobile Source Air Emissions

Pollutant	Mobile Source Emissions (lbs/day) Before Mitigation	Mobile Source Emissions (lbs/day) After Mitigation	SCAQMD Threshold (lbs/day)	Threshold Exceeded
Carbon Monoxide (CO)	142,313	128,888	550	Yes
Reactive Organic Gases (ROG)	12,079	10,934	55	Yes
Nitrogen Oxides (NO_X)	12,970	11,746	55	Yes
Fine Particulate Matter (PM_{10})	10,916	9,890	150	Yes
NOTE: Based on URBEMIS 2001 modeling results, worst-case seasonal emissions for area and mobile emissions, and trip rate data.				

Stationary Sources

Table 4.4-3, *Stationary Source Emissions*, cites the amount of stationary source emissions that are anticipated to result from the increased development under the proposed General

Plan. Stationary source emissions would be generated due to an increased demand for electrical energy, which is generated from power plants utilizing fossil fuels. Electric power generating plants are distributed throughout the SCAB, and their emissions contribute to the total regional pollutant burden. The primary use of natural gas by the land uses throughout the City would be for combustion to produce space heating, water heating and other miscellaneous heating or air conditioning.

Table 4.4-3
Stationary Source Air Emissions

Pollutant	Stationary Source Emissions (lbs/day) Before Mitigation	Stationary Source Emissions (lbs/day) After Mitigation	SCAQMD Threshold (lbs/day)	Threshold Exceeded
Carbon Monoxide (CO)	89,029	89,029	550	Yes
Reactive Organic Gases (ROG)	38,184	38,184	55	Yes
Nitrogen Oxides (NO_X)	1,831	1,829	55	Yes
Fine Particulate Matter (PM_{10})	13,635	13,635	150	Yes
NOTE: Based on URBEMIS 2001 modeling results, worst-case seasonal emissions for area and mobile emissions, and trip rate data.				

Air quality impacts would be regional and not confined to the Carson city limits. The destination of motor vehicles, which are the primary contributors to air pollution, vary widely and cross many jurisdictional boundaries. Further site-specific development proposals would be evaluated for potential air emissions once development details have been designed and are available. Individual projects may not result in significant air quality emissions, although Citywide development associated with the proposed General Plan would result in a significant cumulative air quality impact as explained below.

Cumulative air pollution impacts from implementation of the proposed General Plan are considered significant because they would generate emissions of O_3 (made up by ROG and NO_X), CO, and PM_{10} within an area designated as non-attainment for these pollutants. Policies proposed in the General Plan would reduce the significance of such impacts; however, the impacts would remain significant on a cumulative level even after mitigation.

The proposed Air Quality, Land Use, Transportation and Infrastructure, and Open Space and Conservation Elements include goals and policies intended to minimize mobile and stationary source impacts. Goals and policies within the Air Quality Element encourage pedestrian traffic, alternate forms of transportation, and incentive programs. The Land Use Element includes goals and policies that are aimed at reducing the amount of vehicular traffic and ensuring the compatible placement of land uses. The Transportation and Infrastructure Element includes goals and policies to reduce trip time requirements and establish alternative transportation methods and systems. The Open Space and Conservation Element intends to reduce stationary source emissions by encouraging high efficiency building designs and conservation practices.

Policies in the Proposed General Plan: The Air Quality, Land Use, Transportation and Infrastructure, and Open Space and Conservation Elements include the following policies:

Mobile Emission Reduction

AQ-2.4 Continue to work to relieve congestion on major arterials and thereby reduce emissions.

AQ-2.5 Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

AQ-2.6 Encourage in-fill development near activity centers and along transportation routes.

AQ-2.7 Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.

AQ-3.1 Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric or other non-polluting fuels for Carson Circuit buses and other City vehicles.

AQ-3.2 Continue to promote ridership on the Carson Circuit and Los Angeles County Metropolitan Transportation Authority (MTA) bus and metro rail lines.

AQ-4.1 Work with the City's Public Information Office to increase public awareness regarding air quality and implementation issues.

AQ-4.2 Promote and encourage ride sharing activities within the community, including such programs as preferential parking, park-and-ride lots, alternative work week/flexible working hours and telecommuting, as well as other trip reduction strategies.

LU-6.2 Achieve a land use balance through a variety of methods, including: provision of incentives for desired uses; coordination of land use and circulation patterns; and promotion of a variety of housing types and affordability.

LU-6.3 Consider establishing minimum land use density requirements in certain areas such as mixed use zones to provide more efficient, consistent, and compatible development patterns while also promoting greater potential for pedestrian and transit-oriented development.

LU-8.3 Locate higher density residential uses within proximity of commercial centers to encourage pedestrian traffic, and to provide a consumer base for commercial uses.

LU-15.1 Ensure that the City of Carson is a complete and balanced community which contains housing, shops, work places, schools, parks and civic facilities, essential to the daily lives of residents.

LU-15.2 Encourage the location of housing, jobs, shopping, services, and other activities within easy walking distance of each other.

LU-15.5 Ensure that the character of the community and its transportation facilities are connected to a larger transit network.

LU-15.8 Ensure development of pedestrian-oriented improvements which provide better connections between and within all developments while reducing dependence on vehicle travel.

TI-4.1 Promote the use of public transit.

TI-4.2 Provide appropriate pedestrian access throughout the City. Develop a system of pedestrian walkways, alleviating the conflict between pedestrians, automobiles and bicyclists where feasible.

TI-4.3 Provide appropriate bicycle access throughout the City of Carson.

TI-5.1 Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.

TI-5.2 Encourage the provision of preferential parking for high occupancy vehicles wherever possible.

Stationary Source Emission Reduction

AQ-1.2 Promote the landscaping of undeveloped and abandoned properties to prevent soil erosion and reduce dust generation.

AQ-5.1 Through the City's Planning processes, monitor air pollutant emissions by mitigating air quality impacts, to the greatest extent possible, associated with facilities/industries in Carson.

AQ-5.2 Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.

LU-15.9 Ensure that development and building design works to conserve resources and minimize waste.

LU-15.10 Provide for the efficient use of water through the use of natural drainage, drought tolerant landscaping, and use of reclaimed water, efficient appliances and water conserving plumbing fixtures.

LU-15.11 Ensure that the street orientation, placement of buildings, and the use of shading in existing and new developments contribute to the energy efficiency of the community.

OSC-3.1 Promote incentives for the use of site planning techniques, building orientation, building materials, and other measures which reduce energy consumption.

OSC-3.2 Support the development of alternative sources of energy such as roof-mounted solar panels or energy generated from non-conventional systems outside the City.

OSC-3.3 Work with energy providers to develop and implement programs to reduce electrical demand in residential, commercial and industrial developments.

OSC-3.4 Promote incentives for the use of site planning techniques, building orientation, building materials, and other measures which reduce energy consumption.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan and SCAQMD regulations are available to reduce this impact to a less than significant level.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

CONSISTENCY WITH REGIONAL PLANS

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY CONFLICT OR OBSTRUCT IMPLEMENTATION OF THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENT'S REGIONAL COMPREHENSIVE PLAN GUIDELINES (RCP) AND THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT'S AIR QUALITY MANAGEMENT PLAN (AQMP).**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The SCAG and SCAQMD actively pursue procedural and structural methods of minimizing air pollutant emissions. Although air quality is not SCAG's primary focus, SCAG publishes a document titled *Regional Comprehensive Plan and Guide* (RCP) which sets forth criteria for lowering regional pollutant emissions. The RCP is based on information that is provided by County transportation commissions, Caltrans, the Metropolitan Water District, the California Energy Commission, the Bureau of Land Management of the Department of Interior, South Coast Air Quality Management District and other parties both public and private. Information in the RCP related to air quality is

found within the Growth Management, Regional Mobility, Air Quality and Energy chapters.

The proposed General Plan is consistent with the portions of the RCP that cite the necessity to facilitate programs that reduce vehicular miles traveled (VMT) and vehicular emissions. The RCP cites, "*SCAG shall encourage existing or proposed local jurisdictions programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle mile traveled, and create opportunities for residents to walk and bike*." The proposed General Plan is consistent with this as shown in the above impact. The proposed General Plan is also consistent with the RCP policies that cite the necessity to develop or redevelop areas in a manner that discourages additional vehicular traffic.

Different from SCAG, the SCAQMD's sole interest is the preservation and improvement of air resources in the South Coast Air Basin. The SCAQMD publishes a document entitled the Air Quality Management Plan (AQMP), which specifies various criteria for air quality management within the South Coast Air Basin (including the City of Carson). Issues and requirements within the AQMP are similar to those found in the RCP (the RCP incorporates much of the AQMP in its text). Both documents place heavy reliance on local implementation measures, such as land use decisions and local employment transportation programs. The implementation process stresses the freedom of cities to choose attainment measures that best suit local conditions. Land use strategies contained in the RCP help achieve a jobs/housing balance.

Based on the fact that the City is actively pursuing and implementing programs that reduce air pollutant emissions, the proposed General Plan is consistent with the RCP and AQMP, and thus, constitutes a less than significant impact.

Goals and policies within the Air Quality Element encourage cooperation with the South Coast Air Quality Management District and Southern California Association of Governments. The Transportation and Infrastructure Element encourages cooperation with County and regional agencies through participation in various transportation programs. Based on the fact that air quality is closely related to transportation, implementation of these policies would set the foundation for emission reduction.

Policies in the Proposed General Plan: The Air Quality and Transportation and Infrastructure Elements include the following policies:

AQ-2.1 Coordinate with other agencies in the region, particularly the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG), to implement provisions of the regions' Air Quality Management Plan (AQMP), as amended.

AQ-2.2 Utilize incentives, regulations, and implement the Transportation Demand Management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.

TI-6.1 Actively participate in various intergovernmental committees and other planning forums associated with County, Regional and State Congestion Management Programs.

TI-6.2 Ensure that the City remains in compliance with the County, Regional, and State Congestion Management Programs (CMP) through the development of appropriate City programs and traffic impact analyses of new projects impacting the CMP routes.

TI-6.5 Encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.4.4 UNAVOIDABLE SIGNIFICANT IMPACTS

Development under the proposed General Plan would create unavoidable significant impacts related to construction, mobile sources and stationary sources. These impacts are primarily based on the premise that the City and pollutant sources within are widely dispersed and numerous. Although measures related to construction and stationary sources would be implemented on a project-by-project basis, and vehicular emission reducing programs would be implemented Citywide, it is anticipated that these impacts would remain unavoidable and significant.

4.5 NOISE

The purpose of this section is to describe the baseline Year (2001) and Year 2020 noise environment within the City of Carson. This section also provides an assessment of long-term noise impacts associated with traffic and identifies corresponding mitigation measures associated with implementation of the proposed General Plan. The noise projections for the planning horizon year of 2020 are based upon vehicular traffic counts used in the Circulation and Infrastructure Element. The baseline year traffic counts were collected in 2001.

NOISE SCALES AND DEFINITIONS

Decibels (dB) are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). The A-weighted sound pressure level is the sound pressure level, in decibels, as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear. Examples, of various sound levels in different environments are shown in Table 4.5-1, *Sound Levels and Human Response*.

Many methods have been developed for evaluating community noise to account for, among other things:

- The variation of noise levels over time;
- The influence of periodic individual loud events; and
- The community response to changes in the community noise environment.

Numerous methods have been developed to measure sound over a period of time. These methods include: 1) the Community Noise Equivalent Level (CNEL); 2) the Equivalent Sound Level (Leq); and 3) the Day/Night Average Sound Level (Ldn). These methods are described in Table 4.5-1.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL)

The predominant community noise rating scale used in California for land use compatibility assessment is the Community Noise Equivalent Level (CNEL). The CNEL rating represents the average of equivalent noise levels, known as Leqs, for a 24-hour period based on an A-weighted decibel with upward adjustments added to account for increased noise sensitivity in the evening and night periods. These adjustments are +5 dBA for the evening, 7:00 p.m. to 10:00 p.m., and +10 dBA for the night, 10:00 p.m. to 7:00 a.m. CNEL may be indicated by “dBA CNEL” or just “CNEL”.

Table 4.5-1
Sound Levels and Human Response

Noise Source	dB(A) Noise Level	Response
	150	
Carrier Jet Operation	140	Harmfully Loud
	130	Pain Threshold
Jet Takeoff (200 feet; thence.) Discotheque	120	
Unmuffled Motorcycle Auto Horn (3 feet; thence.) Rock'n Roll Band Riveting Machine	110	Maximum Vocal Effort Physical Discomfort
Loud Power Mower Jet Takeoff (2000 feet; thence.) Garbage Truck	100	Very Annoying Hearing Damage (Steady 8-Hour Exposure)
Heavy Truck (50 feet; thence.) Pneumatic Drill (50 feet; thence.)	90	
Alarm Clock Freight Train (50 feet; thence.) Vacuum Cleaner (10 feet; thence.)	80	Annoying
Freeway Traffic (50 feet; thence.)	70	Telephone Use Difficult
Dishwashers Air Conditioning Unit (20 feet; thence.)	60	Intrusive
Light Auto Traffic (100 feet; thence.)	50	Quiet
Living Room Bedroom	40	
Library Soft Whisper (15 feet; thence.)	30	Very Quiet
Broadcasting Studio	20	
	10	Just Audible
	0	Threshold of Hearing

Source: Melville C. Branch and R. Dale Beland, *Outdoor Noise in the Metropolitan Environment*, 1970, page 2.

EQUIVALENT SOUND LEVEL (LEQ)

The Leq is the sound level containing the same total energy over a given sample time period. The Leq can be thought of as the steady sound level, which in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same period. Leq is typically computed over 1, 8 and 24-hour sample periods.

DAY/NIGHT AVERAGE SOUND LEVEL (LDN)

Another commonly used method is the day/night average level or Ldn. The Ldn is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the Leq. The Ldn is calculated by averaging the Leq for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 p.m. to 7:00 a.m.), by 10 dBA to account for the increased sensitivity of people to noises that occur at night.

OTHER NOISE METRICS

The maximum noise level recorded during a noise event is typically expressed as Lmax. The sound level exceeded over a specified time frame can be expressed as Ln (i.e., L_{90}, L_{50}, L_{10}, etc.). L_{50} equals the level exceeded 50 percent of the time, L_{10} ten percent of the time, etc.

As previously mentioned, people tend to respond to changes in sound pressure in a logarithmic manner. In general, a 1 dBA change in the sound pressure levels of a given sound is detectable only under laboratory conditions. A 3 dBA change in sound pressure level is considered a detectable difference in most situations. A 5 dBA change is readily noticeable and a 10 dBA change is considered a doubling (or halving) of the subjective loudness. It should be noted that a 3 dBA increase or decrease in the average traffic noise level is realized by a doubling or halving of the traffic volume; or by about a 7 mile per hour (mph) increase or decrease in speed.

For each doubling of distance from a point noise source, the sound level will decrease by 6 dBA. In other words, if a person is 100 feet from a machine, and moves to 200 feet from that source, sound levels will drop approximately 6 dBA. For each doubling of distance from a line source, like a roadway, noise levels are reduced by 3 to 5 decibels, depending on the ground cover between the source and the receiver.

Noise barriers can provide approximately a 5 dBA CNEL noise reduction (additional reduction may be provided with a barrier of appropriate height, material, location and length). A row of buildings provides up to 5 dBA CNEL noise reduction with a 1.5 dBA CNEL reduction for each additional row up to a maximum reduction of approximately 10 dBA. The exact degree of noise attenuation depends on the nature and orientation of the structure and intervening barriers.

NOISE STAMDARDS

FEDERAL NOISE STANDARDS

The United States Noise Control Act of 1972 (NCA) recognized the role of the Federal government in dealing with major commercial noise sources in order to provide for uniform treatment of such sources. As Congress has the authority to regulate interstate and foreign commerce, regulation of noise generated by such commerce also falls under congressional authority. The Federal government specifically preempts local control of noise emissions from aircraft, railroad and interstate highways.

The EPA has identified acceptable noise levels for various land uses, in order to protect public welfare, allowing for an adequate margin of safety, in addition to establishing noise emission standards for interstate commerce activities.

The U.S. Department of Housing and Urban Development (HUD) has established policies for granting financial support for the construction of dwelling units in noise-impacted areas. Table 4.5-2, *HUD External Noise Exposure Standards for New Residential Construction*, shows noise exposure levels used by HUD to determine eligibility for financial backing for new or rehabilitative residential construction in noise-impacted areas, in addition to providing special requirements. As indicated in Table 4.5-2, financial assistance from HUD would still be possible when noise exposure is between 65 dBA and 75 dBA, if adequate sound attenuation is provided to achieve appropriate noise reduction.

Table 4.5-2
HUD External Noise Exposure Standards for New Residential Construction

HUD Approval	Site Noise Exposure	Noise Level (Ldn)	Special Approval/ Requirements
Standard	Acceptable	Not exceeding 65 dB	None
Discouraged	Normally Acceptable	65 dB to 75 dB	Building sound attenuation of 5 dB for 65-70 dB noise level and 10 dB for 70-75 dB noise level Special Environmental Clearance Approval of Regional Administration
Prohibited	Unacceptable	75+ dB	Approval of Assistant Secretary of Community Planning EIS required

Source: HUD External Noise Exposure Standards for New Residential Construction July 12, 1979, as amended at 50 FR 9268, Mar. 7, 1985.

STATE NOISE STANDARDS

The Office of Noise Control in the State Department of Health Services has developed criteria and guidelines for local governments to use when setting standards for human exposure to noise and preparing noise elements for General Plans. These guidelines include noise exposure levels for both exterior and interior environments. In addition, Title 25, Section 1092 of the California Code of Regulations sets forth requirements for the insulation of multiple-family residential dwelling units from excessive and potentially harmful noise. The State indicates that locating units in areas where exterior ambient noise levels exceed 65 CNEL is undesirable. Whenever such units are to be located in such areas, the developer must incorporate into building design construction features that reduce interior noise levels to 45 dBA CNEL. Table 4.5-3, *Noise and Land Use Compatibility Matrix*, and Table 4.5-4, *State Interior and Exterior Noise Standards*, summarize standards adopted by various State and Federal agencies. Table 4.5-3 presents criteria used to assess the compatibility of proposed land uses with the noise environment. Table 4.5-4 indicates standards and criteria that specify acceptable limits of noise for various land uses throughout Carson. These standards and criteria will be incorporated into the land use planning process to reduce future noise and land use incompatibilities. These tables are the primary tools that allow the City to ensure integrated planning for compatibility between land uses and outdoor noise.

CITY NOISE STANDARDS

Section 4100 (unnecessary noises) of Chapter I, Article IV in the Carson Municipal Code, controls any disturbing, excessive or offensive noise which causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the community.

Noise Ordinance

In 1995, Carson adopted the "Noise Control Ordinance of the County of Los Angeles," as amended, as the City's Noise Control Ordinance. The adopted noise ordinance sets standards for noise levels citywide and provides the means to enforce the reduction of obnoxious or offensive noises. The noise sources enumerated in the noise ordinance include radios, phonographs, loudspeakers and amplifiers, electric motors or engines, animals, motor vehicles and construction equipment. The noise ordinance sets interior and exterior noise levels for all properties within designated noise zones, unless exempted, as shown in Table 4.5-5, *Noise Ordinance Standards*. Enforcing the noise ordinance includes requiring proposed development projects to show compliance with the ordinance, and requiring construction activity to comply with established schedule limits. The ordinance is reviewed periodically for adequacy and amended as needed to address community needs and development patterns.

Table 4.5-3
Noise and Land Use Compatibility Matrix

Land Use Category	Community Noise Exposure Ldn or CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential-Low Density	50-60	60-70	70-75	75-85
Residential-Multiple Family	50-65	65-70	70-75	75-85
Transient Lodging-Motel, Hotels	50-65	65-70	70-80	80-85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-60	60-65	65-80	80-85
Auditoriums, Concert Halls, Amphitheaters	NA	50-70	NA	70-85
Sports Arenas, Outdoor Spectator Sports	NA	50-75	NA	75-85
Playgrounds, Neighborhood Parks	50-67.5	NA	67.5-75	75-85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-75	NA	70-80	80-85
Office Buildings, Business Commercial and Professional	50-67.5	67.5-77.5	77.5-85	NA
Industrial, Manufacturing, Utilities, Agriculture	50-70	70-80	80-85	NA

Source: Modified from U.S. Department of Housing and Urban Development Guidelines and State of California Standards.

Notes:

NORMALLY ACCEPTABLE - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE - New Construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE - New construction or development should generally not be undertaken.

NA: Not Applicable

Table 4.5-4
State Interior and Exterior Noise Standards

Land Use Categories		CNEL	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single-Family, Duplex, Multiple-Family	45[3]	65
	Mobile Home	--	65[4]
Commercial Industrial Institutional	Hotel, Motel, Transient Lodging	45	--
	Commercial Retail, Bank, Restaurant	55	--
	Office Building, Research and Development, Professional Offices, City Office Building	50	--
	Amphitheater, Concert Hall, Auditorium, Meeting Hall	45	--
	Gymnasium (Multipurpose)	50	--
	Sports Club	55	--
	Manufacturing, Warehousing, Wholesale, Utilities	65	--
	Movie Theaters	45	--
Institutional	Hospital, Schools' Classrooms/Playgrounds	45	65
	Church, Library	45	--
Open Space	Parks	--	65

NOTES:

1. Indoor environmental including: Bathrooms, closets, and corridors.

2. Outdoor environment limited to:
   - Private yard of single family Multi-family private patio or balcony which is served by a means of exit from inside the dwelling
   - Balconies 6 feet deep or less are exempt
   - Mobile home park
   - Park's picnic area
   - School's playground

3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.

4. Exterior noise levels should be such that interior noise levels will not exceed 45 dBA CNEL.

Table 4.5-5
Noise Ordinance Standards

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level	Interior Noise Level
I	Noise Sensitive-Area	Anytime	45	---
II	Residential Properties	10:00 pm to 7:00 am (nighttime)	45	---
		7:00 am to 10:00 pm (daytime)	50	---
III	Commercial Properties	10:00 pm to 7:00 am (nighttime)	55	---
		7:00 am to 10:00 pm (daytime)	60	---
IV	Industrial Properties	Anytime	70	---
All Zones	Multi-family	10:00 pm – 7:00 am	---	40
	Residential	7:00 am – 10:00 pm	---	45

Source: Section 12.08.490 and 12.08.400 in County of Los Angeles County Code. Nov. 2001.

Carson Noise Control Plan

Most noise control is carried out indirectly through thoughtful land use planning. This entails separations of residential and other uses through effective zoning and provision of buffers. Site design also influences noises that infringe on surrounding areas. Monitoring noise levels and maintaining land use and building regulations to limit noise intrusion are principal mechanisms of noise control. Noise control is an intergovernmental responsibility since noises readily cross over territorial boundaries. This is reflected in Carson's Noise Control Plan. Specific activities identified in the Plan include but are not limited to:

- Systematic noise surveys of the City shall be periodically conducted.
- The City shall develop acceptable noise standards consistent with health and quality-of-life goals and employ effective techniques of noise abatement through such means as the Building Code, Subdivision Ordinance and Zoning Ordinance.
- The City shall develop strategies for noise reduction where noise-impacted areas exist, and seek rigorous enforcement where otherwise pre-empted by other governmental agencies.
- A mechanism to assure coordination of all governmental jurisdiction in the field of noise control and abatement should be developed by the City.
- A national uniform sound certification program of published sound ratings for various types of equipment that are sources of noise shall be encouraged.

- The Code Enforcement Division of the Public Services Group will be responsible for general enforcement of State and local noise control regulations.

- The Sheriff's Department will enforce City, state and federal noise laws for mobile sources and complaints in residential zones.

- The Building and Safety Division of the Development Services Group will enforce state and local noise control regulations and Building Code regulations regarding noise control.

- The Planning Division of the Development Services Group shall review potential noise impacts on new developments which require environmental assessments and/or environmental impact reports.

- The County of Los Angeles Department of Animal Care and Control will continue the abatement of annoyance caused by barking dogs.

- Noise criteria shall be established for all applications involving variances and/or conditional use permits for commercial or industrial facilities.

4.5.1 ENVIRONMENTAL SETTING

Carson's noise environment is dominated by vehicular traffic including vehicular generated noise along Interstate 405 (I-405), State Route 91 (SR-91), and primary and major arterial roadways. Additionally, the Compton and Long Beach Airports, as well as railroad operations within the City contribute to the noise environment. Furthermore, a number of other sources contribute to the total noise environment. These noise sources include construction activities, power tools, gardening equipment, loudspeakers, auto repair, radios, children playing and dogs barking. In order to provide a description of the existing noise environment in Carson, field noise measurements were taken in 1999 at various locations in the City to reflect ambient noise levels primarily in the vicinity of sensitive uses (i.e., schools, residences, churches, hospitals, etc.). Existing traffic volumes were also modeled throughout the City to provide projected vehicular generated noise levels.

AMBIENT NOISE

To understand the ambient or background noise levels throughout the City, field measurements were conducted in March 1999.[1] The noise measurements take into account mobile noise sources (i.e., vehicular and aircraft) and stationary noise sources (i.e., playgrounds, industry, manufacturing). Field monitoring consisted of 30 noise measurements recorded at various locations throughout the City. Heavy truck traffic was observed on many of the roadways during the field measurements.

[1] Noise monitoring equipment used for the field measurements consisted of a Larson Davis Laboratories Model 700 integrating sound level meter equipped with a Bruel & Kjaer (B & K) Type 41761 ½" microphone. Each measurement was recorded for a period of 10 between 5 and 8 minutes on the sidewalk adjacent to the roadways (within the right-of-way). Noise measurements are taken as time averaged measures (average of two independent measurements).

Table 4.5-6, *Existing Noise Levels (Based on Field Measurements)*, indicates the general location of each noise measurement taken within the City, the recorded dBA, and the location and type of adjacent sensitive receptors (i.e., residential units, schools, health care facilities). The measured noise levels ranged from 65.9 dBA to 83.2 dBA throughout the City. The noise measurements do not take into account noise attenuation measures (i.e., soundwalls, berms) or setbacks. Therefore, it is anticipated that existing noise levels within residential areas along the roadways identified in Table 4.5-6 are below the ambient noise measurements due to existing soundwalls or physical setbacks from the existing edge of right-of-way.[2] Exhibit 4.5-1, *Location of Noise Measurements*, indicates the approximate location of the field noise measurements.

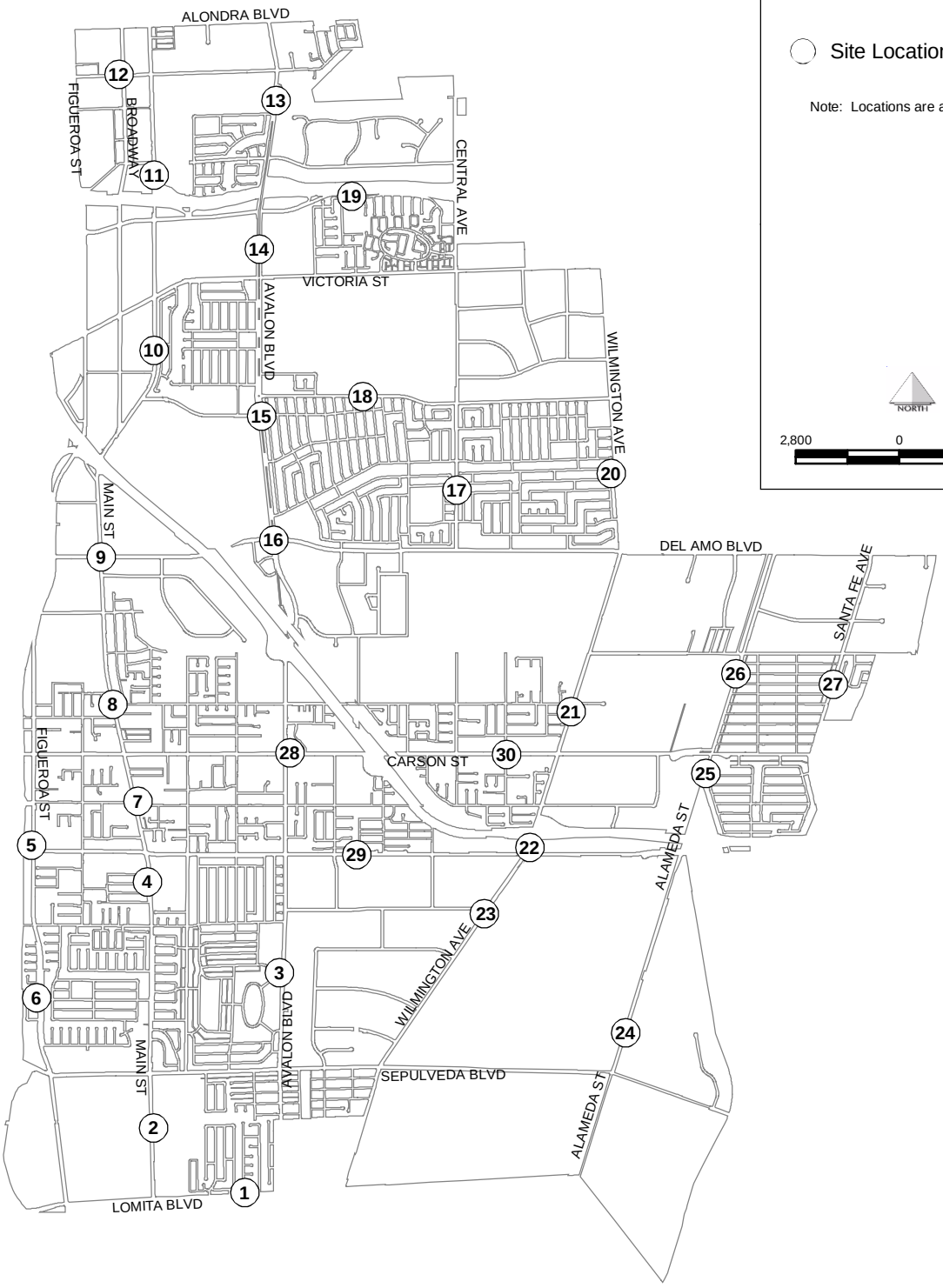
Table 4.5-6
Existing Noise Levels (Based on Field Measurements)

Site	General Location of Noise Measurement	Leq dBA	Orientation/ Type of Sensitive Receptor
1	Lomita Boulevard between Avalon Boulevard and Main Street (at intersection of Island and Lomita Boulevard)	68.2	Single-family units located immediately adjacent to the north.
2	Main Street between Sepulveda Boulevard and Lomita Boulevard (south of railroad trestle)	69.0	None
3	Avalon Boulevard between 223rd Street and Sepulveda Boulevard (at Avalon Boulevard/Bayport intersection).	69.4	Multiple-family residential to the east, single-family residential and a day care to the west.
4	At Carson High School, south of the intersection of Main Street and 223rd Street.	71.2	Carson High School immediately to the east and single-family residential to the west.
5	Figueroa Street between Carson Street and 223rd Street adjacent to school	72.6	Multiple-family residential located to the west and a school located immediately to the east.
6	Figueroa Street between 228th Street and Sepulveda Boulevard (at intersection of 234th Street and Figueroa Street)	68.3	Single-family residential located to the east and west respectively.
7	Main Street between Carson Street and 223rd Street (at intersection 220nd Street and Main Street	67.2	Multiple-family residential to the west; church and school to the east.
8	Intersection of Main Street and 213th Street	67.4	Single-family residential areas to the east and west.
9	Intersection of Main Street and Del Amo Boulevard	68.2	None
10	Main Street south of Victoria Street	69.9	Single-family residential to the east.
11	Main Street Between Gardena Boulevard and SR-91 (at intersection of Walnut Street and Main Street)	74.0	None
12	Broadway between Gardena Boulevard and Alondra Boulevard	69.0	None
13	Avalon Boulevard adjacent to Hemingway Memorial Park	79.4	Church to the east; park to the west.
14	Avalon Boulevard between SR-91 and Victoria Street	74.4	Colony Cove and Carson Harbor Village Mobile Home Parks

[2] Sound/privacy walls typically provide sound attenuation on the order of 5 to 10 dBA.

Table 4.5-6 – Continued
Existing Noise Levels (Based on Field Measurements)

Site	General Location Of Noise Measurement	Leq dBA	Orientation/ Type of Sensitive Receptor
15	Intersection of Avalon Boulevard and 192nd Street	65.9	Single-family residential to the east; school to the west.
16	Intersection of Avalon Boulevard and Del Amo Boulevard	75.1	None
17	Central Avenue between University Drive and Del Amo Boulevard (south of Hemlick Street)	66.9	Church to the west; single-family residential to the east.
18	University Drive between Avalon Boulevard and Central Avenue	70.0	Single-family residential to the south.
19	Artesia Boulevard between Avalon Boulevard and Central Avenue (south of SR-91)	73.4	Park and single-family residential to the south.
20	Wilmington Avenue between University Drive and Del Amo Boulevard	75.5	Single-family residential to east and west.
21	Wilmington Avenue between 213th Street and Carson Street	79.5	Single-family residential to the west.
22	Immediately south of I-405	83.2	None
23	Wilmington Avenue between 223rd Street and Sepulveda Boulevard	75.2	None
24	Alameda Street between Sepulveda Boulevard and 223rd Street	77.7	None
25	Alameda Street between I-405 and Carson Street (at intersection 218th Street and Alameda Street)	76.3	Single-family residential to the east.
26	Alameda Street between Carson Street and Dominguez Street (at intersection of Alameda Street and Harrison Street)	72.7	None
27	Santa Fe Avenue between Dominguez Street and Carson Street	73.3	Single-family residential to west; school to east.
28	Carson Street between Avalon Boulevard and I-405 (at Carson City Hall)	71.7	Mobile home park and medical center to the south.
29	223rd Street between Avalon Boulevard and Wilmington Avenue	74.4	Single-family residential to the north.
30	Carson Street between I-405 and Wilmington Avenue	70.3	Three (3) churches along north side of Carson Street.
NOTE:	Noise measurements were recorded on the sidewalk within the right-of-way. Actual sound levels at receptors would have an anticipated 5-10 dBA reduction.		
Source:	Noise monitoring survey conducted by RBF Consulting on March 9, March 10, and March 11, 1999.		



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

LOCATION OF NOISE MEASUREMENT

EXHIBIT 4.5-1

SENSITIVE NOISE RECEPTORS

The City of Carson has identified residences, public and private school/preschool classrooms, churches, hospitals and elderly care facilities as noise sensitive receptors. Sensitive land uses generally cannot accommodate levels of noise which would, under other circumstances and with regard to other land uses, not be considered intrusive in character. Therefore, the elements of location, hours of operation, type of use, and extent of development warrant extremely close analysis in an effort to insure that the quality of services provided by these noise sensitive receptors is not diminished by the effects of intrusive noise. The maximum interior exposure for these land uses is 45 dBA CNEL (maximum exterior exposure is 65 dBA CNEL).

With the exception of residential land uses, Table 4.5-7, *Noise Sensitive Receptors*, provides a listing of noise sensitive land uses along with their street address. Exhibit 4.5-2, *Sensitive Receptor Location Map*, illustrates the location of these land uses.

The potential exists that noise sensitive receptors located adjacent to the roadway may currently be experiencing excessive noise levels. Depending on the setback location of these adjacent noise sensitive receptors and nature of existing noise attenuation features (if any), the 65 CNEL contour may fall within the outdoor living areas of these land uses, i.e., playground or backyard.

Table 4.5-7
Noise Sensitive Receptors

Facility	Street Address
HEALTH CARE	
Carson Senior Social Services	3 Civic Plaza
El Nido Family Center	460 East Carson Plaza Drive
Family Services	340 West 224th Street
Department of Rehabilitation	451 East Carson Plaza Drive
CHILD CARE	
Schmitt Family Day Care	21826 Moneta Avenue
Patricia Shanklin	22821 Catskill Avenue
Voneta Day Care	1225 Bankers Drive
Sotelo Family Day Care	135 East 229th Place
Kurious Kids	530 Moorhaven Drive
Taylor's Family Day Care	551 East 222 Street
Artie's Licensed Day Care	19303 South Scobey Avenue
Wilson & Wilson Child Care	1672 East Cyrene Drive
McCoy Family Child Care	409 E. Centerview Drive
McNeil Family Day Care	17202 South Billings Drive
Precious Gems Child Care	146 East 213th Street
Olivia's Family Day Care	2556 East Jackson Street

Table 4.5-7 – Continued
Noise Sensitive Receptors

Facility	Street Address
CHILD CARE – CONTINUED	
Parra Family Day Care	177 West 234th Street
Dani's Garden Day Care	19409 Reinhart Street
Peace and Joy Day Care Center	1691-1693 Del Amo Boulevard
Ruiz Family Day Care	19509 South Annalee Avenue
Little Angels' Retreat	18419 South Avalon Boulevard
Jenkins Day Care	16117 Haskins Lane
Lakeshore Kids and Co.	2695 East Dominguez Street
Manna Manor, Inc.	24825 Neptune Avenue
Ravenna Home Manna Manor, Inc.	24713 Ravenna Avenue
Carson Montessori Academy	812 East Carson Street
McClendon's Family Day Care	1242 East Cloverbrook Street
Cobb Family Day Care	19021 Kemp Avenue
Community Development Center, Inc.	23033 South Avalon Boulevard
Little Lambs Training Center	19129 Radlet Avenue
Shirley Currie	1860 East Kamm Street
Davis Family Day Care	357 Centerview Drive
Golden Wings Academy	20715 South Avalon Boulevard #100
Gonzalez Family Day Care	519 East 237th Street
Connie M. & Jesse Jackson	17906 Lysander Drive
Jenkins Day Care	16220 Malloy Avenue
Love Christian Child Care	903 East Gladwick
Audrey Christine Andersen	628 Elsmere Drive
Andrade's Family Day Care	20927 South Margaret Street
Dotty's Day Care	1413 East 220th Street
Beezer Family Day Care	19227 Cliveden Avenue
Tweet's Day Care Center	921 East Dimondale Drive
Jacqueline Brown Family Day Care Center	1754 Fernrock Street
Elisia & Rofino Cardoso	337 East Double Street
Kids World	21601 South Moneta Avenue
PRE-KINDERGARTEN	
Ambler Avenue School	319 East Sherman Drive
Annalee Avenue School	19419 Annalee Avenue
Bonita Street School	21929 Bonita Street
Broadacres Avenue School	19421 South Broadacres Avenue
Catskill Avenue School	23536 Catskill Avenue
Del Amo School	21228 Water Street
Dolores Street School	22526 Dolores Street
Leapwood Avenue School	19302 Leapwood Avenue
Caroldale Avenue School	22424 Caroldale Avenue

Table 4.5-7 – Continued
Noise Sensitive Receptors

Facility	Street Address
PRE-KINDERGARTEN – CONTINUED	
Carson Street School	161 East Carson Street
Towne Avenue School	18924 Towne Avenue
SCHOOLS	
Federation Head Start	22504 South Avalon Boulevard
Ralph Bunche School	16223 Haskins Lane
CSU, Dominguez Hills	1000 East Victoria Street
Towne Avenue Elementary Schools	18924 Towne Avenue
Curtis Junior High School	1254 East Helmick Street
Del Amo Elementary School	21228 Walter Street
Carnegie Junior High School	21820 Bonita Street
Eagle Tree High School	22628 South Main Street
Carson High School/Carson Community Adult School	22328 South Main Street
Caroldale Learning Community	22424 Caroldale Avenue
232nd Place School	23240 Archibald Avenue
Domiguez Elementary School	21250 Santa Fe Avenue
Stephen M. White Middle School	22102 South Figueroa Street
Peninsula Christian School	22507 South Figueroa Street
St. Philomena Catholic School	21832 South Main Street
CHURCHES	
Baptist Temple of Prayer	224 East Carson Street
Calvary Chapel of South Bay	415 West Torrance Boulevard
Carson Baptist Church	520 East 228th Street
Carson Christian Center/Carson-Wilmington Minister's Fellowship	19303 Annalee Avenue
Carson Christian Church	356 East 220 Street
Carson Church of Religious Science	220 East Carson Street
Carson Hope Chapel Foursquare	129 East 223rd Street
Carson Pentecostal Church	555 East 220th Street
Central Baptist Church	1641 East Carson Street
First Christian Faith United Church	1609 East Del Amo Boulevard
First Lutheran Church of Carson	19707 South Central Avenue
Grace Orthodox Presbyterian Church	22511 South Figueroa Street
Harbor Community Chapel	21521 South Avalon Boulevard
Immanuel Missionary Baptist Church	503 East 220th Street
Judson Baptist Church	451 East 223rd Street
Kaiser Hospital Chapel	24733 Marbella Avenue
Keystone Assembly of God	21916 Moneta Avenue
Mission Eben-Ezer Family Church	225 West Torrance Boulevard
Mountain Movers Church	519 East 245th Street
New Life Christian Center	1210 East 223rd Street

Table 4.5-7 – Continued
Noise Sensitive Receptors

Facility	Street Address
CHURCHES – CONTINUED	
Pentecostal Church of God	21818 Dolores Street
Spanish Seventh Day Adventist Church	21828 Dolores Street
St. Philomena Catholic Church	21900 South Main Street
United Baptist Church	435 West 220th Street
United Samoan Church	600 East Double Street
United Samoan Congregational Christian Church	1717 East Carson Street
SENIOR CENTERS	
Carson Gardens Retirement Apartments	21811 South Main Street
Camino Village Senior Complex	21735 South Main Street
Avalon Courtyard Retirement Center	22121 South Avalon Boulevard
Carson Retirement Center	345 East Carson Street

NOISE SOURCES

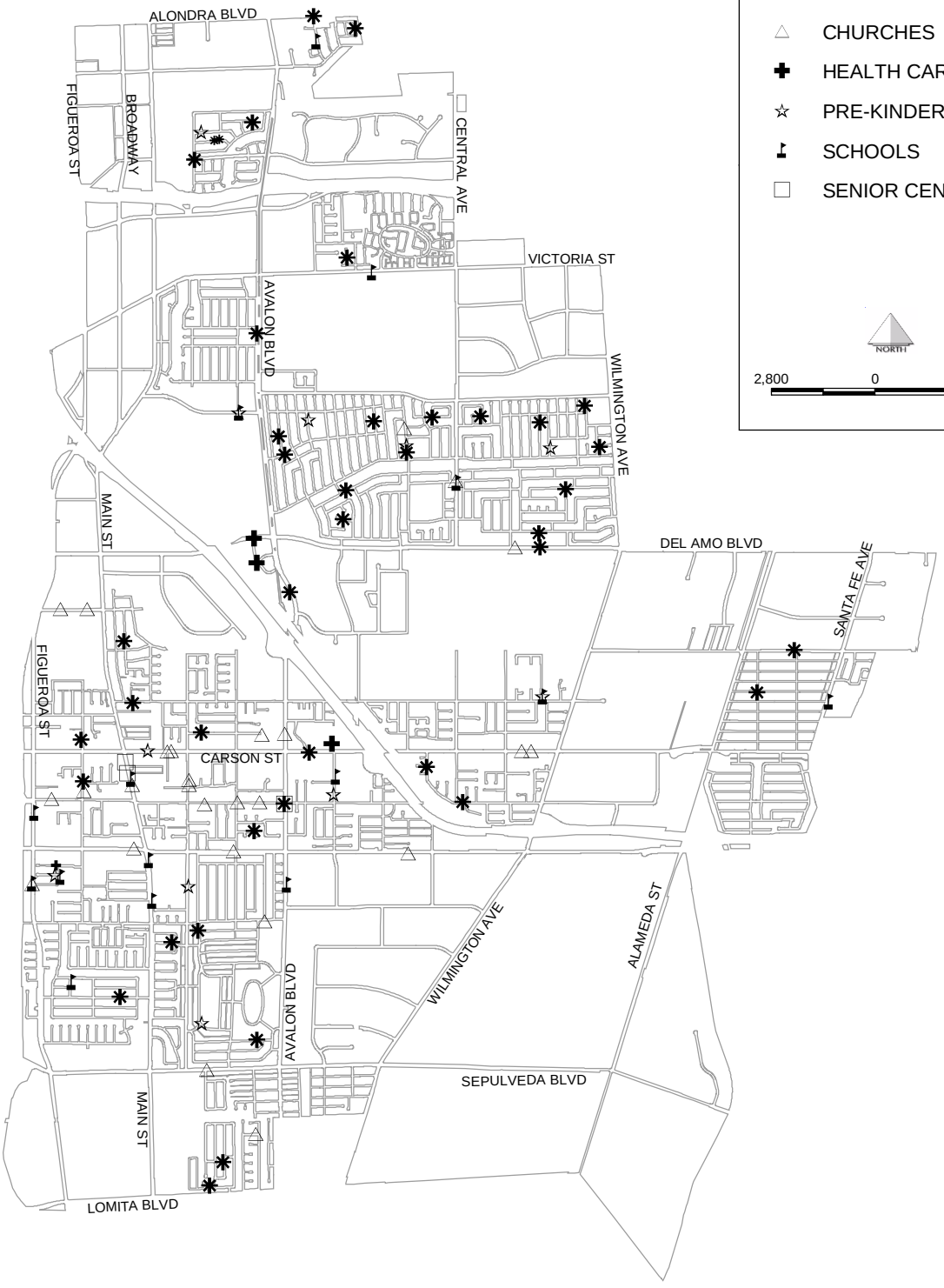
MOBILE NOISE SOURCES

Roadway Noise

As is typical of most urbanized areas, the most pervasive noise sources in the City of Carson are motor vehicles, including automobiles, trucks, buses and motorcycles. The noise produced by these sources occurs primarily around roadways and may be of sufficient magnitude to expose various land uses to excessive noise levels. As a general observation, the speed of the vehicle is directly correlated to the noise level; an increase in speed causes an increase in noise levels. The major roadways in the City include: Figueroa Street, Main Street, Avalon Boulevard, Wilmington Avenue, Santa Fe Avenue, Lomita Boulevard, Sepulvada Boulevard, 223rd Street, Carson Street, Del Amo Boulevard, University Drive, Victoria Street, Gardena Boulevard, Alondra Boulevard and Alameda Street. Noise levels along Alameda Street, also known as the "Alameda Corridor," are often higher than projected due to large volumes of truck traffic and rail line operations. Additionally, I-405, I-110, I-710 and SR-91 generate substantial noise levels within the community. In general, most of the land uses along the major roadways are commercial, open space, and light industrial. However, single and multi-family areas, as well as public facilities, are situated along many of the major roadways indicated above.

Railroad Noise

In general, the noise generated by a train pass-by can be divided into two components; that generated by the engine or locomotive, and that due to the railroad cars. The characteristic frequency of the engine is different than that for the cars. The effective



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

SENSITIVE RECEPTOR LOCATION MAP

EXHIBIT 4.5-2

radiating frequency is 1000 Hz for the locomotive engines, and 2000 Hz for the portion of noise generated by the cars. The noise generated by the engine is the result of the mechanical movements of the engine parts, the combustion process, the horn (if used), and to a lesser extent the exhaust system. The noise generated by the cars is a result of the interaction between the wheels and the railroad tracks.

The City of Carson is served by three railroads: Union Pacific Railroad (UPRR), Burlington Northern Santa Fe (BNSF) Railroad and the Metro Blue line. The UPRR runs two lines (San Pedro and Wilmington) along the extreme western portion of the City, as it converges on the Los Angeles City container transfer facility, which borders the west side of Long Beach. Several UPRR spur lines extend westward from the San Pedro and Wilmington lines into the central portion of Carson providing rail service to many of the major petroleum production companies. A UPRR line also runs within the right-of-way of the Dominguez Channel. A BNSF rail line traverses the southern portion of the City from the Alameda Street Corridor to the Harbor Freeway (I-110). The Metro Blue line crosses the extreme eastern section of the City, running north to downtown Los Angeles and south through Long Beach.

The San Pedro line, the Wilmington line, and the Dominguez Channel line run within the City of Carson. The San Pedro line carries five trains each day. The Wilmington line, which runs parallel to the Alameda Corridor line and is the preferred route out of the harbor, operates 15 trains each day. The train(s) run approximately every three hours on the Wilmington line. By the year 2003, the San Pedro line will be the only railroad line in operation. However, the Wilmington line will remain in place and serve as an auxiliary line. The Dominguez Channel line carries five trains per day in each direction. However, when the trains are used for shipping coal, the line is utilized 10 to 15 times per day each direction.[3]

The BNSF line is located in the southern portion of Carson and runs from Alameda Street west through light industrial and residential areas to the Harbor Freeway.[4] There are approximately thirty-eight (38) trains that utilize the BNSF rail line on a daily basis within the City of Carson.

Aircraft Noise

The primary source of aircraft noise within the City of Carson is the Compton Airport located immediately north of the City. At its closest distance, the runway is located approximately 3,000 feet from the City's northern boundary. Compton Airport does not generate a significant high level of noise. According to the *City of Compton General Plan Existing Airport Noise Contours*, the 60 and 65 CNEL contours for the Compton Airport do not extend into the City of Carson.

Aside from Compton Airport, aircraft noise could permeate from Long Beach Airport (LGB) should the capacity significantly increase. Long Beach Airport is home to

[3] Mr. Mike Irvine, General Superintendent of Transportation, Union Pacific Railroad, April 7, 1999.

[4] Train operation data associated with the BNSF Railroad line were provided by Mr. Don Cleveland, staff with BNSF, April 14, 1999.

manufacturing activities of Gulfstream Aerospace, Mooney Aircraft, Boeing B-717, and Boeing C-17, and it provides commercial airline service via American Airlines, America West Airlines, and JetBlue Airways.

Because the Airport is completely surrounded by close-in residential areas, aircraft noise has been a primary issue for the surrounding area. Previous efforts to control aircraft noise resulted in an ordinance, which was adopted in 1981. However, this ordinance was challenged by many airlines by the mid-1980s. The litigation surrounding efforts to find a reasonable balance between air commerce and community noise exposure ended after 12 years, with a settlement agreement between all parties in mid 1995. The agreement contained, as a goal, conformance with State and federal noise exposure rules/guidelines, and permitted the same level of airline activity that had been permitted by the Federal District Court and 9th Circuit Court of Appeals. It also provided that the allowable 41 daily scheduled airline flights could actually be increased, if the airlines could operate the additional flights within their allotted share of the total, cumulative noise "budget." The Airport Noise Compatibility Ordinance that was implemented as part of the settlement in 1995, was specifically grandfathered by the federal Airport Noise and Capacity Act which became law in 1991, and the Ordinance contained, as its basic provisions, noise control measures which were recognized as being reasonable by the 9th Circuit Court of Appeals. The City of Long Beach's 2010 Strategic Plan, developed by the community and approved unanimously by the Long Beach City Council in June of 2000, subsequently reinforced this same long-term direction for LGB – maximize its use within the provisions of the Noise Compatibility Ordinance.

Based on the LGB Airport Noise Compatibility Ordinance, the City of Long Beach set a goal to maximize the economic and air transport benefits of LGB, within the limits of the regulation. The expectation is that maximization of scheduled airline and commuter use within Ordinance limits will allow LGB to grow from its current level of 800,000 annual passengers to 3.8 million annual passengers. Should the volume of air traffic at Long Beach Airport increase, it may become a significant problem for residential areas on the east side of the City of Carson.

STATIONARY NOISE SOURCES

Industrial Noise

Industrial land uses have the potential to exert a relatively high level of noise impact within their immediate operating environments. The scope and degree of noise impacts generated by industrial uses is dependent upon various critical factors, including the type of industrial activity, hours of operation, and the sites' location relative to other land uses.

Industrial noise sources are located throughout the City. Delivery trucks, air compressors, generators, outdoor loudspeakers and gas venting are common noise sources associated with industrial land uses. Industrial activities produce noises above the general level of their surroundings, though few exceed the 65 dBA criteria at residential locations.

Commercial and Residential Related Noise

A variety of stationary noise sources associated with commercial and residential activities exist throughout the City of Carson. Commercial noise sources may include mechanical equipment and engines in non-moving motors such as power tools (i.e., automobile repair shops). Stationary noise sources associated with residential areas are primarily due to air conditioners and pool/spa equipment. Additional stationary noise sources include animals, stereos, musical instruments, sporting events and horns. These noise sources have the potential to temporarily disrupt the quietness of an area. Effective control of these noise sources cannot be accomplished through decibel standards, but instead may be accomplished through provisions in the Noise Ordinance.

COMPUTER MODELING

Roadway noise levels throughout the City were projected using the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108) together with several roadway and site parameters. The noise prediction model utilizes an extensive set of input parameters including the roadway cross section (i.e., number of lanes), roadway width, average daily traffic (ADT), vehicle travel speed, vehicle fleet mix, roadway grade, angle-of-view, site conditions ("hard" or "soft"), and the percent of total average daily traffic that flows each hour throughout a 24-hour period. The model does not account for ambient noise levels (i.e., noise from adjacent land uses) or topographical differences between the roadways and adjacent land uses. Various vehicle speeds were assumed throughout the City based on empirical observations and posted maximum speeds (refer to Appendix D, *Noise Model Runs*). As previously stated, noise projections are based on vehicular traffic counts obtained by the City of Carson.

COMMUNITY NOISE CONTOURS

Existing noise contours were calculated by utilizing the FHWA RD-77-108 noise prediction model. The noise contours represent the City's major and secondary highways, industrial and commercial streets and a number of collector streets that traverse the City. Noise generation for each roadway segment was calculated and the distance to the 60, 65, and 70 dBA CNEL contours was determined at 100 feet from roadway centerline. A noise contour is a line behind which the noise level does not exceed a certain value. For instance, the 60 dBA CNEL contour indicates that the CNEL between the street and the contour line is equal to, or greater than 60 dB; the CNEL beyond the contour line - away from the street - is less than 60 dB.

60 CNEL. The 60 CNEL contour defines the noise study zone. The noise environment for any proposed noise-sensitive land use (for example, single- or multi-family residences, hospitals, schools, or churches) within this zone should be evaluated on a project specific basis. The project may require mitigation to meet city and/or state (Title 24) standards. A site- and project-specific study will be necessary to determine what kinds of mitigation will make the interior building environment acceptable for the given type of land use. Some sites may already be sufficiently protected by existing walls or berms so that no further mitigation measures are required.

65 CNEL. The 65 CNEL contour defines the noise mitigation zone. Within this contour, new or expanded noise-sensitive developments should be permitted only if appropriate mitigation measures, such as barriers or additional sound insulation, are included and city and/or state noise standards are achieved. In some instances it may be possible to show that existing walls, berms, or screening may exist such that required mitigation is already in place.

The inclusion of an area within a 60 or 65 CNEL contour on Exhibit 4.5-3, *Existing Noise Contours (2001)*, indicates that noise levels are high enough to be of potential concern, but does not imply that excessive noise levels are uniformly present on all sites within the area. Buildings, walls, berms, and changes in topography affect noise levels. Some locations may be screened from noise impact by the presence of one or more of these features.

As indicated in Table 4.5-8, *Existing CNEL Projections*, the existing noise levels at 100 feet from the roadway centerline vary from a minimum of 55.58 CNEL to a maximum of 66.40 CNEL. As indicated in the Table, the 65 CNEL contour locations vary from 35 feet (along 213th Street) to 145 feet (along Del Amo Boulevard) from the roadway centerline. For all of these roadway links, the 65 CNEL contours extend beyond the edge of right-of-way (ROW).

4.5.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Noise impacts resulting from the implementation of the proposed General Plan could be considered significant if they cause any of the following results:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

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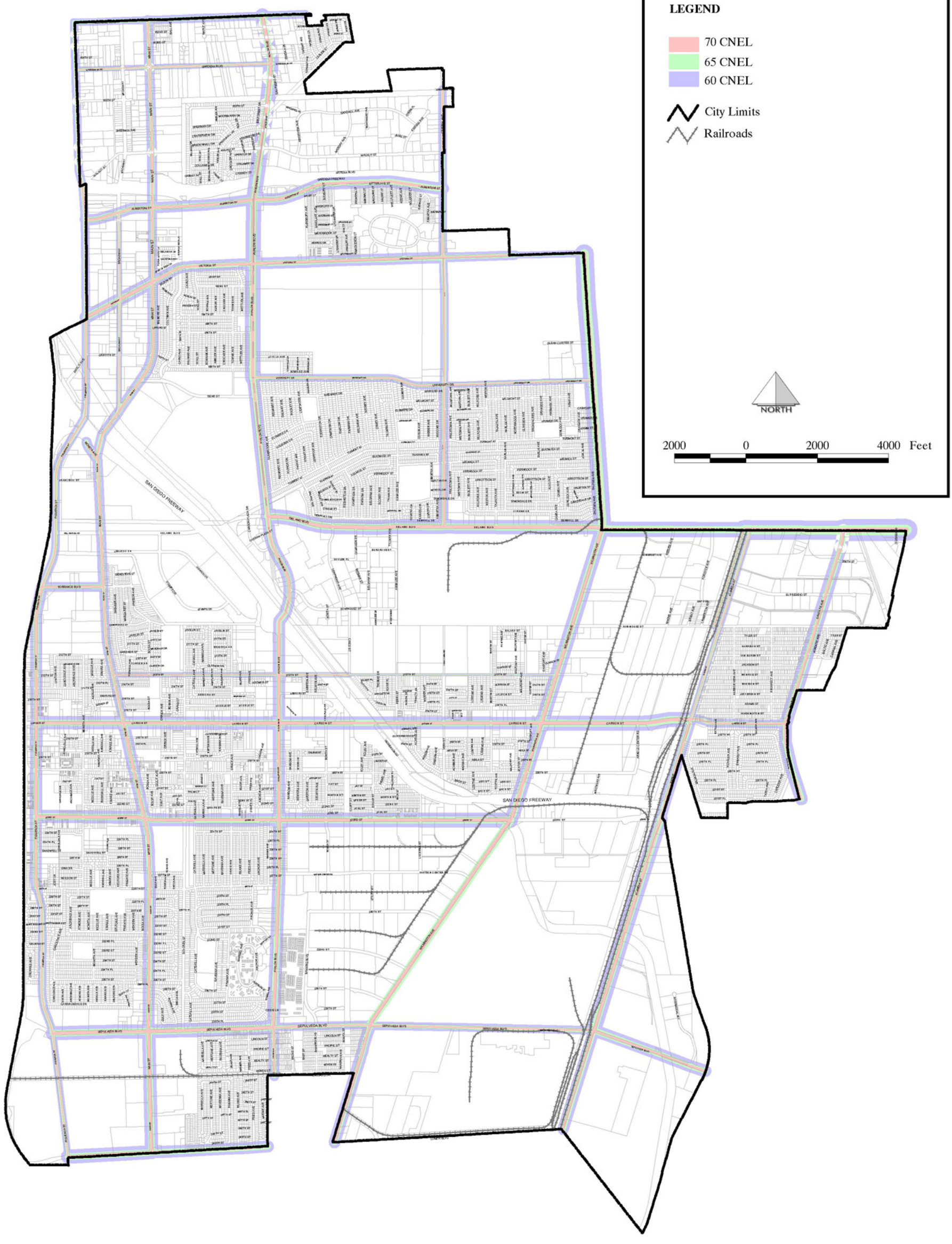

Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Existing Noise Contours (2001)

EXHIBIT 4.5-3

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Table 4.5-8
Existing CNEL Projections

Location	ADT[1] (Veh/Day)	CNEL[2] @ 100 Ft.	Distance to Contours (Ft.)[3]		
			70 dBA	65 dBA	60 dBA
Alondra Blvd.					
Figueroa St. to Main St.	9,000	59	23	49	105
Main St. to Malloy Ave.	11,000	60	26	56	120
Gardena Blvd					
Figueroa St. to Avalon Blvd.	6,000	58	17	37	80
Albertoni St.					
Figueroa St. to Avalon Blvd.	16,000	62	33	72	155
Avalon Blvd. To Central Ave.	14,000	62	37	80	172
Victoria St.					
Figueroa St. to Main St.	20,000	63	39	83	180
Main St. to Avalon Blvd.	16,000	62	33	72	155
Avalon Blvd. To Central Ave.	17,000	62	35	75	161
Central Ave. to Bishop Ave.	13,000	61	29	63	135
Bishop Ave. to Wilmington Ave.	8,000	59	21	45	97
University Dr.					
Avalon Blvd. To Central Ave.	7,000	59	23	50	108
Central Ave. to Wilmington Ave.	5,000	58	19	40	87
Del Amo Blvd.					
Avalon Blvd. To Central Ave.	18,000	64	44	94	204
Central Ave. to Wilmington Blvd.	13,000	63	42	91	196
Wilmington Ave. to Alameda St.	15,000	64	46	100	216
Alameda St. to Santa Fe Ave.	21,000	65	58	125	270
Santa Fe Ave. to I-710	26,000	66	67	145	311
Torrance Blvd.					
Figueroa St. to Main St.	12,000	61	27	59	128
213th St.					
Main St. to Avalon Blvd.	11,000	58	16	35	76
Avalon Blvd. to Chico St.	11,000	58	16	35	76
Chico St. to Wilmington Ave.	4,000	53	8	18	39
Carson St.					
Figueroa St. to I-405	29,000	63	40	86	185
I-405 to Wilmington Ave.	20,000	63	39	83	180
Wilmington Ave. to Alameda St.	19,000	64	46	98	211
Alameda St. to Santa Fe Ave.	16,000	60	27	58	124
223rd St.					
Figueroa St. to Main St.	21,000	63	40	86	185
Main St. to Avalon Blvd.	20,000	63	39	83	180
Avalon Blvd. to Lucerne St.	18,000	64	44	94	204
Lucerne St. to Alameda St.	19,000	64	46	98	211
Sepulveda Blvd.					
Figueroa St. to Avalon Blvd.	23,000	63	42	91	197
Avalon Blvd. to Alameda St.	11,000	60	26	56	120
East of Alameda St.	19,000	63	37	80	173
Lomita Blvd.					
Figueroa St. to Main St.	23,000	63	42	91	197
Main St. to Avalon Blvd.	18,000	62	36	78	167

Table 4.5-8 – Continued
Existing CNEL Projections

Location	ADT[1] (Veh/Day)	CNEL[2] @ 100 Ft.	Distance to Contours (Ft.)[3]		
			70 dBA	65 dBA	60 dBA
Figueroa St.					
Lomita Blvd. to Sepulveda Blvd.	8,000	59	21	45	97
Sepulveda Blvd. to 228th St.	8,000	59	24	52	113
228th St. to Torrance Blvd.	10,000	60	36	78	167
Torrance Blvd. To Victoria St.	18,000	62	26	56	120
Victoria St. to Albertoni St.	11,000	60	26	56	120
Albertoni St. to Alondra Blvd.	11,000	60	26	56	120
Broadway					
Main St. to Victoria St.	6,000	58	17	37	80
Victoria St. to Albertoni St.	6,000	58	17	37	80
Albertoni St. to Alondra Blvd.	7,000	58	19	41	89
Main St.					
Lomita Blvd. to Sepulveda Blvd.	21,000	63	40	86	185
Sepulveda Blvd. to Carson St.	18,000	62	36	78	167
Carson St. to Torrance Blvd.	16,000	60	27	58	124
Torrance Blvd. To 192nd St.	14,000	61	30	66	142
192nd St. to Victoria St.	12,000	62	33	72	155
Victoria St. to Albertoni St.	12,000	61	27	59	128
Albertoni St. to Alondra Blvd.	14,000	61	30	66	142
Avalon Blvd.					
Lomita Blvd. to Sepulveda Blvd.	15,000	62	32	69	148
Sepulveda Blvd. to 223rd St.	20,000	63	39	83	180
223rd St. to University Dr.	25,000	62	36	78	168
University Dr. to Victoria St.	27,000	64	47	102	219
Victoria St. to Alondra Blvd.	26,000	64	46	99	214
Central Ave.					
Del Amo Blvd. To University Dr.	9,000	61	28	60	128
University Dr. to Grenleaf Blvd.	11,000	60	26	56	120
Wilmington Ave.56					
Lomita Blvd. to Sepulveda Blvd.	13,000	62	35	76	164
Sepulveda Blvd. to 223rd St.	22,000	65	50	108	50
2223rd St. to Del Amo Blvd.	22,000	63	45	89	191
Del Amo Blvd. To University Dr.	24,000	65	53	115	247
University Dr. to Victoria St.	26,000	65	56	121	260
Alameda St.					
Lomita Blvd. to Sepulveda Blvd.	15,000	63	39	84	180
Sepulveda Blvd. to 223rd St.	18,000	64	44	94	204
223rd St. to Carson St.	12,000	62	33	72	155
Carson St. to Del Amo Blvd.	5,000	58	19	40	87
Santa Fe Ave.					
223rd St. to Del Amo Blvd.	20,000	63	39	83	179

[1] ADT means average daily two-way traffic volume.
[2] CNEL values are calculated at 100 feet from the centerline (modeled results rounded to the nearest whole number).
[3] All distances are measured from the centerline.

NOTES:
1. R/W-Noise contour located with the roadway right-of-way (ROW).
2. Estimates do not adjust for any existing noise barriers and are for traffic use only.

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels, and/or

- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project are to excessive noise levels.

Based on these standards, the effects of the proposed project have been categorized as either "less than significant" or "potentially significant." Mitigation measures are recommended for potentially significant impact. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

SIGNIFICANCE OF CHANGES IN AMBIENT NOISE LEVELS

A project is considered to have a significant noise impact where it causes an adopted noise standard to be exceeded for the project site or for adjacent sensitive receptors. In addition to being concerned about the absolute noise level that might occur when a new source is introduced into an area, it is also important to consider the existing noise environment. If the existing noise environment is quiet and the new noise source greatly increases the noise exposure, even though a criterion level might not be exceeded, some impact may occur. Lacking adopted standards for evaluating such impacts, general considerations for community noise environments are that a change of over 5 dBA is readily noticeable and, therefore, is considered a significant impact (refer to Table 4.5-9, *Significance of Changes in Cumulative Noise Exposure*).[5] Changes from 3 to 5 dBA may be noticed by some individuals and are, therefore considered to constitute an adverse environmental impact. Changes in community noise levels of less than 3 dBA are normally not noticeable and are therefore considered less than significant.[6] Adverse impacts would result if increases in noise levels were audible (increases equal to, or greater than 3 dBA), although the noise level may not exceed the significant impact criteria specified above.

Table 4.5-9
Significance of Changes in Cumulative Noise Exposure

Ambient Noise Level Without Project (Ldn or CNEL)	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels by:
< 60 dBA	+ 5.0 dBA or more
60-65 dBA	+3.0 dBA or more
> 65 dBA	+1.0 dBA or more
Sources: FICON, FHWA, and Caltrans as applied by Brown-Buntin Associates, Inc., 1997	

[5] *Assessment of Noise with Respect to Community Response*, ISDR 1996, International Standardization, Switzerland.

[6] *Fundamentals and Abatement of Highway Traffic Noise*, Bolt, Beranek and Newman, 1973.

STANDARD NOISE ATTENUATION TECHNIQUES

Noise reduction can be accomplished by placement of walls, landscaped berms, or a combination of the two. Generally, effective noise shielding requires a solid barrier with a mass of at least four pounds per square foot of surface area, which is large enough to block the line of sight between the source and receiver. Variations may be appropriate in individual cases based on distance, nature and orientation of buildings behind the barrier, and a number of other factors. Garages or other buildings may be used to shield dwelling units and outdoor living areas from traffic noise.

In addition to site design techniques, noise insulation can be accomplished through proper design of buildings. Sound-rated windows (extra thick or multi-paned) and wall insulation are also effective techniques. However, none of these measures can realize their full potential unless care is taken in actual construction: doors and windows fitted properly; openings sealed; joints caulked; plumbing adequately insulated from structural members. Additionally, insulating noise sensitive uses, such as residences, schools, libraries, hospitals, nursing and carehomes and some types of commercial activities can reduce noise impacts. State and Federal statutes have largely preempted local control over vehicular noise emissions. However, commercial, industrial and certain residential activities provide opportunities for local government to assist in noise abatement. Local ordinances may establish maximum levels for noise generated on-site. This usually takes the form of limiting the level of noise permitted to leave the property where it may impact other uses.

Although vehicular noise emissions standards are established at the State and Federal levels, local agencies can play a significant part in reducing traffic noise by controlling traffic volume and congestion. Traffic noise is greatest at intersections due to acceleration, deceleration and gear shifting. Measures such as signal synchronization can help to minimize this problem. Likewise, reduction of traffic congestion aids in the reduction of noise. This can be accomplished through the application of traffic engineering techniques such as channelization of turning movements, parking restrictions, separation of modes (bus, auto, bicycle, pedestrian) and restrictions on truck traffic.

4.5.3 IMPACTS AND MITIGATION MEASURES

CONSTRUCTION NOISE

❍ **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED GENERAL PLAN WOULD INVOLVE CONSTRUCTION-RELATED NOISE AS FUTURE PARCELS ARE DEVELOPED AND/OR RENOVATED.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Typical activities associated with construction are a highly noticeable temporary noise source. Noise from construction activities is generated by two primary sources during construction phases. The transport of workers and equipment to construction sites and the noise related to the construction itself. As underutilized or

vacant parcels are developed in accordance with the proposed General Plan, construction-related activities would generate noise from construction equipment, grading operations, and stationary equipment. These noise sources can be a nuisance to local residents and businesses. However, construction noise impacts are short-term and cease upon completion of each project. Compliance with the Noise Ordinance and Noise Control Plan, as well as implementation of the policies in the proposed General Plan would serve to reduce short-term construction noise impacts to less than significant levels.

Policies in the Proposed General Plan: The Noise Element contains the following policies:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-2.1 Limit truck traffic to specific routes and designated hours of travel, where necessary, as defined in the Transportation and Infrastructure Element and by the City's Development Services Group. Said routes and hours shall be reviewed periodically to ensure the protection of sensitive receptors and residential neighborhoods.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

TRAFFIC NOISE

- **FUTURE TRAFFIC NOISE LEVELS ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY CONTRIBUTE TO AN EXCEEDANCE OF THE CITY'S NOISE STANDARD RESULTING IN POTENTIAL NOISE IMPACTS TO SENSITIVE RECEPTORS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The future noise levels along 98 major surface streets links within the City of Carson were modeled to determine the projected location and extent of future

vehicular generated noise conditions (refer to Table 4.5-10, *Ultimate Exterior Noise Adjacent to Nearby Roadways, Year 2020*, and Exhibit 4.5-4, *Future Noise Contours, (2020*). Exhibit 4.5-4 shows the future noise environment as it would exist in the year 2020 with the proposed General Plan. Twenty-seven (27) of the surface street links modeled would generate noise levels greater than 65 CNEL at 100 feet from centerline. Sixty-two (62) surface street links would generate noise levels between 60 CNEL and 65 CNEL. Six surface street links would generate noise levels between 55 CNEL and 60 CNEL at 100 feet from the centerline. Three surface street links would generate noise levels below 55 CNEL at 100 feet from the centerline.

Table 4.5-11, *Projected Increase in Motor Vehicle Noise*, provides a comparison of motor vehicle noise levels between 2001 and 2020 conditions. This table indicates the anticipated noise level changes adjacent to specific roadways in the City as a direct result of implementation of the proposed General Plan.

As indicated in Table 4.5-11, implementation of the proposed General Plan would generate an audible noise increase (greater than 3.0 dBA) on 14 roadway links of the 68 total roadway links modeled. Fifteen (15) surface street links modeled are projected to contribute to a noise increase between 1.0 dBA and 3.0 dBA. Twenty-four (24) inaudible noise increases (less than 1.0 dBA) are projected to occur adjacent to the surface street links analyzed within the City. According to the impact thresholds established in Table 4.5-9, nine of the 68 surface street links are considered to have a potentially significant projected noise increase.[7] Fifteen (15) links could not be directly compared due to differing alignments or link contributions from Existing to Future scenarios.[8] There is a greater number of future roadway links as opposed to existing links due to future planned roadway enhancements. Implementation of the following proposed General Plan policies would serve to further reduce noise levels associated with vehicular generated noise within the City for 2020 conditions.

Policies in the Proposed General Plan: The Noise Element contains the following policies:

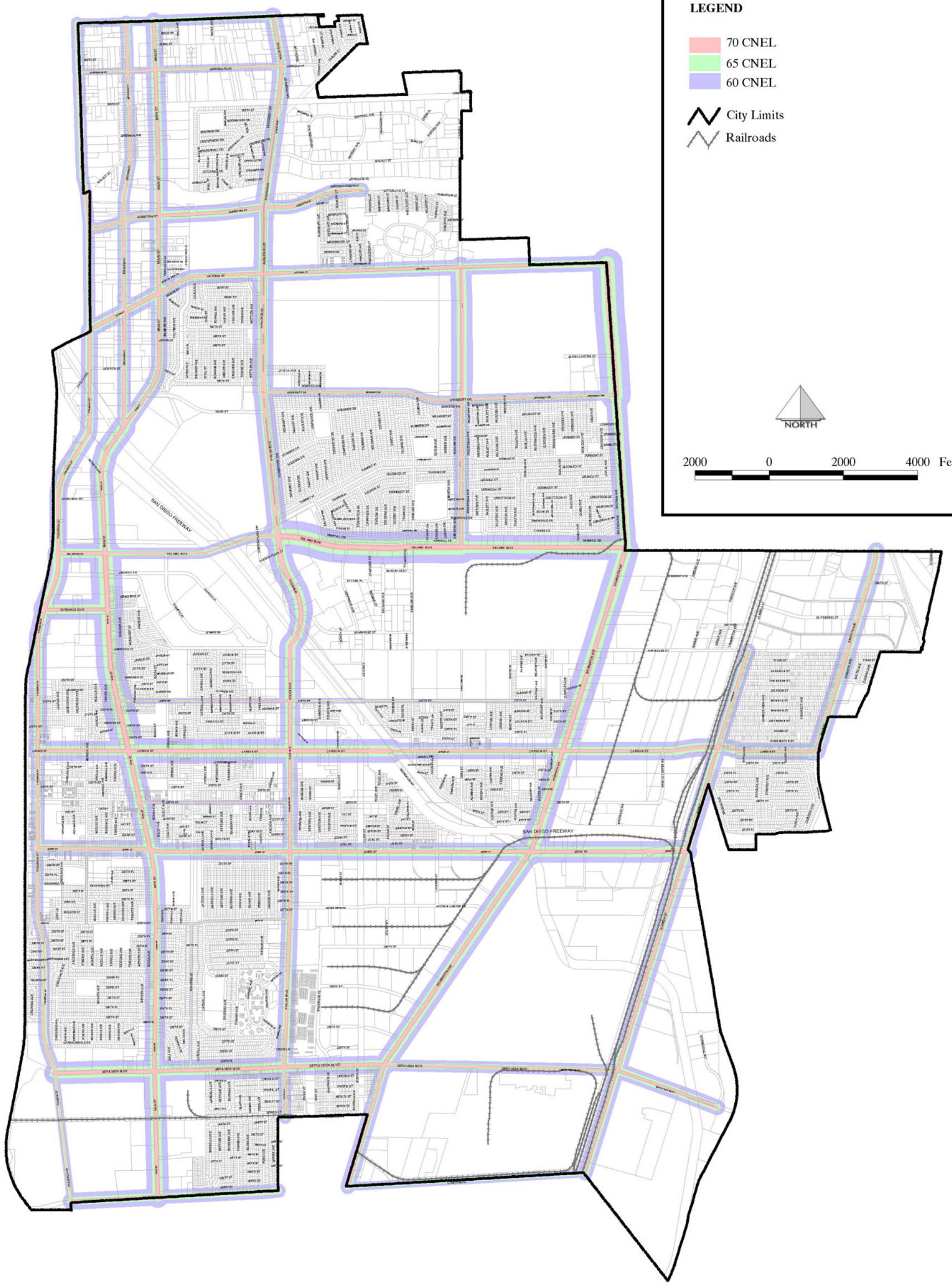
N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

[7] These roadway links are expected to generate noise levels in excess of 65 dB(A) CNEL at 100 feet from the centerline or exceed existing noise levels by 3 dB9A) upon General Plan implementation in 2020.

[8] Not all existing and future scenarios for roadway segments could be compared on a one to one basis due to future modified roadway segments, reconfigured links, and new links. Therefore, only the links, which could be compared on a one to one basis, were used. For a complete listing of future modeled roadway noise levels, please refer to Table 4.5-10, *Ultimate Exterior Noise Exposure Adjacent to Nearby Roadways, Year 2020*.

CARSON GENERAL PLAN EIR



Source: GIS Data, City of Carson, October 2002

OCTOBER 28, 2002

Future Noise Contours (2020)

EXHIBIT 4.5-4

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Table 4.5-10
Ultimate Exterior Noise Exposure Adjacent to Nearby Roadways, Year 2020

Location	ADT[1] (Veh/Day)	CNEL[2] @ 100 Ft.	Distance to Contours (Ft.)[3]		
			70 dBA	65 dBA	60 dBA
Alondra Blvd.					
Figueroa St. to Main St.	11,417	60	27	57	124
Main St. to Avalon Blvd.	16,365	62	34	73	157
Gardena Blvd					
Figueroa St. to Main St.	7,859	59	21	45	96
Main St. to Avalon Blvd.	9,790	60	24	52	112
Albertoni St.					
Figueroa St. to Main St.	12,349	62	34	74	158
Main St. to Avalon Blvd.	20,683	64	48	104	224
Avalon Blvd. To SR-91	16,902	63	42	91	195
Victoria St.					
Figueroa St. to Main St.	27,485	64	48	103	222
Main St. to Avalon Blvd.	23,799	64	43	94	201
Avalon Blvd. To Tamcliff Ave.	25,517	64	45	98	211
Tamcliff Ave. to Central Ave.	21,351	64	45	98	211
Central Ave. to Wilmington Ave.	25,275	64	45	97	210
University Dr.					
Avalon Blvd. To Central Ave.	9,766	61	29	63	136
Central Ave. to Wilmington Ave.	10,439	61	31	66	142
Del Amo Blvd.					
Figueroa St. to Main St.	18,972	65	54	117	252
Main St. to Avalon Blvd.	9,111	62	33	72	155
Avalon Blvd. To Central Ave.	43,451	69	94	204	439
Central Ave. to Wilmington Ave.	28,476	67	71	154	331
Torrance Blvd.					
Figueroa St. to Main St.	38,003	66	59	128	275
213th St.					
Main St. to Avalon Blvd.	11,236	58	17	36	77
Avalon Blvd. to Chico St.	11,293	58	17	36	77
Chico St. to Wilmington Ave.	5,927	55	11	23	50
Carson St.23					
Figueroa St. to Main St.	51,398	65	58	126	271
Main St. to Avalon Blvd.	50,989	67	72	155	335
Avalon Blvd. to I-405	47,925	67	69	149	321
I-405 to Wilmington Ave.	27,591	64	48	103	222
Wilmington Ave to Alameda St.	32,517	65	53	115	248
Alameda St to Santa Fe Ave.	28,164	64	49	105	225
223rd St.					
Figueroa St. to Main St.	26,530	64	47	100	217
Main St. to Avalon Blvd.	29,357	65	50	108	232
Avalon Blvd. to Wilmington Ave.	31,546	65	52	113	243
Wilmington Ave. to Alameda St.	41,422	66	63	135	292
Sepulveda Blvd.					
Figueroa St. to Main St.	44,131	66	65	141	304
Main St. to Avalon Blvd.	38,665	66	60	129	278
Avalon Blvd. to Wilmington Ave.	30,365	65	51	110	237
Wilmington Ave to Alameda St.	16,807	62	34	74	160
Alameda St. to Intermodal	25,685	64	46	98	212

Table 4.5-10 – Continued
Ultimate Exterior Noise Exposure Adjacent to Nearby Roadways, Year 2020

Location	ADT[1] (Veh/Day)	CNEL[2] @ 100 Ft.	Distance to Contours (Ft.)[3]		
			70 dBA	65 dBA	60 dBA
Lomita Blvd.					
Figueroa St. to Main St.	28,473	64	49	105	227
Main St. to Avalon Blvd.	21,670	63	41	88	189
Wilmington to Alameda St.	10,254	60	25	53	115
Figueroa St.					
Lomita Blvd. to Sepulveda Blvd.	8,865	59	22	48	104
Sepulveda Blvd. to 223rd Street	15,876	62	33	71	154
223rd St. to Carson St.	21,090	63	40	86	186
Carson St. to Torrance Blvd.	31,812	65	53	113	244
Torrance Blvd to Del Amo Blvd.	40,270	66	62	133	286
Del Amo Blvd to I-405	30,465	65	51	110	237
I-405 to Victoria St.	28,677	64	49	106	228
Victoria St. to SR-91	17,414	62	35	76	163
SR-91 to Gardena Blvd.	18,049	62	36	78	168
Gardena Blvd. to Alondra Blvd.	19,202	63	38	81	175
Broadway					
Main St. to Victoria St.	15,665	63	40	86	186
Victoria St. to Albertoni St.	14,446	63	38	82	176
SR-91 to Gardena Blvd.	12,983	62	35	76	164
Gardena Blvd. to Alondra Blvd.	13,980	63	37	80	172
Main St.					
Lomita Blvd. to Sepulveda Blvd.	31,612	66	64	138	297
Sepulveda Blvd. to 223rd St.	28,280	66	59	128	275
223rd St. to Carson St.	34,827	67	68	147	316
Carson St. to 213th St.	54,986	68	92	199	429
213th St. to Torrance Blvd.	47,162	68	83	180	387
Torrance Blvd to Del Amo Blvd.	53,802	68	91	196	423
Del Amo Blvd. to I-405	32,983	66	66	142	305
I-405 to Broadway	35,457	66	68	146	314
Broadway to Victoria St.	20,146	64	47	102	219
Victoria St. to Albertoni St.	24,270	65	54	115	246
SR-91 to Gardena Blvd.	25,759	65	56	120	259
Gardena Blvd. to Alondra Blvd.	21,709	64	50	107	231
Avalon Blvd.					
Lomita Blvd. to Sepulveda Blvd.	18,708	63	37	80	172
Sepulveda Blvd. to 223rd St.	28,722	64	49	106	228
223rd St. to Carson St.	33,386	64	44	94	203
Carson St. to 213th St.	37,507	65	59	127	273
213th to I-405	40,673	66	62	134	288
Dominguez St. to Del Amo Blvd.	48,335	67	70	150	323
Del Amo Blvd. to University Dr.	36,492	65	58	124	268
University Dr. to Victoria St.	39,899	66	61	132	285
Victoria St. to Albertoni St.	35,057	65	56	121	261
SR-91 to Gardena Blvd	32,703	65	54	116	249
Gardena Blvd. to Alondra Blvd.	31,836	65	53	113	244

Table 4.5-10 – Continued
Ultimate Exterior Noise Exposure Adjacent to Nearby Roadways, Year 2020

Location	ADT[1] (Veh/Day)	CNEL[2] @ 100 Ft.	Distance to Contours (Ft.)[3]		
			70 dBA	65 dBA	60 dBA
Central Ave.					
Del Amo Blvd. to Turmont St.	18,640	64	45	97	208
Turmont St. to University Dr.	18,341	64	44	96	206
University Dr. to Victoria St.	30,021	66	62	133	287
Wilmington Ave.					
Lomita Blvd. To Sepulveda Blvd.	23,390	63	43	92	199
Sepulveda Blvd. to 223rd St.	36,994	65	58	126	270
223rd St. to I-405	57,883	67	78	169	364
I-405 to Carson St.	49,485	67	71	152	328
Carson St. to 213th	55,113	67	76	164	353
213th to Del Amo Blvd.	56,303	67	77	166	358
Del Amo Blvd. to University Dr.	38,443	66	60	129	277
University Dr. to Victoria St.	50,998	68	88	189	408
Alameda St.					
Lomita Blvd. To Sepulveda Blvd.	17,502	64	43	93	200
Sepulveda Blvd. to 223rd St.	23,579	65	53	113	244
I-405 to Carson St.	20,878	64	48	104	225
Carson St. to Dominguez St.	16,731	63	42	90	194
Santa Fe Ave.					
Carson St. to Dominguez St.	31,274	65	52	112	242
Dominguez St. to Del Amo Blvd.	29,280	64	50	107	231
Moneta Ave.					
228th St. to 223rd St.	4,310	54	9	19	41
228th Street					
Main St. to Avalon Blvd.	3,756	53	8	17	37
220th Street					
Main St. to Avalon Blvd.	8,590	57	14	30	64
Dolores St.					
Sepulveda Blvd. to 228th St.	3,017	52	7	15	32

[1] ADT means average daily two-way traffic volume.
[2] CNEL values are calculated at 100 feet from the centerline (Modeled results are rounded to the nearest whole number).
[3] All distances are measured from the centerline.

NOTES:
1. R/W-Noise contour located with the roadway right-of-way (ROW).
2. Estimates do not adjust for any existing noise barriers and are for traffic use only.

Table 4.5-11
Projected Increase in Motor Vehicle Noise[1]

Location	Existing (2001) CNEL @ 100 Ft.	Future (2020) CNEL @ 100 Ft.	Difference
Alondra Blvd.			
Figueroa St. to Main St.	59	60	1
Main St. to Malloy Ave.	60	62	2
Gardena Blvd			
Figueroa St. to Avalon Blvd.	58	59	1
Main St. to Avalon Blvd.	-	60	N/A
Albertoni St.			
Figueroa St. to Main St.	-	62	N/A
Main St. to Avalon Blvd.	62	64	2
Avalon Blvd. To Central Ave.	62	63	1
Victoria St.			
Figueroa St. to Main St.	63	64	1
Main St. to Avalon Blvd.	62	64	2
Avalon Blvd. To Central Ave.	62	64	2
Central Ave. to Bishop Ave.	61	64	3
Bishop Ave. to Wilmington Ave.	59	64	5
University Dr.			
Avalon Blvd. To Central Ave.	59	61	2
Central Ave. to Wilmington Ave.	58	61	3
Del Amo Blvd.			
Avalon Blvd. To Central Ave.	64	65	1
Central Ave. to Wilmington Blvd.	63	62	-1
Wilmington Ave. to Alameda St.	64	69	5
Alameda St. to Santa Fe Ave.	65	67	2
Santa Fe Ave. to I-710	66	-	N/A
Torrance Blvd.			
Figueroa St. to Main St.	61	66	5
213th St.			
Main St. to Avalon Blvd.	58	58	0
Avalon Blvd. To Chico St.	58	58	0
Chico St. to Wilmington Ave.	53	55	2
Carson St.			
Figueroa St. to I-405	63	67	4
I-405 to Wilmington Ave.	63	64	1
Wilmington Ave. to Alameda St.	64	65	1
Alameda St. to Santa Fe Ave.	60	64	4
223rd St.			
Figueroa St. to Main St.	63	64	1
Main St. to Avalon Blvd.	63	63	0
Avalon Blvd. To Lucerne St.	64	65	1
Lucerne St. to Alameda St.	64	66	2
Sepulveda Blvd.			
Figueroa St. to Avalon Blvd.	63	66	3
Avalon Blvd. To Alameda St.	60	64	4
East of Alameda St.	63	64	1
Lomita Blvd.			
Figueroa St. to Main St.	59	64	5
Main St. to Avalon Blvd.	62	63	1

Table 4.5-11 – Continued
Projected Increase in Motor Vehicle Noise[1]

Location	Existing (2001) CNEL @ 100 Ft.	Future (2020) CNEL @ 100 Ft.	Difference
Figueroa St.			
Lomita Blvd. To Sepulveda Blvd.	59	59	0
Sepulveda Blvd. to 228th St.	59	-	N/A
228th St. to Torrance Blvd.	60	-	N/A
Torrance Blvd. to Victoria St.	62	66	4
Victoria St. to Albertoni St.	60	-	N/A
Albertoni St. to Alondra Blvd.	60	-	N/A
Broadway			
Main St. to Victoria St.	58	63	5
Victoria St. to Albertoni St.	58	63	5
Albertoni St. to Alondra Blvd.	58	63	5
Main St.			
Lomita Blvd. To Sepulveda Blvd.	63	66	3
Sepulveda Blvd. to Carson St.	62	67	5
Carson St. to Torrance Blvd.	60	68	8
Torrance Blvd. to 192nd St.	61	-	N/A
192nd St. to Victoria St.	62	-	N/A
Victoria St. to Albertoni St.	61	65	4
Albertoni St. to Alondra Blvd.	61	-	N/A
Avalon Blvd.			
Lomita Blvd. To Sepulveda Blvd.	62	63	1
Sepulveda Blvd. to 223rd St.	63	64	1
223rd St. to University Dr.	62	-	N/A
University Dr. to Victoria St.	64	66	2
Victoria St. to Alondra Blvd.	64	65	1
Central Ave.			
Del Amo Blvd. to University Dr.	61	64	3
University Dr. to Grenleaf Blvd.	60	-	N/A
Wilmington Ave.			
Lomita Blvd. To Sepulveda Blvd.	62	63	1
Sepulveda Blvd. to 223rd St.	65	65	0
223rd St. to Del Amo Blvd.	63	67	4
Del Amo Blvd. to University Dr.	65	66	1
University Dr. to Victoria St.	65	68	3
Alameda St.			
Lomita Blvd. To Sepulveda Blvd.	63	64	1
Sepulveda Blvd. to 223rd St.	64	65	1
223rd St. to Carson St.	62	-	N/A
Carson St. to Del Amo Blvd.	58	-	N/A
Santa Fe Ave.			
223rd St. to Del Amo Blvd.	63	-	N/A

NOTE: Where needed, sound pressure levels (SPL) have been added using the following formula:

$$SPL_{(Total)} = 10\log_{10}[10^{spl(1)/10}+10spl^{(2)/10}+\ldots\ldots..10spl^{(n)/10}]$$

1 – Modeled noise results have been rounded to the nearest whole number.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-2.1 Limit truck traffic to specific routes and designated hours of travel, where necessary, as defined in the Transportation and Infrastructure Element and by the City's Development Services Group. Said routes and hours shall be reviewed periodically to ensure the protection of sensitive receptors and residential neighborhoods.

N-2.2 Examine the feasibility of implementing sound attenuation measures along the City's arterial streets, particularly along designated truck routes. To this end, prioritize the areas in need of sound attenuation based on degree of sensitivity of uses, excess of maximum allowable standards, length of time the noise impact has existed, and number of residential units and sensitive receptors impacted.

N-2.3 Examine the feasibility of an ordinance which creates an overlay zone to be placed over residential properties along arterial streets and/or designated truck routes. This overlay zone would provide additional sound attenuation techniques to improve affected residential homes.

N-2.4 Augment the list of eligible improvements under housing programs, such as the Community Development Block Grant (CDBG) Home Improvement Loan/Rebate Program, to include remedial improvements to homes lying within the designated improvement areas and located within the overlay zone, as described above in Policy N-2.3.

N-2.5 Minimize potential transportation noise through proper design of street circulation, coordination of routing, and other traffic control measures such as enforcing the speed limit, shifting travel lanes away from impacted units or sensitive receptors, adding bike lanes.

N-2.6 Discourage through traffic in residential neighborhoods.

N-2.7 Actively advocate noise control requirements for all motor vehicles.

N-3.2 Coordinate with the businesses along the Corridor to ensure that noise attenuation measures are addressed in the selection of the vehicle technology, location of truck pick-up and loading areas, locations of mechanical and electrical equipment, exterior speaker boxes, public address systems, and similar noise sources.

N-3.3 For both transportation-related and development projects along the Corridor, continue to incorporate noise assessments into the environmental review process, as needed.

N-3.4 At such a time when Alameda Street becomes a state highway:

- Encourage Caltrans to meet the City's standard for exterior noise levels of 65 dBA CNEL;
- Where appropriate and feasible, encourage Caltrans to keep interior residential noise levels below the City's standard of 45 dBA CNEL; and
- Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of improvements to the Corridor.

N-4.1 Encourage Caltrans to meet the City's standard for exterior noise levels of 65 dBA CNEL.

N-4.2 Where appropriate and feasible, encourage Caltrans to keep interior residential noise levels below the City's standard of 45 dBA CNEL.

N-4.3 Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of improvements to existing facilities, as well as any new highway projects.

N-7.2 Continue to incorporate noise assessments into the environmental review process, as needed. Said assessments shall identify potential noise sources, potential noise impacts, and appropriate sound attenuation. In non-residential projects, potential noise sources shall include truck pick-up and loading areas, locations of mechanical and electrical equipment, and similar noise sources. Require mitigation of all significant noise impacts as a condition of project approval.

N-7.3 Require all new residential construction in areas with an exterior noise level greater than 65 dBA CNEL to include sound attenuation measures that reduce interior noise levels to the standards shown in Table N-1 (refer to General Plan Update). Sound attenuation measures include:

- Sound walls,
- Double glazing,
- Building location, and/or
- Facade treatment.

N-7.4 Ensure acceptable noise levels near schools, hospitals, convalescent homes, churches, and other noise sensitive areas in accordance with Table N-1 (refer to General Plan Update). To this end, require buffers or appropriate mitigation of potential noise sources. Such sources include, but are not limited to truck pickup and loading areas, mechanical and electrical equipment, exterior speaker boxes, and public address systems.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

AIRCRAFT NOISE

❍ **FUTURE OPERATION OF THE LONG BEACH AIRPORT AND COMPTON AIRPORT MAY BE A SIGNIFICANT NOISE SOURCE TO SURROUNDING LAND USES.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: As described in the Environmental Setting Section, the primary source of aircraft noise within the City of Carson is the Compton Airport located immediately north of the City. According to the City of Compton General Plan Existing Airport Noise Contours, the 60 and 65 CNEL contours for the Compton Airport do not extend into the City of Carson. Thus, no significant noise impacts occur from the operation of the Compton Airport impact noise sensitive uses in Carson. However, there is some intrusion of noise from the Long Beach Airport. Currently, noise generated from the Long Beach Airport does not significantly impact the City of Carson. However, should the volume of air traffic at Long Beach Airport increase, noise could become a significant impact to residential areas on the east side of the City. Compliance with the guidelines and specifications set forth in Chapter 16.43 (Long Beach Airport Noise Compatibility Ordinance No. C-7320) of the Long Beach Municipal Code would serve to reduce any potentially significant noise impacts from future operations of the Long Beach Airport. Furthermore, implementation of policies proposed in the General Plan would serve to reduce any potentially significant noise impacts associated with future operations of the Compton and Long Beach Airports to less than significant levels.

Policies in the Proposed General Plan: The Noise Element contains the following policies:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-6.1 Continue to monitor noise associated with airport operations at the Compton and Long Beach Airports.

N-6.2 Coordinate with the operators of the Long Beach Airport to ensure that any increase in operations will not adversely impact the residential areas on the eastern side of the City.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan and compliance with the Long Beach Airport Noise Compatibility Ordinance No. C-7320 is required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

RAILROAD NOISE

- **FUTURE OPERATION OF RAILWAYS WOULD BE A SIGNIFICANT NOISE SOURCE TO LAND USES LOCATED IN CARSON.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: As stated in the Environmental Setting Section, Carson is traversed by three railroads and one light rail system: Union Pacific Railroad (UPRR), Burlington Northern Santa Fe (BNSF) Railroad and the Metro Blue Line. No acoustical data or additional operational information was provided by BNSF, regarding operations within the City of Carson. Although noise levels from individual train movements on railways produce short-term noise impacts when they occur, such impacts do not occur frequently enough to produce a significant noise exposure as defined by CNEL.

Alameda Corridor

Section 3.7.3 in the *Alameda Corridor Final EIR* defines the operating concept for a consolidated Corridor. The principle objective of the Alameda Corridor is to concentrate rehabilitation and reconstruction effects on one rail corridor that would be used by three rail carriers for transporting port-related cargo. While the vast majority of freight rail traffic would be handled in the Corridor, the remaining railroad lines would likely remain in place in order to handle switching operations. For purposes of planning and estimating the effects of rail operations, it was assumed that overland common point (OCP) traffic would account for 50 percent of all containerized cargo entering the Ports of Los Angeles and Long Beach in 2010, as compared with the 35 percent in 1993. According to forecasts in the *Alameda Corridor Final EIR*, total through train movements to and from the ports are expected to reach 73 per day by the year 2010 and 97 per day by the year 2020. Southern Pacific's (SP) share of this traffic is anticipated be approximately 45 percent (33 trains per day) by the year 2010 and 40 percent (39 trains per day) by the year 2020. Union Pacific (UP) trains are projected to be 32 percent (23 trains per day) in 2010 and 35 percent (34 trains per day) in 2020. The AT&SF is expected to move 23 percent (17 trains per day) of through trains in the year 2010 and 25 percent (24 trains per day) in the year 2020.

The following text has been excerpted from page 4-112 of the *Alameda Corridor Final EIR*, and summarizes the noise impact and mitigation recommended for segments of the Corridor in Carson.

- Dominguez Seminary: The increase in train and street traffic along Alameda Street is projected to cause significant noise impacts at the Seminary, particularly any residential quarters at the Seminary. A noise barrier along the train tracks or along Alameda Street would keep noise levels below the impact criteria.

- Dominguez Hills Estates: A number of mobile homes are located on a bluff west of Alameda Street overlooking the train tracks. The train tracks would be at-grade in this section for all alternatives. The projected noise levels at the homes closest to Alameda Street do not exceed the impact criteria, although a noticeable change in noise levels is projected. Because of the vantage point of the mobile homes overlooking the tracks, significant noise mitigation would be difficult to achieve without higher than normal walls.

- Dominguez to I-405: Train tracks would be at-grade in this section for all alternatives. Impact is projected for a number of residences east of Alameda Street. The impact could be controlled with sound barriers along the train tracks or along Alameda Street. Barriers may not be feasible in this area without interring with the tracks for the Southern Pacific rail yard or impairing access to properties fronting on Alameda Street.

Table 4-32 in the *Alameda Corridor Final EIR* identifies the barrier and trench attenuation used for noise modeling. For purposes of the noise analysis, for the portions of the Corridor in Carson, a 15-foot barrier was anticipated either along the train tracks or along Alameda Street. The barriers provide attenuation of 10 to 13 dBA, depending on the type of noise and the location of the source.

For Alternative 2.1, in the year 2010 with mitigation, the Corridor project would result in noise levels below the criteria at site LT-2 (21843 Salmon Avenue), LT-3, (2510 Jefferson Street) and LT-5 (Dominguez Seminary). The CNEL is anticipated to be 58.2, 60.2 and 63.0 for LT-2, LT-3 and LT-5, respectively. However, one site, LT-4 (Dominguez Hills Estates) would have a CNEL of 66.8 with mitigation, which exceeds the noise criteria. These noise projections have been extrapolated from Table 4-34 in the *Alameda Corridor Final EIR*.

For Alternative 2.1, in the year 2020 with mitigation, the Corridor project would result in noise levels below the criteria at site LT-2 (21843 Salmon Avenue), LT-3, (2510 Jefferson Street) and LT-5 (Dominguez Seminary). The CNEL is anticipated to be 59.6 and 61.6 for LT-2 and LT-3, respectively. However, two sites, LT-4 (Dominguez Hills Estates) and LT-5 (Dominguez Seminary) would have a CNEL that exceeds the noise criteria. The CNEL for LT-4 and LT-5 would be 69.0 and 66.0, respectively, in 2020 with mitigation. These noise projections have been extrapolated from Table 4-35 in the *Alameda Corridor Final EIR*.

The *Alameda Corridor Final EIR* concluded that in both 2010 and 2020, no houses within the City of Carson along the Corridor would be significantly impact after mitigation is installed.

In conclusion, implementation of policies proposed in the General Plan, as well as mitigation measures in the *Alameda Corridor Final EIR*, would help to reduce any potentially significant noise impacts associated with future operations of railways, but would not reduce the impacts to less than significant levels.

Policies in the Proposed General Plan: The Noise Element contains the following policies:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-3.3 For both transportation-related and development projects along the Corridor, continue to incorporate noise assessments into the environmental review process, as needed.

N-3.4 At such a time when Alameda Street becomes a state highway:

- Encourage Caltrans to meet the City's standard for exterior noise levels of 65 dBA CNEL;
- Where appropriate and feasible, encourage Caltrans to keep interior residential noise levels below the City's standard of 45 dBA CNEL; and
- Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of improvements to the Corridor.

N-5.1 Continue to encourage the railroad and transit operators within the City to schedule trains during the daylight hours, when possible.

N-5.2 Require noise attenuation measures for residential construction in areas affected by the 65 dBA CNEL railroad noise contour. Sound attenuation measures shall reduce interior noise to a maximum of 45 dBA CNEL. These measures shall apply to new residential construction as well as renovations, remodels, and building additions.

N-5.3 Coordinate with the railroad and transit operators to ensure that noise attenuation measures are addressed in the selection of the rail and

vehicle technology for use along rail/transit lines, and the design and reconstruction of existing lines.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan or mitigation measures identified in the *Alameda Corridor Final EIR* are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

STATIONARY NOISE

- **STATIONARY NOISES WITHIN THE CITY MAY IMPACT ADJACENT LAND USES.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: A variety of stationary noise sources are located throughout the City, primarily consisting of commercial and light industrial mechanical equipment, air conditioning units, compressors and similar equipment. This equipment is typically fitted with noise muffling devises. In addition, as part of the City approval for any land use involving such stationary noise sources, the City requires an acoustic study to demonstrate that the stationary noise sources would not exceed City Noise Ordinance limits at the adjacent property line. Implementation of the proposed General Plan policies below would serve to ensure that stationary noise impacts are reduced to less than significant levels.

Policies in the Proposed General Plan: The Noise Element contains the following policies:

N-1.1 Continue to implement and enforce the City's Noise Ordinance and Noise Control Plan.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control. The ordinance(s) and/or plan(s) shall clearly address mitigation of noise conflicts between adjacent uses, construction noise (particularly in or near residential neighborhoods), noise associated with maintenance equipment (e.g., leaf blowers, street sweepers, etc.), hours of operation of construction or maintenance equipment, noise standards, abatement, enforcement, procedures, mitigation of impacts from short-term events (i.e., concerts, sporting events, etc.), as well as like issues.

N-1.3 Enhance enforcement methods and/or mechanisms by exploring new enforcement options.

N-1.5 Coordinate with the California Occupational Safety and Health Administration (Cal-OSHA) to provide information on occupational noise requirements within the City.

N-3.2 Coordinate with the businesses along the Corridor to ensure that noise attenuation measures are addressed in the selection of the vehicle technology, location of truck pick-up and loading areas, locations of mechanical and electrical equipment, exterior speaker boxes, public address systems, and similar noise sources.

N-3.3 For both transportation-related and development projects along the Corridor, continue to incorporate noise assessments into the environmental review process, as needed.

N-7.1 Incorporate noise considerations into land use planning decisions by establishing acceptable limits of noise for various land uses throughout the community.

N-7.2 Continue to incorporate noise assessments into the environmental review process, as needed. Said assessments shall identify potential noise sources, potential noise impacts, and appropriate sound attenuation. In non-residential projects, potential noise sources shall include truck pick-up and loading areas, locations of mechanical and electrical equipment, and similar noise sources. Require mitigation of all significant noise impacts as a condition of project approval.

N-7.3 Require all new residential construction in areas with an exterior noise level greater than 65 dBA CNEL to include sound attenuation measures that reduce interior noise levels to the standards shown in Table N-1. Sound attenuation measures include:

- Sound walls,
- Double glazing,
- Building location, and/or
- Facade treatment.

N-7.4 Ensure acceptable noise levels near schools, hospitals, convalescent homes, churches, and other noise sensitive areas in accordance with Table N-1 (refer to General Plan Update). To this end, require buffers or appropriate mitigation of potential noise sources. Such sources include, but are not limited to truck pickup and loading areas, mechanical and electrical equipment, exterior speaker boxes, and public address systems.

N-8.1 Require the design of mixed use structures to incorporate techniques to prevent transfer of noise and vibration from the commercial to the residential uses.

N-8.2 Encourage commercial uses in mixed use developments, which are not noise intensive.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.5.4 UNAVOIDABLE SIGNIFICANT IMPACTS

Development under the proposed General Plan would create unavoidable significant impacts related to Traffic Noise and Railroad Noise. These impacts are primarily based on the premise that these noise levels could not be feasibly reduced to a less than significant level through standard mitigation practices. Although measures related to mobile source noise sources would be implemented on a project-by-project basis, it is anticipated that these impacts would remain significant and unavoidable.

4.6 GEOLOGIC AND SEISMIC HAZARDS

This section describes the current conditions relating to the geologic and seismic characteristics within the City of Carson. This section concludes with an assessment of geologic impacts and identifies corresponding mitigation measures associated with implementation of the proposed General Plan.

4.6.1 ENVIRONMENTAL SETTING

GEOLOGY

The City of Carson is located within the northerly end of the Peninsular Ranges geomorphic province. The Peninsular Ranges province extends from the Los Angeles Basin south of the Santa Monica Mountains to the tip of Baja California. It includes the San Jacinto and Santa Ana Mountain Ranges and Santa Catalina Island. This geomorphic province is characterized by elongated northwest trending mountain ranges separated by straight-sided sediment floored valleys (Yerkes et al. 1965). The northwest trend is further reflected in the direction of the dominant geologic structural features of the province, which are northwest trending faults and folds. These include the Newport-Inglewood fault zone, the Paramount syncline[1], the Dominguez anticline[2], the Gardena syncline, the Wilmington anticline and the Wilmington syncline. Geologic units of the northern Peninsula Ranges province consist of Jurassic and Cretaceous age basement rocks overlain by as much as 32,000 feet of marine and non-marine sedimentary strata ranging in age from the late Cretaceous to Holocene epochs.

PHYSIOGRAPHIC FEATURES

The City of Carson is situated in the northern part of the physiographic basin known as the Los Angeles Basin (Yerkes et al. 1965), or the Coastal Plain of Los Angeles (Mendenhall 1905). The most prominent landform within the City is Dominguez Hills, which represents the central portion of the Newport-Inglewood fault zone (or uplift). Dominguez Gap is another important landform feature within the City.

Dominguez Hills. The Dominguez Hills lie immediately west of the Alameda Street corridor, between the Redondo Beach/Artesia Freeway (SR-91) on the north and Del Amo Boulevard on the south. Dominguez Hills are a feature consisting of an elliptical, northwest trending anticlinal dome that ranges in elevation from approximately 20 feet above mean sea level (msl) to 195 feet msl.

Dominguez Gap. The Dominguez Gap constitutes a portion of the Downy Plain lying between the Dominguez Hills and the northwestern extension of Signal Hill. The gap is approximately 1.6 miles wide at its narrowest point and approximately seven miles long.

[1] Syncline: A fold that is convex downwards.

[2] Anticline: A fold that is convex upwards.

It was entrenched mainly by the ancestral San Gabriel River, which has a southward flowing ancestral Los Angeles River as a tributary. An estimated 150 feet of Holocene materials has been deposited within the Dominguez Gap.

SOILS

Soils in the City of Carson range from sand to clay loam soil types. Information obtained from the Los Angeles Soils Survey (United States Soil Conservation Service, 1969) general soils map is displayed in Table 4.6-1, *General Physical Properties of Soils in the Carson Area*. A soil association has a distinctive proportional composition of soils. Normally, a soil association consists of one or more major soil types and at least one minor soil type. The table demonstrates the general properties of soil associations that underlay the City. According to the Soil Conservation Service of the U.S. Department of Agriculture (USSCS), no prime agricultural soils exist within the City of Carson.

Table 4.6-1
General Physical Properties of Soils in the Carson Area

Association	Soil Association	Soil Type	Depth (inches)	Slope (%)	Erosion Potential	Shrink-Swell Potential
10	Oceano	Sand	60"	2-5	Mod-High	Low
13	Netz-Cortina	Fine sand and fine sandy loam	60"	0-5	Low-Mod	Low
14	Hanford	Sandy loam	60"	2-5	Low	Low
15	Yolo	Silty loam	60"	0	Low-Mod	Mod
20	Chino (with inclusions of the Foster and Grangeville Associations)	Clay loam	60"	0	Low	Mod
21	Ramona-Placentia	Sandy loam	18-60"	2-5	Low-Mod	High

Source: U.S. Soil Conservation Service, 1969.

MINERAL RESOURCES

OIL WELL PRODUCTION

The Los Angeles Basin is a major oil-producing district in Southern California. Oil, first discovered in the basin in 1889, occurs chiefly in Pliocene and Miocene strata, with lesser amounts in Pleistocene strata and in fractured schist[3] (cretaceous or older) of the basement complex. The City of Carson is located within the Dominguez and Wilmington oil fields.

[3] Schist is a medium grade metamorphic rock.

SEISMIC HAZARDS

The following section describes the presence and characteristics of seismic hazards in Carson, including earthquake faults, surface rupture, ground shaking, liquefaction, hazardous buildings and seismic response.

EARTHQUAKE FAULTS

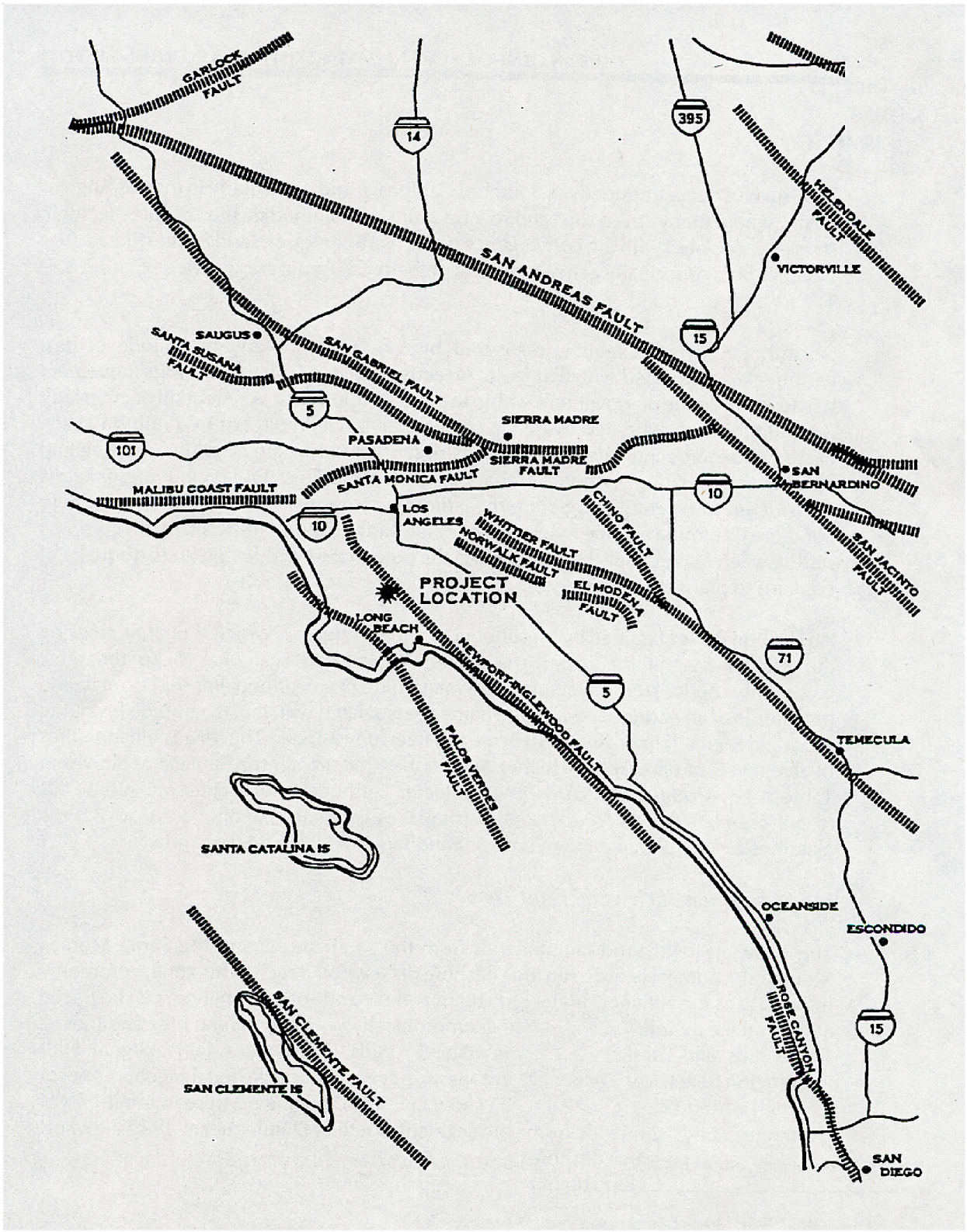
The Southern California region is considered to be seismically active. Earthquakes occur frequently, particularly in the Los Angeles Basin, where numerous faults accommodate the complex tectonic stresses caused by the convergence of the North American and Pacific Plates. Five major faults or zones present a seismic hazard for Carson: Newport-Inglewood Fault zone; San Andreas Fault zone; Palos Verdes Fault zone; Whittier Fault zone (Elysian Park structure); and Santa Monica Fault zone. Exhibit 4.6-1, *Regional Fault Map*, depicts these faults.

The intensity of earthquakes is measured, or expressed in terms of two scales. The Richter Scale measures the strength of an earthquake, or the strain energy released, as determined by seismographic observations. The Mercalli Intensity Scale (MM), describes the intensity in terms of observable impacts. Both measurement systems are referenced in the following discussions.

Newport-Inglewood Fault Zone. The Newport-Inglewood fault extends from the southern edge of the Santa Monica Mountains southeastward to an area offshore of Newport Beach. From north to south, the fault segments are:

- Charnock Fault;
- Overland Avenue Fault;
- Inglewood Fault;
- Portrero Fault;
- Avalon-Compton Fault;
- Cherry Hill Fault; and
- Seal Beach Fault.

This zone, commonly referred to as the Newport-Inglewood uplift zone or zone of deformation, can be traced at the surface by following a line of geomorphically young anticline hills and mesas. These hills and mesas include the Baldwin Hills, Dominguez Hills, Signal Hill, Huntington Beach Mesa and Newport Mesa. Recent earthquake focal mechanisms for 39 small earthquakes (1977 to 1985) show faulting along the north segment (north of Dominguez Hills) and along the south segment (south of Dominguez Hills to Newport Beach). The 1933 Long Beach earthquake has been attributed to movement on the Newport-Inglewood fault zone. Based on historic earthquakes, the fault zone is considered active. The Newport-Inglewood fault zone is considered capable of generating a maximum credible earthquake or a magnitude 7.0. The Cherry Hill branch of the Newport-Inglewood fault zone traverses Carson in the area of Dominguez Gap just to the north of Del Amo Boulevard. Movement along the fault is northeast side up, resulting in vertical displacement of waterbearing sediments extending for several miles.



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Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

REGIONAL FAULT MAP

EXHIBIT 4.6-1

Avalon-Compton Fault/Regional Shear Zone. The Avalon-Compton Fault zone, which is part of the Newport-Inglewood Fault zone, has been identified by the California Department of Mines and Geology (CDMG) as the only active fault located in the City of Carson.[4] The Avalon-Compton fault is approximately four miles long and lies immediately east of Avalon Boulevard and north of the Redondo Beach/Artesia Freeway. Refer to Exhibit 4.6-1, *Regional Fault Map*. Historically, the Avalon-Compton fault/Regional Shear zone has moderate to high seismic activity with numerous earthquakes greater than Richter scale magnitude four. A geological study conducted on this fault concluded that the Avalon-Compton fault and associated Regional Shear zone is seismically active and may exist a depth within this area, but that no Holocene (or even late Pleistocene) ground rupture resultant from the two features exists in the areas studied.[5]

San Andreas Fault Zone. The San Andreas Fault zone is California's most prominent structural feature, trending in a general northwest direction for over 600 miles, encompassing virtually the entire length of California. The fault is divided into segments that have somewhat distinctive behavior patterns. The southern segment is approximately 280 miles long. It extends from the Mexican border into the transverse ranges west of Tejon Pass. Along this segment, there is no single traceable fault line (Lacopi, 1977); rather, the fault is composed of several branches. The fault is considered capable of generating a maximum credible earthquake of magnitude 8.25 (Greensfelder, 1974).

Palos Verdes Fault Zone. The Palos Verdes fault zone is located southwest of Carson and is traceable in the subsurface along the northern front of the Palos Verdes Hills. Zielbauer et al. (1962) report that early Pleistocene age San Pedro Formation beds are sharply unwarped along the fault trace, but that the fault does not cut materials younger than middle Pleistocene at the surface. Offshore data, consisting of acoustic and reflection profiles, show offset in the base of the Holocene material, suggesting very recent movement along the Palos Verdes Fault (Darrow and Fisher, 1983). The fault is considered capable of generating a maximum credible earthquake of magnitude 6.6.

Whittier Fault Zone (Elysian Park Structure). The 1987 Whittier Narrows earthquake (Richter magnitude 5.9) has been attributed to subsurface thrust faults (a low angle reverse fault) that are reflected at the earth's surface by a west-northwest trending anticline known as the Elysian Park Anticline (Lamar, 1970), or the Elysian Park structure. The axial trace of this structure extends approximately 12 miles through the Elysian Park-Repetto Hills from the Silver Lake area on the west to the Whittier Narrows on the east. The subsurface faults that create the structure are not exposed at the surface, and do not present a potential surface rupture hazard; however, as demonstrated by the 1987 earthquake and two smaller earthquakes on June 12, 1989, the faults are sources of future seismic activity. As such, the structure should be

[4] Effective January 1, 1994, the name "Special Studies Zones" has been changed to "Earthquake Fault Zones" and Chapter 7.5, Div. 2 of the Public Resources code has been renamed the "Alquist-Priolo Earthquake Fault Zoning Act".

[5] Source: *Dominguez Hills Village Specific Plan EIR*, prepared by Robert Bein, William Frost and Associates. September 1995. Page 5.1-4.

considered an active feature capable of generating future earthquakes. The fault is considered capable of generating a maximum credible earthquake of magnitude 6.75.

Santa Monica Fault Zone. The Santa Monica Fault is an east-west trending left reverse fault that extends approximately 24 kilometers within the immediate vicinity of Pacific Palisades, Westwood, Beverly Hills and Santa Monica. The annual slip rate is estimated between 0.27 millimeters (mm) and 0.39 mm per year along the fault. The Santa Monica Fault has the capability to generate between a 6.0 to 7.0-magnitude earthquake. The most recent surface rupture along this fault occurred during the Late Quaternary period (between 700,000 years ago and the present day).

GROUND SHAKING

The effects of ground shaking in Carson will vary considerably depending on the distance of the seismic source to the City and the duration of strong vibratory motion. In general, long-period seismic waves, characteristic of earthquakes that occur approximately nine miles or more from the area of concern, interact with and damage structures such as high-rise buildings, bridges, and freeway overpasses. Short-period waves, however, are generally very distinctive near the epicenter of moderate- and large-magnitude seismic events, causing severe damage predominately to low-rise rigid structures (less than three stories) not specifically designed to resist them.

Detectable ground shaking within the City of Carson could be caused by any of the active or potential active faults shown on Exhibit 4.6-1, *Regional Fault Map*. The Newport-Inglewood, Whittier, Santa Monica, and Palos Verdes Faults are the active faults most likely to cause high ground accelerations in the City.[6] The San Andreas Fault has the highest probability of generating a maximum credible earthquake in California within the next 30 years. The anticipated earthquake with a projected magnitude of 7.5 to 8.0 is thought to be capable of seismic intensity values of about IV to V on the Modified Mercalli (MM) Scale. Such an event would have an expected shaking duration of 35 to 50 seconds.

Alluvial deposits underlie the central and southeastern portions of the City, while Quaternary non-marine terrace deposits underlie the northern, western and southern portions of the City. Because of the area's unstable sub-base of sandy soil, Carson (as well as the entire South Bay area) is regarded as one of the most severe shock areas in the Los Angeles area.[7]

SURFACE RUPTURE

Surface faulting, rupture of the ground surface along a causative fault trace, is associated with the primary movement that produced the seismic event. Surface faulting is defined as slip on a fault plane that has propagated upwards to, and offsetting or disturbing, the earth's surface. Offset on a fault intersecting the ground surface can

[6] *1996 Sixth Amendment to Project Area No. 1 EIR*, Rincon, page 5.3-1, July 2, 1996.

[7] Ibid.

create a discrete step or fault scarp if fault slip occurs on a single fault plane or within a narrow fault zone. If fault slip is accommodated over a broader area, then the deformation may be manifest as a zone of fracturing and ground cracking with minor amounts of offset on individual fractures.

Principally studying the seismic history of the fault and reviewing geologic evidence, which suggest historic or prehistoric surface rupture, can determine the likelihood of surface rupture on a given fault. Past studies have shown that future surface faulting is most likely to occur where the trace ruptured last, especially if there is evidence repeated and significant displacement on the trace.

The Alquist-Priolo Earthquake Fault Zoning Act, (Public Resources Code 2621, Division 2, Chapter 7.5) regulates development near active faults so as to mitigate the hazard of surface fault-rupture. Under the Alquist-Priolo Earthquake Fault Zoning Act, designated fault zones (from inferred or trace fault information), require special studies to determine the on-site extent of the faults prior to development in the Earthquake Fault Zone (previously referred to as Special Studies Zone). The Act also requires that, prior to approval of a project, a geologic study be conducted to define and delineate any hazards from surface rupture. A geologist registered by the State of California, within or retained by the lead agency for the project must prepare this geologic report. A 50-foot setback from any known trace of an active fault is required. Additionally, a site-specific geological report is required for construction within 1/8 mile on either side of a fault zone.

The northernmost portion of the City is within an Alquist-Priolo Earthquake Fault Zone. The Avalon-Compton structural zone, which is part of the Newport-Inglewood Fault zone, is the only active fault within the City of Carson.

GROUND FAILURE

Seismically induced ground failure as discussed in this section includes liquefaction, differential compaction, ground lurching, ground cracking and earthquake induced slope failures.

LIQUEFACTION

Liquefaction of surface or subsurface materials is the result of strong ground shaking of water-saturated, loose to moderately dense sand and silty sand. It is defined as the transformation of a granular material from a solid state into a liquefied state as consequence of increased pore water pressure that occurs during an earthquake. Liquefaction can result in shifting of foundations, settling of roadways and rupture of underground pipelines and cables. Buildings and other objects on the ground surface can settle, tilt and collapse as the foundations beneath them lose support, and lightweight buried structures may float to the surface.

The Newport-Inglewood fault zone is a potential source of ground stress, and liquefaction could occur in the area if the ground water table were high enough during an earthquake. Due to existing conditions in the City, particularly in the alluvial and former slough areas, there is the possibility that liquefaction could impact buildings and/or other structures in the event of an earthquake. Exhibit 4.6-2, *Potential Liquefaction Areas*, shows the areas in the City that have shown historical occurrence of liquefaction, or local geological, geotechnical and groundwater conditions, indicating a potential for permanent ground displacements.

Differential Compaction or Settlement. Differential compaction resulting from earthquake ground shaking is potentially damaging to structures, buried utilities and services. Differential settlement may occur in cohesionless sediments where differences in densities in adjacent materials lead to different degrees of compaction during ground shaking. In the case of saturated cohesionless sediments, post earthquake settlement may occur when excess pore-water pressures generated by the earthquake dissipate.

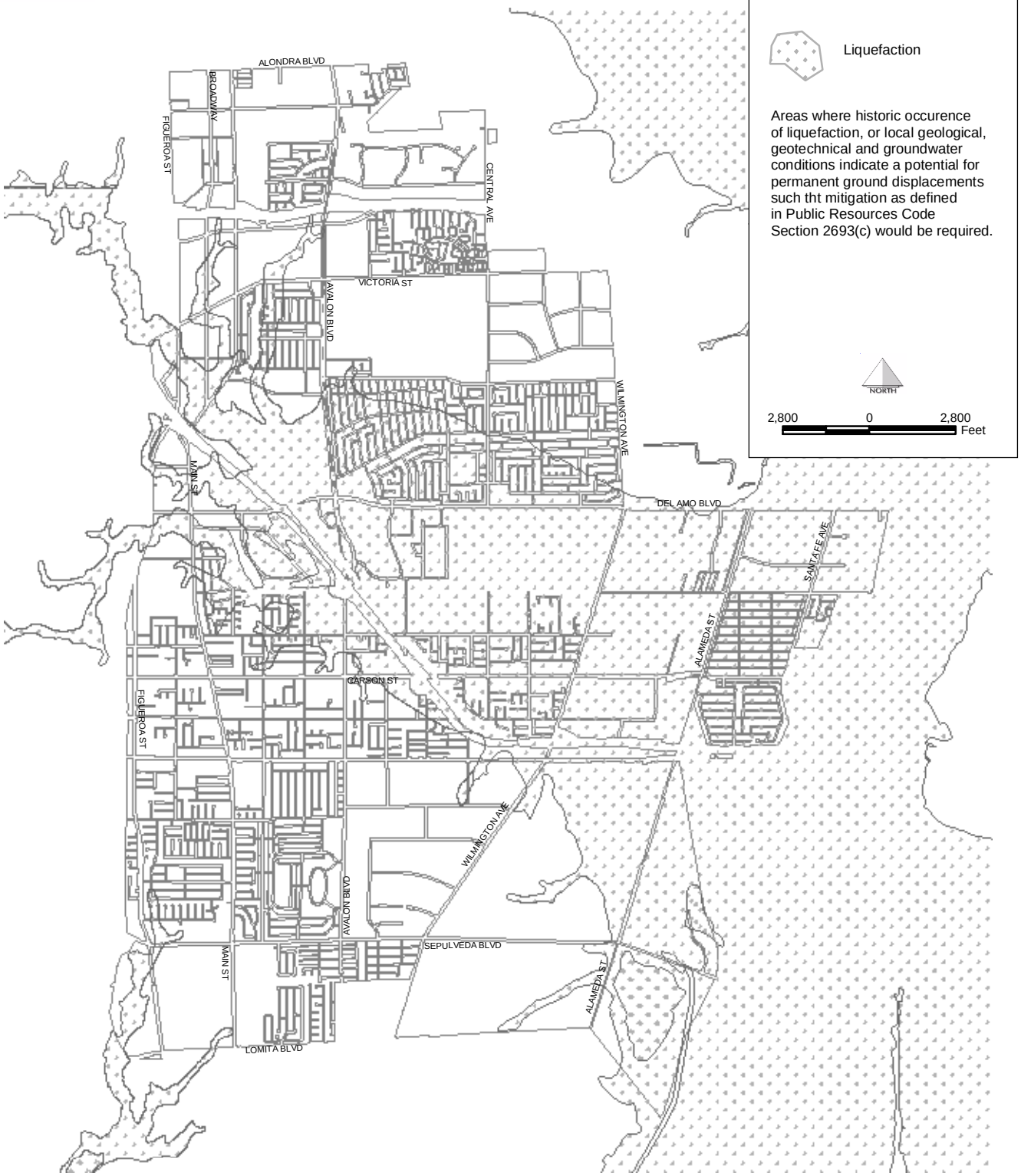
Differential settlement poses a major geotechnical constraint to development in Carson. Given the lateral and vertical variation of the alluvial soils underlying Carson, differential settlement could occur in areas thought to have a low susceptibility to settlement. There are 14 former landfills in the City. Areas where such activities have occurred may be subject to the generation of organic gases associated with decomposition, and possibly experience differential settlement as portions of the ground surface collapse inward.

Ground Cracking, Ground Lurching and Lateral Spreading. Both ground cracking and lurching are secondary features resulting from strong to moderately strong ground shaking and may be associated with liquefaction. Ground cracking usually occurs in near-surface materials, reflecting differential compaction or liquefaction of underlying materials. The potential for ground cracking exists especially in those areas of the City that have a moderate to high potential for liquefaction.

Ground lurching results when soft, water saturated surface soils are thrown into undulatory motion. Ground lurching usually occurs in those regions where a high potential for liquefaction occurs.

Lateral spreading (a form of landsliding) is referred to as limited displacement ground failure, often associated with liquefaction. Compact surface materials may slide on liquefied, or low shear strength layers at shallow depth, moving laterally several feet down slopes of less than two degrees. Such circumstances may be present where conditions conducive to shallow liquefaction exist.

Subsidence. The City of Carson is located within the Dominguez and Wilmington Oil Fields. There is no documented ground subsidence associated with the Dominguez Oil Field. However, the historic withdrawal of oil has been known to cause subsidence in portions of the Wilmington Oil Field. Total subsidence reached a maximum of 29 feet over the crest of the Wilmington anticline, where most of the oil has been withdrawn. Water injection to halt the subsidence was started in the late 1950s in the areas of



CARSON GEOGRAPHIC SERVICES

Source: State of California Seismic Hazard Zones Maps: Inglewood Quadrangle, Long Beach Quadrangle, Southgate Quadrangle and Torrance Quadrangle, March 25, 1999; Special Studies Zones, Torrance Quadrangle, July 1, 1986.
OCTOBER 22, 2002

POTENTIAL LIQUEFACTION AREAS

EXHIBIT 4.6-2

maximum subsidence, but did not become a significant factor until 1971-72.[8] According to the 1981 Carson Safety Element historical subsidence within the City is now under control.

Shallow or Perched Groundwater. Shallow or perched groundwater can cause problems when designing multi-story buildings or underground facilities, such as parking lots or storage tanks. Construction of underground facilities usually requires excavating near vertical walls of earth. Shallow groundwater conditions combined with loose unconsolidated sediments tend to make these types of excavations unstable, requiring special construction techniques to insure the safety of workers. Also of concern is the additional pressure that the groundwater adds against subterranean walls. Special drainage systems have to be designed to help reduce the additional pressure and to prevent flooding. In addition, leaking of underground storage tanks can cause contamination of the underlying regional water table. Groundwater within the City of Carson occurs at a depth of approximately 30 feet below ground surface (bgs) to 70 feet bgs.[9]

Slope Stability. Seismically related slope stability problems include landslides, rockfalls, mudslides and avalanches. Due to the relative absence of significant elevation changes in the City, slope instability in Carson is limited to the slopes adjacent to the flood control channels that intersect the City. The loose unconsolidated nature of the sediments, exposed in those slopes not faced with concrete may cause the slopes to be surficially unstable.

Shrink/Swell Potential. Shrink/swell characteristics with the City of Carson present a geotechnical constraint within the City. Soils with high clay content typically have high shrink/swell characteristics. Shrinking and swelling of soil can cause overlying concrete to crack and settle. Table 4.6-1, *General Physical Properties of Soils in the Carson Area*, identify the shrink-swell potential of soils within Carson.

LANDSLIDES

Earthquake-induced landslides of steep slopes occur in either bedrock or soils and can result in undermining of buildings, severe foundation damage and collapse. Although earthquake activity does induce some landsliding, most slides result from the weight of water-saturated soil and rock exceeding shear strength of the underlying material.

No landslide areas exist within the City of Carson. According to the California Department of Mines and Geology, no areas are known to exist within the City where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground

[8] *Alameda Corridor Environmental Impact Report,* prepared by Myra L. Frank & Associates, Inc., page 4-10, January 1993.

[9] *Annual Survey and Report of Groundwater Replenishment,* Water Replenishment District of California, Plate 2, 1998.

displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.[10]

4.6.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Geology and Soils impacts resulting from the implementation of the proposed General Plan may be considered significant if they cause any of the following results:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving;
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction;
    - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18- 1-B of the Uniform Building Code (1994), creating substantial risk to life or property; and/or
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water (refer to Section 7.0, *Effects Found Not to Be Significant*).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for a potentially significant impact. If a potentially

[10] California Department of Mines and Geology, Official Map of Seismic Hazard Zones. August 15, 2001. http://www.consrv.ca.gov/dmg/shezp/maps.

significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.6.3 IMPACTS AND MITIGATION MEASURES

FAULT RUPTURE

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN GEOLOGIC OR SEISMIC HAZARDS WITH RESPECT TO RUPTURE OF A KNOWN EARTHQUAKE FAULT.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The California Department of Mines and Geology has identified that the Avalon-Compton fault, which is part of the Newport-Inglewood Fault Zone, is an area designated as an Alquist Priolo Earthquake Fault Zone. Land use designations within this fault zone include: High Density Residential, Low Density Residential, Light Industrial, Public Facilities and General Commercial. Although the Newport-Inglewood Fault Zone is seismically active, surface faulting does not appear to be a significant potential hazard.

A site-specific geologic report is required for construction within 1/8 mile on either side of an Earthquake Fault Zone established by the CDMG. Any development would require compliance with seismic safety design requirements as stated in the current Uniform Building Code (UBC), or City Building Code.

According to Alquist Priolo criteria, if a site investigation precisely locates or demonstrates a lack of active fault rupture within the Alquist Priolo Earthquake Fault Zone, setbacks or "non-structural" zones can be reduced or eliminated. A geological study was conducted on this fault as part of an EIR prepared for the Dominguez Hills Village Specific Plan.[11] The report recommended no setbacks in compliance with Alquist Priolo criteria.

The City of Carson has identified minimizing the risk of injury, loss of life and property damage caused by earthquake hazards as one of its primary goals in the Safety Element of the proposed General Plan (SAF-1). Policies such as requiring development to comply with seismic design standards and educating residents regarding earthquake safety are included to achieve the City's goals. Implementation of the proposed General Plan with its goals and policies and compliance with Alquist Priolo Earthquake criteria would reduce any impacts as a result of fault rupture within the City to a less than significant.

Policies in the Proposed General Plan: The Safety Element includes the following policies:

[11] Source: *Dominguez Hills Village Specific Plan EIR*, prepared by Robert Bein, William Frost and Associates. September 1995. Page 5.1-4.

SAF-1.1 Continue to require all new development to comply with the most recent City Building Code seismic design standards.

SAF-1.2 Work with the City's Public Information Office and Public Safety Division to:

- Educate residents in earthquake safety at home,
- Educate the public in self-sufficiency practices necessary after a major earthquake (e.g., alternative water sources, food storage, first aid, family disaster plans, and the like), and
- Identify locations where information is available to the public for planning self-sufficiency.

SAF-1.3 Examine the potential to create a commercial loan program to subsidize the cost of retro-fitting buildings to meet seismic safety regulations. To this end, pursue all sources of State and federal funding in order to retro-fit buildings to meet seismic requirements.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

SEISMIC GROUND SHAKING

❍ **SEISMIC GROUND SHAKING AND SECONDARY SEISMIC EFFECTS IN THE CITY DURING AN EARTHQUAKE ON THE NEARBY REGIONAL FAULTS MAY CAUSE DAMAGE TO DEVELOPMENT RESULTING FROM IMPLEMENTATION OF THE PROPOSED GENERAL PLAN.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Earthquakes are a common occurrence in Southern California. Four faults are located within close proximity to the City of Carson: Newport-Inglewood, Whittier, Santa Monica and Palos Verdes Faults. The San Andreas Fault, located further from the City, is considered capable of delivering much larger magnitude earthquakes to Carson.

Development under the proposed General Plan may result in the addition of up to 1,839 residential units and approximately 15 million square feet of non-residential uses, thereby exposing more people (residents and employees) to the effects of ground shaking from regionally generated earthquakes. Strong seismic ground shaking could result in substantial damage to some buildings within the City of Carson.

The effects of seismically induced ground shaking are probably the most critical potential seismic hazards to the City of Carson. Seismic hazards include secondary effects of seismically induced ground failure including liquefaction and landslides. Property damage, personal injury, and loss of life may result from such events.

The City of Carson has identified natural disasters, such as earthquakes as an issue to be addressed in the proposed General Plan. One of the goals identified in the Safety Element is to minimize the risk of injury, loss of life and property damage caused by earthquake hazards (SAF-1). The policies include ensuring compliance with the UBC and creating loan programs to subsidize the costs of retrofitting buildings to meet seismic safety regulations. In addition to the policies proposed, the mitigation measures found below would reduce seismic impacts to less than significant levels.

Policies in the Proposed General Plan: The Safety Element includes the following policies:

SAF-1.1 Continue to require all new development to comply with the most recent City Building Code seismic design standards.

SAF-1.2 Work with the City's Public Information Office and Public Safety Division to:

- Educate residents in earthquake safety at home,
- Educate the public in self-sufficiency practices necessary after a major earthquake (e.g., alternative water sources, food storage, first aid, family disaster plans, and the like), and
- Identify locations where information is available to the public for planning self-sufficiency.

SAF-1.3 Examine the potential to create a commercial loan program to subsidize the cost of retro-fitting buildings to meet seismic safety regulations. To this end, pursue all sources of State and federal funding in order to retro-fit buildings to meet seismic requirements.

SAF-3.1 Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress.

SAF-3.2 Maintain and update, as necessary, the SEMS Multihazard Functional Plan which identifies emergency response and recovery actions in the event of an incident.

Mitigation Measures: In addition to the policies listed above, the following mitigation measures are recommended to further reduce any impacts.

MM-SAF-1 Due to the potential for ground shaking in a seismic event, individual development projects shall comply with the standards set forth in the Uniform Building Code (most recent edition) to assure seismic safety to the satisfactions of the Department of Building and Safety prior to issuance of a building permit, including compliance with California Division of Mines and Geology Special Publication 117 (Guidelines for Evaluation and Mitigating Seismic Hazards in California, adopted March 13, 1997). Given the proximity of the Avalon-Compton fault within the City of Carson, more stringent measures may be warranted.

MM-SAF-2 Individual development projects shall comply with non-structural seismic mitigation measures, e.g. overhead glass treatments shall use safety glass or film; vending machines, ice machines (if used) and other types of machines and equipment shall be bolted or braced. Pictures and decorative items within common areas shall be secured for earthquake safety.

MM-SAF-3 Ensure individual development projects compliance with current seismic mitigation codes.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

LIQUEFACTION

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN IMPACTS RELATED TO LIQUEFACTION.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: Historically, the City of Carson has demonstrated occurrences of liquefaction throughout significant portions of the central and southeast sections of the City. Liquefaction occurs in areas underlain by water-saturated granular soils, particularly in the alluvial and former slough areas. Historical occurrences of liquefaction have occurred primarily in the center of the City, adjacent to and northeast of the San Diego Freeway (I-405) and in the southeast portion of the City.

It is impossible to eliminate or avoid seismic hazards within Southern California. However, the City of Carson acknowledges the necessity to address these hazards and to minimize the damage that liquefaction resulting from seismic activity can cause within the City. As a result, Carson has identified the reduction of seismic hazards as one of its goals (SAF-1). Implementation of the policies in the proposed General Plan and the mitigation measure would ensure that impacts resulting from liquefaction remain at less than significant levels.

Policies in the Proposed General Plan: The Safety Element includes the following policies:

SAF-1.1 Continue to require all new development to comply with the most recent City Building Code seismic design standards.

SAF-1.3 Examine the potential to create a commercial loan program to subsidize the cost of retro-fitting buildings to meet seismic safety regulations. To this end, pursue all sources of State and federal funding in order to retro-fit buildings to meet seismic requirements.

Mitigation Measures: In addition to the policies listed above, the following mitigation measure is recommended to further reduce any impacts.

MM-SAF-4 Individual development projects shall comply with the standards set forth in the UBC (most recent edition) for structures on-site to assure safety of the occupants to the satisfaction of the Department of Building and Safety prior to issuance of a building permit. These standards included compliance with California Division of Mines and Geology Special Publication 117 (Guidelines for Evaluating and Mitigating Seismic Hazards in California, adopted march 13, 1997) and "Recommended Procedures for Implementation of CDMG Special Publication 117- Guidelines for analyzing and Mitigating Liquefaction in California" (Dr. Geoffrey R. Martin et al, May 1999).

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

LANDSLIDES

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN IMPACTS RELATED TO LANDSLIDES.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: The Seismic Hazards Mapping Program of the California Geological Survey identifies Seismic Hazard Zones within the State of California. Official maps, released March 25, 1999 verify that there are no areas known to exist with in the City of Carson where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements.[12] As a result, no mitigation in compliance with Public Resources Code 2693 (c) would be required. In addition, policies proposed in the General Plan would ensure that any impacts resulting from seismic induced landslides remain at less than significant levels.

Policies in the Proposed General Plan: The Safety Element includes the following policy:

SAF-1.1 Continue to require all new development to comply with the most recent City Building Code seismic design standards.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

SOIL EROSION

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN IMPACTS RELATED TO SOIL EROSION OR THE LOSS OF TOPSOIL.**

[12] California Department of Conservation, Division of Mines and Geology, State of California Seismic Hazard Zone, Torrance and Long Beach Quadrangle, Official Map, Released March 25, 1999.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: The City of Carson is relatively flat resulting in a low potential for soil erosion. The Dominguez Hill area does provide the opportunity for soil erosion during rain.

Implementation of the proposed General Plan would result in development of vacant and underutilized parcels. The City has established several requirements for development to minimize soil erosion, including grading requirements for all hillside developments and temporary erosion control measures during severe weather conditions. The Geology Division of the County Engineers office reviews all subdivision maps to assess impacts of development within the City. In addition, the City has identified specific policies to further reduce impacts from soil erosion. Implementation of the proposed General Plan, City established requirements and the following mitigation measure would ensure that soil erosion impacts remain at less than significant levels.

Also, refer to impact discussion related to storm water runoff in Section 4.7, *Hydrology and Drainage*.

Policies in the Proposed General Plan: The Open Space/Conservation Element includes the following policy:

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

Mitigation Measures: In addition to the policy listed above, the following mitigation measure is recommended to further reduce any impacts.

MM-SAF-5 Grading plans for development projects shall include an approved drainage and erosion control plan to minimize the impacts from erosion and sedimentation during grading. Plans should conform to all standards adopted by the City and meet the requirements of Storm Water Pollution Prevention Plans (SWPPS) required by California State Water Resources Control Board.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

UNSTABLE OR EXPANSIVE SOILS

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN IMPACTS RELATED TO EXPANSIVE SOILS OR SOIL STRENGTH.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis:

Differential Settlement. Variations in the alluvia soils underlying the City of Carson may allow for differential settlement within the City. Sites historically used as landfills may possibly experience differential settlement as portions of the ground surface collapse inward. The City of Carson requires preparation, approval and compliance with a geotechnical report prepared by a California-registered engineering geologist prior to any development within these areas. Additionally, compliance with design requirements as stated in the current Uniform Building Code (UBC) would reduce impacts to a less than significant level. Refer to Section 4-10, *Public Health and Safety*, for further information regarding landfills.

Subsidence. Subsidence has occurred within the City as a result of previous withdrawal of oil within the Wilmington Oil Field. However, Carson has maintained control of any further subsidence within the City. Therefore, less than significant impacts are anticipated in this regard.

Shallow or Perched Groundwater. The City of Carson requires special construction measures during excavation, such as dewatering and use of temporary shoring. In addition, drainage systems are required to be designed to help reduce the additional pressure of groundwater and to prevent flooding. Any dewatering would require appropriate permitting from the County of Los Angeles and Regional Water Quality Control.

Slope Instability. Slope instability in Carson is limited to the slopes adjacent to the flood control channels that within the City. Instability may occur due to the unconsolidated nature of the sediments, exposed in those slopes. Impacts in this regard are anticipated to be less than significant.

Shrink and Swell Potential. Unstable soils, such as the Ramona-Placentia sandy loam in the City of Carson provide an unsound base for construction and should be evaluated on a site-specific basis. The following mitigation measure would reduce impacts resulting from unstable geologic units or expansive soils to less than significant.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential impacts resulting from unstable geologic units or expansive soils.

Mitigation Measures: The following mitigation measure is recommended to further reduce any impacts.

MM-SAF-6 Future development shall comply with all recommendations contained in site-specific geologic, geotechnical, and structural design studies prepared for land development projects. These geotechnical reports shall address soil conditions, including low soil strength, shrink swell potential and other unstable soil conditions. Recommendations contained in these site-specific studies shall be reviewed and approved by the Building Official and incorporated in to final grading and structural design plans, as deemed appropriate by the Building Official.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.6.4 UNAVOIDABLE SIGNIFICANT IMPACTS

All geologic and seismic impacts associated with implementation of the proposed General Plan would be less than significant by adherence to/compliance with the policies proposed and with the imposition of mitigation measures. No unavoidable significant geologic or seismic impacts would occur as a result of implementation of the proposed General Plan.

4.7 HYDROLOGY AND DRAINAGE

This section describes current conditions related to hydrology and drainage within the City of Carson. Additionally, this section provides an assessment of hydrologic impacts and identifies corresponding mitigation measures associated with the development of the proposed General Plan.

4.7.1 ENVIRONMENTAL SETTING

WATER RESOURCES

Water resources are diminishing throughout Southern California with increased development. As the native water supply decreases, the region's dependence on imported water grows. Water conservation, use of reclaimed water as well as control and treatment of runoff pollution is critically important not only to Carson, but the entire region.

SURFACE WATER

No naturally occurring permanent surface water features exist within Carson.

GROUNDWATER

The Central Basin and the West Coast Water Basin are the two groundwater basins underlying Carson. The Newport-Inglewood fault zone serves as a water barrier separating the Central Water Basin and the West Coast Water Basin. This groundwater barrier passes through the north-central portion of Carson in a southeast direction. Groundwater flows within the City generally in a southwest direction.

The adjudicated[1] rights in the Central and West Coast Basins limit the use of groundwater to 281,836 acre-feet per year (AFY): 217,367 AFY in the Central Basin and 64,468 AFY in the West Coast Basin.[2]

Development of the yield of Central Basin is dependent on the use of local storm runoff, imported and recycled water for groundwater recharge and the injection of imported water from the backside of the Alamitos Seawater Intrusion Barrier.[3] The Central Basin is replenished though subsurface flows from the San Gabriel Valley and precipitation that falls directly on the Montebello Forebay and percolates into the Basin.

[1] Adjudicate means to determine judicially.

[2] *Annual Survey and Report on Groundwater Replenishment*, Water Replenishment District of Southern California, page 1, 1998.

[3] *1995-1996 Urban Water Management Plan*, Dominguez Water Corporation, page 3.

Groundwater for the West Coast Basin originates from subsurface flow from the Central Basin and injection along the seawater barrier system. Virtually all of the major rivers flowing through the Central and West Coast Basins have been developed into a comprehensive system of dams, flood control channels and percolation ponds for artificially recharging the basins. Los Angeles County studies have indicated that 90 percent of the rain and runoff in the County either percolates naturally into the ground or is captured in the flood control reservoirs for later release to recharge groundwater basins.[4] The replenishment of Central and West Coast Basins with recycled water is becoming an important source of water.

Several aquifers exist in the vicinity of the City of Carson, including the Gage/Gardena, Lynwood, Silverado and Sunnyside aquifers. The Gage/Gardena aquifer occurs at a depth of 180 feet and varies in thickness from 50 to 100 feet. The Lynwood aquifer occurs at a depth of 270 feet. The Silverado aquifer occurs at a depth of 320 to 450 feet and is the principal groundwater source for the region. Beneath the Silverado aquifer, the Sunnyside aquifer occurs at a depth of 600 feet. These aquifers are primarily replenished by area rainfall.

REGIONAL WATER AGENCIES

The Metropolitan Water District of Southern California (MWD) provides supplemental water for Southern California. The MWD service area encompasses approximately 5,200 square miles. MWD is composed of 27 member agencies, including 14 cities, 12 municipal water districts and one county water authority. MWD imports water from the Colorado River through an extensive aqueduct system and from Northern California via the State Water Project. MWD operates several filtration plants to treat both Colorado River and State Water Project water supplies. The two MWD treatment plants that serve Carson are the Weymouth Filtration Plant in LaVerne and the Diemer Filtration Plant in Yorba Linda.[5]

The West Basin Municipal Water District (WBMWD) provides supplemental imported water supplies to local retail water agencies. Imported water is provided in part to supplement existing groundwater supplies in all areas of WBMWD and to provide a barrier, through injection wells, to seawater intrusion into the West Coast Basin.[6] The MWD and WBMWD act cooperatively to conserve both groundwater and surface water resources.

WATER SUPPLY

Carson is served by two water supply agencies: California Water Service Company (Cal Water) and the Southern California Water Company (SCWC).

[4] Ibid.

[5] *Regional Urban Water Management Plan*, Metropolitan Water District of Southern California, October 1995, page 5.

[6] *1995 Urban Water Management Plan*, Central Basin and West Basin Municipal Water Districts, page 6.

California Water Service Company

Cal Water is a wholesale agency providing imported water for residential and industrial development. The Dominguez District of Cal Water serves a 35-square mile service area, including most of Carson. Imported water is purchased from the MWD through a member agency, the WBMWD. Cal Water participates in the MWD-sponsored "In-Lieu" Water Programs, whereby water suppliers purchase imported water from MWD at a reduced rate instead of pumping groundwater. The non-pumped groundwater then remains in the two Basins serving Carson for use in the future when imported water may not be as plentiful.

Cal Water's water supply has two principal sources: local groundwater and purchased imported water. It is a major beneficiary of the West Coast and Central Water Basins, with groundwater rights totaling 16,481 acre-feet and ten producing wells.[7] Approximately 18 percent of Cal Water's water supply comes from groundwater resources and approximately two percent is derived from desalinization water. The remaining 80 percent comes from imported water, which is adjusted seasonally as supply varies. In time of high imported water availability (winter), imported water reserves are used, and in times of low water availability (summer), groundwater use is increased. This seasonal demand shifting effectively conserves groundwater as a seasonal storage reservoir, and shifts demand for imported water to the winter months.

Cal Water provides water utility services to 435,000 people through 25 operating districts. Carson is part of the Dominguez operating district, serving 32,800 customers. The number of Cal Water customers is projected to increase approximately 6.2 percent from 1995 to 2015. To meet water demands for the next decade, the company will rely on a mix of ground, imported, desalinated and recycled water sources. Cal Water projections indicate that under normal precipitation conditions, it will have sufficient water supplies to meet annual customer water demand through 2015. This is based on the continuation of conservation programs, on desalinated and recycled water becoming available and on planned efforts to emphasize groundwater supplies and to reduce reliance on imported water sources.

Southern California Water Company

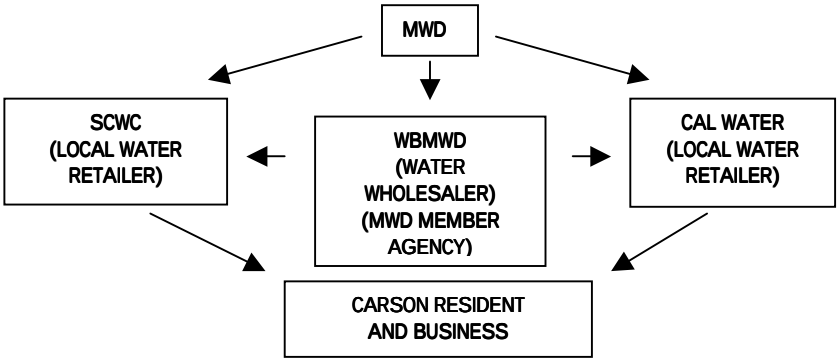
The SCWC is an investor-owned private utility company regulated by the California Public Service Commission. SCWC's service areas are divided into three regions. Carson is part of the Southwest District in Region II. Region II operates seven separate water systems consisting of more than 895 miles of distribution pipelines, meters and hydrants. The Southwest District purchases approximately 80 percent of its water demand from MWD connections located all over the service area. The water is imported from the Colorado River or the Bay Delta in Northern California. Approximately 20 percent of the water demand is produced from company-owned local groundwater wells.

In April of 2000, the Southwest District had approximately 48,276 service connections with average daily demand of 23,300 gallons per day (gpd). At that time, the SCWC had

[7] *1995-1996 Urban Water Management Plan*, Dominguez Water Corporation, page 3.

approximately 2,030 service connections within the City of Carson.[8] Currently the Southwest system serves approximately 13 percent of the City of Carson.[9] According to Ken Putnam of SCWC there are no local groundwater wells within Carson maintained by SCWC. Occasionally Carson may receive groundwater reach, but generally all of the water supplied to Carson by SCWC is purchased from the MWD.[10]

The following diagram demonstrates the provision of water supply to the City of Carson.



STORMWATER MANAGEMENT

Stormwater runoff is a significant contributor to local and regional pollution. Urban stormwater runoff is the largest source of unregulated pollution to the waterway and coastal areas of the United States. Federal, State and regional regulations require the City of Carson to control the discharge of pollutants to the storm drain system, including the discharge of pollutants from construction sites and areas of new development or significant development.

FEDERAL REQUIREMENTS

CLEAN WATER ACT

Passed in 1972, the Clean Water Act (CWA) established the National Pollutant Discharge Elimination System (NPDES) permit program. The CWA prohibits the discharge of pollutants from point sources to United States (U.S.) waters unless an NPDES permit authorizes the discharge. It requires that municipal NPDES Permits include a requirement to prohibit non-storm water discharges into the storm sewer and controls to reduce the discharge of pollutants in storm water discharges to the maximum extent practicable, including management practices, control techniques, system design

[8] Letter dated April 6, 1999 from Mr. Uday Shah, District Engineer, Southern California Water Company, Southwest District.

[9] Letter dated February 7, 2002 from Ken Putnam, Engineering and Planning Manager, Region II, Southern California Water Company.

[10] Telephone conversation with Ken Putnam, Engineering and Planning Manager, Region II, Southern California Water Company, October 18, 2002.

and engineering methods and such other provisions that the U.S. Environmental Protection Agency (EPA) or the California State Water Resources Control Board deem appropriate for the control of such pollutants.

Reduction of conventional forms of pollution, such as sewage treatment plants and industrial facilities has been considerable since implementation of the NPDES program. However, it was shown that pollution from land runoff contributed a larger portion of pollutants than the regulated conventional sources. The 1987 CWA amendments established a framework for regulating urban storm water runoff. Urban runoff includes dry and wet weather flows from urbanized areas through a storm water conveyance system. Pollutants can be intercepted and deposited into U.S. waters as water flows over streets, parking lots, construction sites and industrial, commercial, residential and municipal areas. If not properly controlled, urban runoff could be a significant source of pollutants in waters of the U.S.

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM STORMWATER PROGRAM

The NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges adversely affecting the quality of the nation's waters. The Program uses the NPDES permitting mechanism to require control and monitoring measures designed to prevent harmful pollutants from being washed into local bodies by stormwater runoff. The NPDES program requires the owner or operator of any facility, or any person responsible for any activity that discharges waste into the surface waters of the U.S. to obtain a NPDES permit from the Regional Water Quality Control Board, as mandated by the Clean Water Act.

STATE AND REGIONAL PROGRAMS

The Clean Water Act allows individual states to operate their own NPDES programs provided such programs meet minimum federal requirements. The Los Angeles Regional Water Quality Control Board issues the municipal stormwater National Pollutant Discharge Elimination System permit, MS4. The City of Carson is in the jurisdiction of the Los Angeles Regional Water Quality Control Board, currently operating under Permit No. CAS004001, Order No. 01-182. The Permit was adopted on December 31, 2001 and expires on December 31, 2006.

The objective of Order No. 01-182 is to protect the beneficial uses of receiving waters in Los Angeles County. To meet this objective, the Order requires that the Los Angeles Countywide Storm Water Quality Management Plan (SQMP) specify Best Management Practices (BMPs) that will be implemented to reduce the discharge of pollutants in stormwater to the maximum extent practicable. Further, Permittees are to assure that stormwater discharges from the MS4 shall neither cause nor contribute to the exceedance of water quality, standards and objectives nor create conditions of nuisance in the receiving waters, and that the discharge of non-storm water to the MS4 has been effectively prohibited.

Permit No. CAS004001 requires implementation of a Storm Water Quality Management Program (SQMP), which provides specific guidelines to control, reduce

and monitor discharges of waste to storm drain systems. The emphasis of the SQMP is pollution prevention through education, public outreach, planning and implementation as source control BMPs first and structural and treatment control BMPs second.

STANDARD URBAN STORM WATER MITIGATION PLAN (SUSMP)

The Standard Urban Stormwater Mitigation Plan (SUSMP) was developed as part of the Los Angeles Regional Water Quality Control Board's Municipal Stormwater Program. The SUSMP addresses stormwater pollution from certain types of new development and redevelopment. The SUSMP specifies the minimum required Best Management Practices (BMPs) that must be used for a designated project. Additional BMPs may be required on certain targeted categories of projects based on these regulations at the discretion of the City of Carson. Applicable project applicants are required to incorporate appropriate SUSMP requirements into their development plans.

GROUNDWATER QUALITY

Los Angeles Regional Water

The general quality of groundwater within the Los Angeles Regional Water Quality Control Board (RWQCB) area has degraded substantially over the years as a result of fertilizers and pesticides; nitrogen and pathogenic bacteria from overloaded or improperly sited septic tanks; storage tanks that have leaked or are leaking hazardous substances into the subsurface; and a variety of other sources or conditions. These conditions can result in health risks to those who rely on groundwater for domestic supply. In areas with industrial or commercial activities, aboveground and underground storage tanks contain vast quantities of hazardous substances. Thousands of these tanks in the region have leaked or are leaking, discharging petroleum fuels, solvents, and other hazardous substances into the subsurface. These discharges into the subsurface resulting from inadequate handling, storage, and disposal practices can further pollute groundwater.

West Coast and Central Basins

Seawater intrusion that has historically occurred in the West Coast and Central Basins is under control in most areas through an artificial recharge system consisting of spreading basins and injection wells that form fresh water barriers along the coast. Groundwater in the lower aquifers of these basins is generally of good quality, but large plumes of saline water have been trapped behind the barrier of injection wells within the West Coast Basin, degrading significant volumes of groundwater with high concentrations of chloride. The quality of groundwater in parts of the upper aquifers of both basins is degraded by both organic and inorganic pollutants from a variety of sources, such as leaking tanks, leaking sewer lines and illegal discharges. Leakage primarily consists of gasoline, diesel fuel and waste oil. Clean up of these leaking tanks is monitored by the State Water Resources Control Board. As the aquifers and confining layers in these alluvial basins are typically interconnected, the quality of groundwater in the deeper

production aquifers is threatened by the migration of pollutants from the upper aquifers.

Results of basin-wide monitoring have confirmed that the quality of groundwater extracted from the Central Basin has been very good. However, there is a continuing problem with industrial solvents contaminating groundwater within limited areas of the Central Basin. These solvents, namely trichloroethylene (TCE) and tetrachloroethylene (PCE), have been detected in several wells in the areas straddling the pressure and non-pressure areas of the basin. Analysis of this situation has revealed that the contamination is most likely a result of local sources of leaking underground storage tanks, illegal disposal and poor handling practices at the point of use rather than replenishment operations.

DRAINAGE FACILITIES

The Los Angeles County Department of Public Works (LACDPW) is the agency responsible for regional flood control protection within Los Angeles County. LACDPW presently owns and maintains three regional flood control facilities in and around the City of Carson. These facilities are the Dominguez Channel, Compton Creek and Wilmington Channel.

Two drainage reaches are classified as unimproved watercourses within the City of Carson. The first reach is aligned through Victoria Golf Course, a Los Angeles County Department of Parks and Recreation facility, and extends from Dominguez Channel to 192nd Street. The second reach is aligned through Carson Harbor Village Mobile Home Park, from Victoria Street to Albertoni Street.

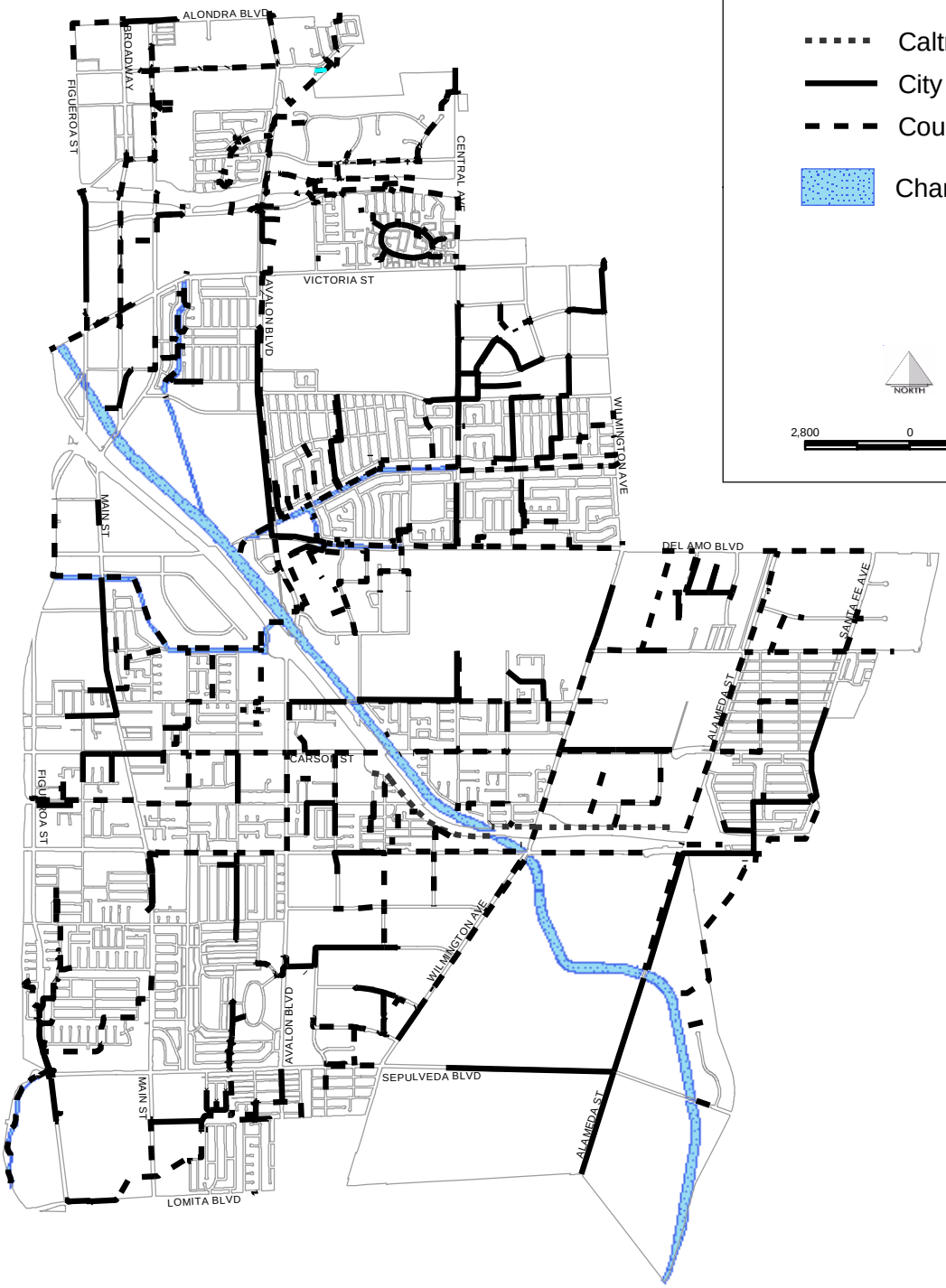
The California State Department of Transportation (Caltrans) also operates and maintains several drainage facilities within State operating rights-of-way associated with the Harbor (I-110), Redondo Beach/Artesia (SR-91) and San Diego (I-405) Freeways. In addition, to the above drainage facilities, approximately 130 storm drains exist within the City.[11] The drainage facilities located within Carson are shown in Exhibit 4.7-1, *Existing Drainage Facilities*.

MASTER PLAN OF DRAINAGE

In 1987, the City of Carson, in consultation with Willdan and Associates, developed a Master Plan of Drainage for the City. The Master Plan of Drainage provides an assessment of citywide drainage facilities and establishes a long-range plan for the implementation and development of proposed drainage facilities in the City.

The Master Plan of Drainage divided the City into 12 major drainage zones and described the existing and proposed facilities required in each zone. Zones 1 through 7 are located north of Dominguez Channel, while zones 8 through 12 are located south of Dominguez Channel. A comprehensive inventory of existing drainage facilities,

[11] *City of Carson Master Plan of Drainage*, page 5, September 1987.



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

EXISTING DRAINAGE FACILITIES

EXHIBIT 4.7-1

drainage patterns and their capacities was completed. Hydrology and hydraulic analysis were conducted to determine the need for additional drainage facilities to satisfy flood control requirements.

The plan provides for flood protection from a storm with a return frequency of 50 years for sump areas and natural drainage courses, with the exception of Zone 2 where the drainage system was found to be adequate for a 25-year frequency with minor exceptions. For all other areas, flood protection from a storm with a return frequency of 10 years was provided. The City's Master Plan of Drainage concluded that the existing storm drain system is generally adequate to provide flood protection for developed areas of the City with a few exceptions. The plan recommended 58 proposed drainage facilities at a total cost of $22 million. Each proposed drainage facility was assigned a number on the basis of its priority. Eight proposed drainage facilities rated priority one, 18 rated priority two and 32 rated priority three.

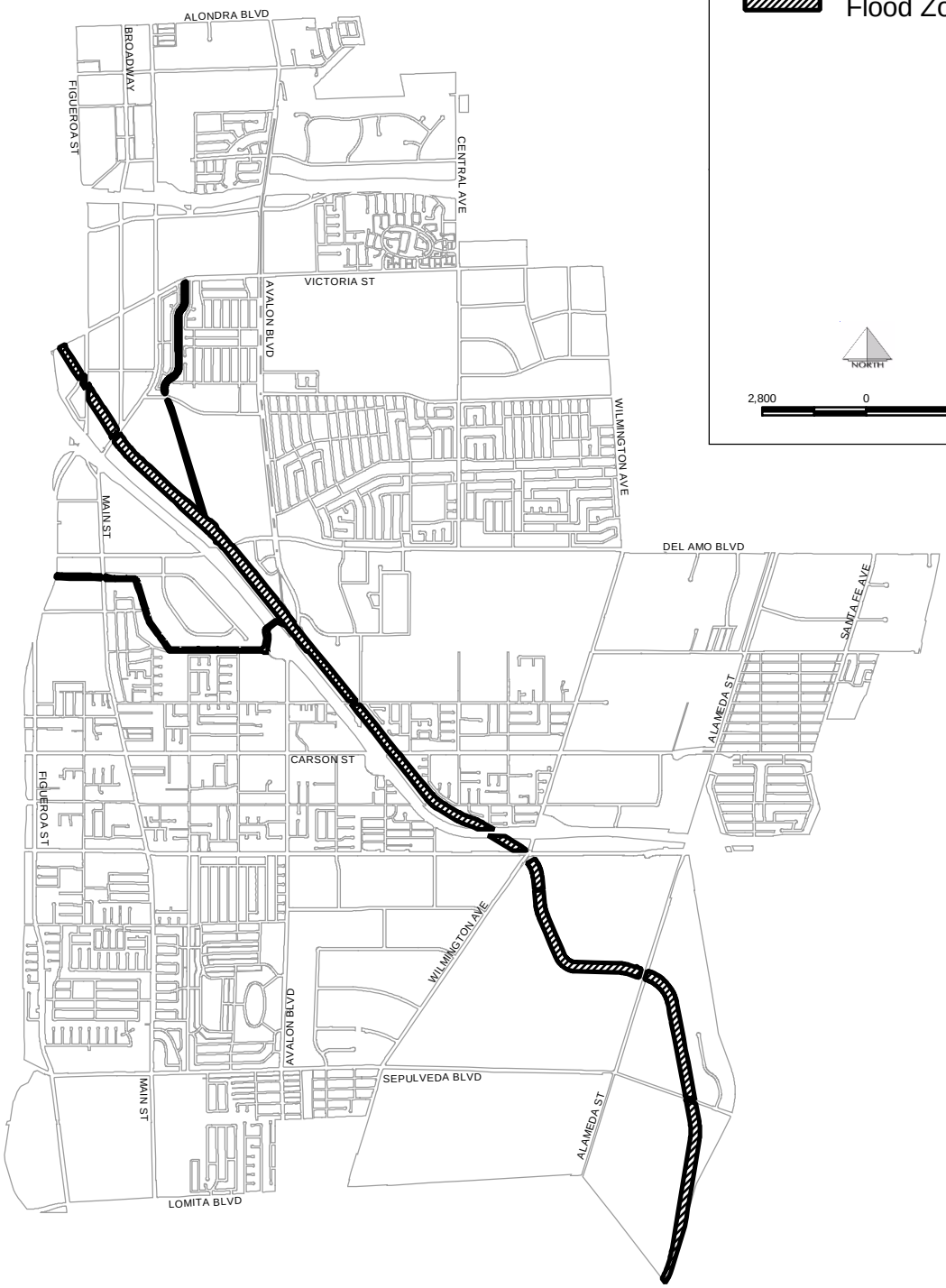
The City's Mater Plan of Drainage should be consulted for exact system configurations and suggested improvements for any particular site with the City.

FLOOD HAZARDS

The topography within the City of Carson is generally flat with elevations ranging from sea level to approximately 195 feet above mean sea level (msl) at the top of Dominguez Hills. Carson is divided by the Dominguez Channel, a regional flood control system operated and maintained by the County of Los Angeles Department of Public Works. Flows in the City are conveyed by several networks of large drainage facilities to Dominguez Channel. The southwest portion of the City and two smaller areas to the northeast do not convey flows to the Dominguez Channel.

The Federal Emergency Management Agency (FEMA) is responsible for administration of the National Flood Insurance Program (NFIP). The City of Carson is designated by the NFIP as a Zone "C" City (area of minimal flooding). Up until February 2000, FEMA indicated that roughly the eastern third of the City would be flooded during a 100-year storm event. However, on February 25, 2000, FEMA identified this area as not being within a flood zone. This determination was as a result of work partially completed by the U.S. Army Corps of Engineers (Corps), which included the restoration of a section of the Los Angeles River levee system that provides flood protection for part of four surrounding communities, including the City of Carson. The completed portion of the restoration project extends along the Los Angeles River from Long Beach Boulevard to the Pacific Ocean, and along Compton Creek from the Artesia Freeway to the Los Angeles River. The Corps completed the entire flood control project in December 2001.

Flooding that would result from a 100-year storm is limited to the Dominguez Channel, as shown in Exhibit 4.7-2, *Flood Zone Map*. Areas outside the 100-year storm limits may also flood due to poor storm drainage. It should be noted that according to FEMA, the entire City would be flooded during a 500-year flood event.



CARSON GEOGRAPHIC SERVICES

Source: Federal Emergency Management Agency, 1997
OCTOBER 22, 2002

FLOOD ZONE MAP

EXHIBIT 4.7-2

Historically, flooding problems within the City of Carson have occurred in low lying areas and in areas where slopes are flat and peak storm flows are unable to be quickly conveyed into the stormwater collection system. During heavy rains, runoff water from the northeast part of the City is caught and contained in Del Amo Park, located at Avalon Boulevard and Del Amo Boulevard. Del Amo Park is designated by the Los Angeles Food Control District as a catch basin to relieve the storm drain of excessive water that cannot be immediately handled during a rainstorm. A Los Angeles County pump station, located at the northeast corner of the catch basin, pumps the basin dry when the water flow subsides. An area for potential flooding is in the southeast corner of the City at the catch basin located on Santa Fe Street between Carson and Wardlow Streets. Runoff water is handled in the same manner as at Del Amo Park, which is used on a daily basis as a City recreation park facility. The catch basin on Santa Fe Avenue is also a public street on a day-to-day basis.

If evacuation due to flooding is necessary, the selection of sites for relocation centers should consider the following:

- Carriage Crest Park and Del Amo Park are low points and should not be used during a flooding incident.

- Dolphin Park may flood during a heavy storm. Its safety should be ascertained before use.

- If schools are to be used, avoid Towne Avenue Elementary, which is in a flood prone area, and Leapwood Avenue Elementary, which is in a mudslide prone area.

- California State University at Dominguez Hills is on high ground and is large enough to handle a major relocation, but access from south Carson may be blocked by flooded intersections and mudslides near the campus. Access routes must be carefully planned, if the campus is to be utilized as an emergency shelter.

DAM INUNDATION

According to the City of Carson's SEMS Multihazard Functional Plan, the City is not subject to inundation associated with dam failure.

SEISMICIALLY INDUCED WATER WAVES

Seismically induced water waves include tsunamis, seiches and waves generated by failure of retaining structures. Tsunamis are generated by earthquake-induced subsea dislocations or landslides, which cause large volumes of water to move in the form of ocean waves. Coastline configuration and tidal influx may cause local amplifying effects. A seiche is a low amplitude wave generated in a restricted body of water due to earthquake motions.

TSUNAMIS

Due to the distance of the City to the Pacific Ocean, Carson has not been vulnerable to storm surge inundation. The potential for tsunami effects within the City is negligible.

SEICHES

The absence of any large bodies of water within Carson, preclude the possibility of damage from seiche effects.

4.7.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria, or standards used to determine the significance of impacts may vary depending on the nature of the project. Hydrology and water quality impacts resulting from the implementation of the proposed General Plan could be considered significant if they cause any of the following results:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;

- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or

- Inundation by seiche, tsunami, or mudflow (see Section 7.0, Effects Found Not To Be Significant).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.7.3 IMPACTS AND MITIGATION MEASURES

WATER QUALITY STANDARDS AND WASTE DISCHARGE REQUIREMENTS

❍ **FUTURE CONSTRUCTION ACTIVITIES AND POST-CONSTRUCTION USES RESULTING FROM IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY VIOLATE WATER QUALITY STANDARDS OR WASTE DISCHARGE REQUIREMENTS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Surface runoff in the City of Carson may contribute to water quality degradation. Future construction, grading and excavation would cause temporary disturbance of surface soils. Runoff from disturbed areas would likely contain silt and debris, resulting in a short-term increase in the sediment load of the stormdrain system serving the City. There is also the possibility for chemical releases at future construction sites. Substances such as oils, fuels, paints and solvents may be transported to nearby drainages, watersheds and groundwater in storm runoff, wash water and dust control water. The significance of these water quality impacts would vary depending upon the level of construction activity, weather conditions, soil conditions and increased sedimentation of drainage systems within the area.

Implementation of the proposed General Plan may generate wastewater during construction of individual development projects that would adversely affect water quality beyond standards specified by the State Water Resources Control Board (SWRCB). The City of Carson has acknowledged the importance of protecting its water resources and has identified protection and conservation of water resources as one of its goals (OSC-2) in the proposed General Plan. Polices OSC-2.1, 2.2, 2.3 and 2.4 state the policies the City will implement to protect Carson's water quality and water resources and to meet waste discharge requirements. Additional policies are contained in the Open Space and Conservation and Transportation and Infrastructure Elements would help to maintain water quality in the City of Carson as it approaches buildout. In addition, mitigation measures are proposed to further reduce any impacts to less than

significant levels. Therefore, implementation of the proposed General Plan would result in less than significant impacts in regards to water quality and waste discharge.

Policies in the Proposed General Plan: The Open Space and Conservation and Transportation and Infrastructure Elements include the following policies:

OSC-2.1 Maintain and improve water quality.

OSC-2.2 Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

Mitigation Measures: In addition to the policies listed above, the following mitigation measures are recommended to further reduce any impacts.

MM-HYD-1 Individual development projects would be required to prepare a drainage/grading plan for approval by the Los Angeles County Department of Public Works prior to issuance of grading permits.

MM-HYD-2 Individual development projects would be required to construct any parkway drains or similar devices required by the draining/grading plan prior to issuance of a building permit.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

GROUNDWATER DEPLETION

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN IMPACTS ASSOCIATED WITH DEPLETION OF GROUNDWATER SUPPLIES AND INTERFERE WITH GROUNDWATER RECHARGE.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City of Carson relies on a combination of two wholesalers and two retailers for its municipal water supply and water recycling efforts: Metropolitan Water District, West Basin Municipal Water District, Southern California Water Company, and the California Water Service Company. These agencies operate and maintain various pipelines, booster stations and other facilities in the City to maintain a supply of potable water and to promote the use of recycled water. Of these four water purveyors, only Cal Water utilizes local ground water for Carson.

Implementation of the proposed General Plan would increase the population and businesses within the City of Carson, and ultimately increase the demand for water supplies. Implementation of the proposed General Plan would result in a 7.4 percent increase in the amount of residential units. Acreage designated Commercial would increase 11 percent, while acreage designated Industrial would increase 5 percent as a

result of implementation of the proposed General Plan. The increase in commercial acreage can be attributed to the projected increase of mixed-use development of 3.9 million square feet over the next 20 years. The increase in industrial acreage can be attributed to the increase in acreage of the Business Park and Light Industrial land uses over the next 20 years. Projected development would further constrain the water supply.

Water conservation in Southern California became increasingly important in the 1980s and early 1990s, when the entire region suffered a severe drought. Drought conditions in Southern California directly affects groundwater recharge and groundwater supplies. Carson has recognized the importance of water conservation. The City has identified the protection and conservation of Carson's water resources as one of its goals in the Open Space and Conservation Element of the proposed General Plan (OSC-2). In addition, specific policies have been identified to achieve this goal. They include conserving and enhancing the City's water supply and coordinating and monitoring the community's water conservation efforts to ensure their effectiveness (OSC-2.4).

Policies in the Proposed General Plan: The Land Use and Open Space and Conservation Elements include the following policies:

LU-15.10 Provide for the efficient use of water through the use of natural drainage, drought tolerant landscaping, and use of reclaimed water, efficient appliances and water conserving plumbing fixtures.

OSC-2.4 Conserve the water supply available to the City and promote water conservation in the management of public properties.

OSC-2.5 Educate citizens about water conservation, encourage its practice and monitor its effectiveness.

OSC-2.6 Ensure the completion of the reclaimed water facility in the City of Carson.

OSC-2.7 Encourage the use of reclaimed water in all applications for which potable water is not necessary.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

DRAINAGE AND RUNOFF

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN IMPACTS TO DRAINAGE PATTERNS IN THE CITY OF CARSON THAT MAY LEAD TO EROSION, SILTATION OR SURFACE WATER RUNOFF. IN ADDITION, IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY**

CREATE OR CONTRIBUTE RUNOFF WATER TO THE STORMWATER DRAINAGE SYSTEMS IN THE CITY.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The Los Angeles County Department of Public Works (LACDPW) presently owns and maintains three regional flood control facilities in and around the City of Carson. The California State Department of Transportation (Caltrans) also operates and maintains several drainage facilities within State operating rights-of-way. In addition, to the above drainage facilities, approximately 130 storm drains exist within the City.

Implementation of the proposed General Plan would result in the development of vacant and underutilized parcels. Development would increase erosion, siltation and surface water runoff to the existing storm drain system. No new drainage systems or alterations to the existing drainage systems are planned for the City of Carson, as those identified are considered sufficient to handle current and projected future use. However, the City has recognized the need to monitor and improve as necessary, the storm drain system to ensure its adequacy in accommodating future development. Specific policies have been proposed as part of the General Plan to reduce any impacts to drainage and runoff to less than significant levels.

Policies in the Proposed General Plan: The Safety and Transportation and Infrastructure Elements include the following policies:

SAF-2.1 Continue to maintain and improve levels of storm drainage service.

TI-8.2 As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of uses, as well as existing uses.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

FLOODING/DAM INUNDATION

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN POTENTIAL FLOODING IMPACTS WITHIN THE CITY CARSON.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City of Carson is 83 percent built out. Implementation of the proposed General Plan would ultimately result in the addition of approximately 1,839 dwelling units and approximately 15 million square feet of non-residential uses.

Flooding that would result from a 100-year storm is limited to the Dominguez Channel. Areas outside the 100-year storm limits may also flood due to poor storm drainage. According to FEMA, the entire City would be flooded during a 500-year flood event.

A Master Plan of Drainage for the City of Carson was developed in 1987. The Plan assesses citywide drainage facilities and establishes long term plans for the development and implementation of additional drainage facilities. The Plan provides exact system configurations and suggested improvements for particular sites within the City. Implementation of the Plan would provide additional control over drainage concerns.

In addition, Carson has identified the minimization of risk and damage from flood hazards within the City as a planning goal (SAF-2). Policies SAF-2.1, 2.2, 2.3, 2.4 and 2.5 included in the proposed General Plan would decrease potential flood hazards. Implementation of the Master Plan of Drainage combined with the policies proposed in the General Plan, would result in less than significant impacts in regards to flooding.

According to the City of Carson's SEMS Multihazard Functional Plan, the City is not subject to inundation associated with dam failure. Thus, implementation of the proposed General Plan would not result in any impacts in this regard.

Policies in the Proposed General Plan: The Safety and Transportation and Infrastructure Elements include the following policies:

SAF-2.1 Continue to maintain and improve levels of storm drainage service.

SAF-2.2 Continue to work with the appropriate local, State and Federal agencies (i.e., Los Angeles County Department of Public Works, Caltrans, Federal Emergency Management Agency, etc.) to reduce the potential for flood damage in the City of Carson.

SAF-2.3 Ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. To this end, work closely with Los Angeles County Department of Public Works and other cities in the South Bay region to ensure that facilities are adequate to accommodate storm waters.

SAF-2.4 As development intensifies and/or as redevelopment occurs in the City, ensure that storm drain systems are adequate to accommodate any intensification of uses, as well as existing uses.

SAF-2.5 Periodically review and recommend appropriate changes to the Los Angeles County Department of Public Works for the Storm Drainage Master Plan for Los Angeles County.

SAF-3.2 Maintain and update, as necessary, the SEMS Multihazard Functional Plan which identifies emergency response and recovery actions in the event of an incident.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan Update are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.7.4 UNAVOIDABLE SIGNIFICANT IMPACTS

Development under the proposed General Plan would create unavoidable significant impacts related to groundwater depletion. These impacts are primarily based on the premise that the water supply for the City of Carson and the Southern California region is constrained. Implementation of the proposed General Plan would result in increased water demand. Although measures related to water conservation would be implemented, it is anticipated that these impacts would remain unavoidable and significant.

4.8 PUBLIC SERVICES AND UTILITIES

The analysis in this section focuses upon public services, utilities and service systems. Public services include fire protection, police protection, schools and libraries. Utilities and service systems include wastewater, water and solid waste. Electricity, natural gas and telephone services are also evaluated. The potential impacts on public service and utility agencies were evaluated based on correspondence (refer to Appendix F, *Correspondence*) with local public service and utility agencies that serve the Carson Area.

4.8.1 ENVIRONMENTAL SETTING

FIRE PROTECTION

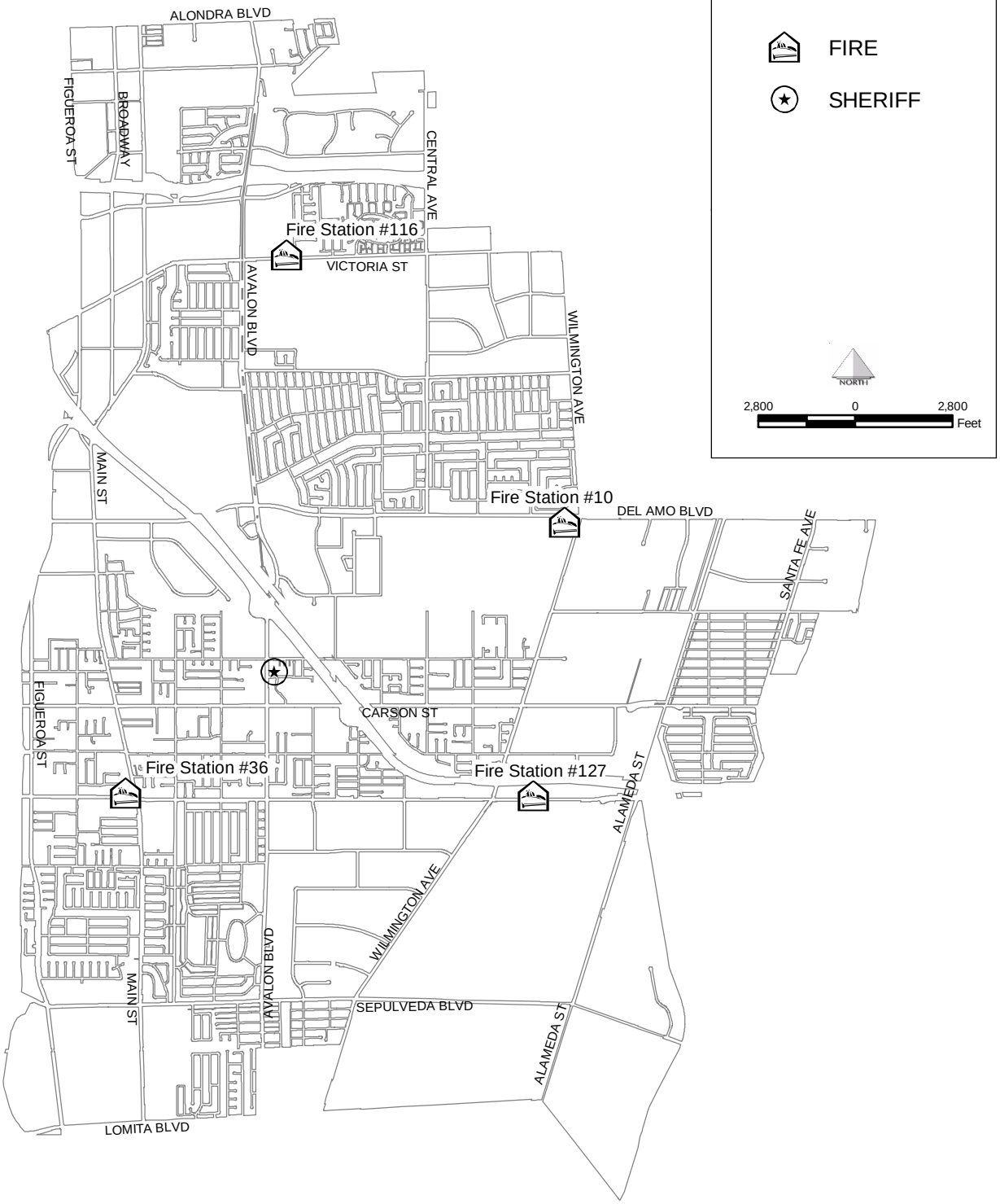
The Los Angeles County Fire Department (LACFD) provides fire protection services to the City of Carson. There are six primary fire stations that provide both fire and emergency medical services to the City. Four of the stations are located within Carson's boundaries. There is also a Fire Prevention Office located at the Carson City Hall. Refer to Exhibit 4.8-1, *Existing Fire and Sheriff Stations*. Each of the primary stations has established an expanded response matrix for its individual jurisdiction, which increases the resources available to help a fire station respond to an emergency. These include additional engine companies, truck companies, paramedic units and hospitals. As 911 emergency calls are processed, a computer dispatching system selects from this matrix to provide the closest available unit that can meet the emergency need. The Los Angeles County Fire Department operates under the 1996 Uniform Fire Code.

The LACFD's current Five-year Fire Station Plan includes a new station in the western part of the City near the 405/110 Freeway interchange. It is identified as a Priority Four (4) project, with one being the highest priority and five the lowest. No site has yet been selected. The LACFD has insufficient funds to allocate to the new station at this time.

Paramedic definitive care is provided through squads 36 and 116, located within the City of Carson. Additional paramedic squads are located in the surrounding communities of Lomita, Lawndale, Hawthorne, Lakewood, Paramount and Rolling Hills to augment, providing additional paramedic coverage as needed. Three LACFD helicopters provide air ambulance and paramedic service to the Los Angeles County area including Carson. American Medical Response (AMR) provides ambulance service for the area with units based at East 223rd Street and Lucerne Avenue in Carson.

POLICE PROTECTION

The Los Angeles County Sheriff's Department (LACSD) provides police services for the City of Carson. Carson Sheriff Station is located at 21356 South Avalon Boulevard in



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

EXISTING FIRE AND SHERIFF STATIONS

EXHIBIT 4.8-1

Carson (refer to Exhibit 4.8-1). As of September 2002, total staff for this location includes 187 sworn personnel and 35 civilian personnel staff. There are approximately 2.1 sworn personnel per 1,000 residents.

Response times are categorized by emergent response (a call which requires a code-3 response), immediate response (a call which requires a prompt non code-3 response) and routine response (a call of a non-emergent nature). Table 4.8-1, *Emergency Response Calls and Times*, shows the total number of calls per response category and the amount of time on average to respond to those calls.

Table 4.8-1
Emergency Response Calls and Times

Type of Call	2000		2001		2002 (As of August 31)	
	Calls	Time	Calls	Time	Calls	Time
Emergent	1,329	4.7 minutes	1,178	5.0 minutes	735	4.8 minutes
Priority	4,836	7.7 minutes	5,363	7.8 minutes	4,004	7.6 minutes
Routine	23,463	36.7 minutes	24,783	39.1 minutes	18,103	36.3 minutes
Total	29,628		31,324		18,013	

Source: LACSD Carson Station, Correspondence dated September 26, 2002.

The City of Carson has responded to increasing crime rates by adding two Community Oriented Policing Teams, a two-person crime suppression patrol unit and a Park Enforcement Team. In addition, the Carson Sheriff Station provides several community oriented programs and services.

- Community Oriented Police Teams. The Community Oriented Policing Teams interact regularly with City leaders and the community to identify community priorities regarding public safety and quality of life issues. Collaborative efforts with the community and other public service agencies are utilized to develop and implement solutions to these issues.

- Park Enforcement Team. The Park Enforcement Team provides law enforcement services to all park facilities located within the City and the adjacent neighborhoods. Park Watch Programs have been developed to provide proactive law enforcement and community mobilization in the protection and safety of the City's parks.

- Community Relations. The Community Relations office coordinates a variety of community outreach activities to improve the relationship of the Sheriff's Department with the Carson community. These activities include Home/ School/Business Safety Presentations, Station Open Houses, Community Academies, Neighborhood Watch, Volunteers on Patrol, The Explorer Scout Program, Disadvantaged Families and Support Programs and the Station Volunteer Program.

- Vital Intervention Directional Alternatives (VIDA) Program. The VIDA Program is a 16-week curriculum for at-risk youths. The program functions within a highly structured and disciplined environment, focusing on respect and assuming responsibility for one's actions, in addition to teaching essential life skills.

- Child Outreach Program. The Carson Station Child Outreach Program provides field trips and an annual Christmas party for at-risk youth within the community.

SCHOOL FACILITIES

The City of Carson is served by the Los Angeles Unified School District (LAUSD) and the Compton Unified School District (CUSD). LAUSD has 14 elementary schools, five middle schools and six high schools that serve the Carson area. CUSD has one elementary school, one middle school and one high school serving the City. Exhibit 4.8-2, *Educational Facilities*, shows the schools that are located within the City of Carson.

In addition to public schools, the City of Carson also has two parochial schools, an adult school and the California State University Dominguez Hills campus.

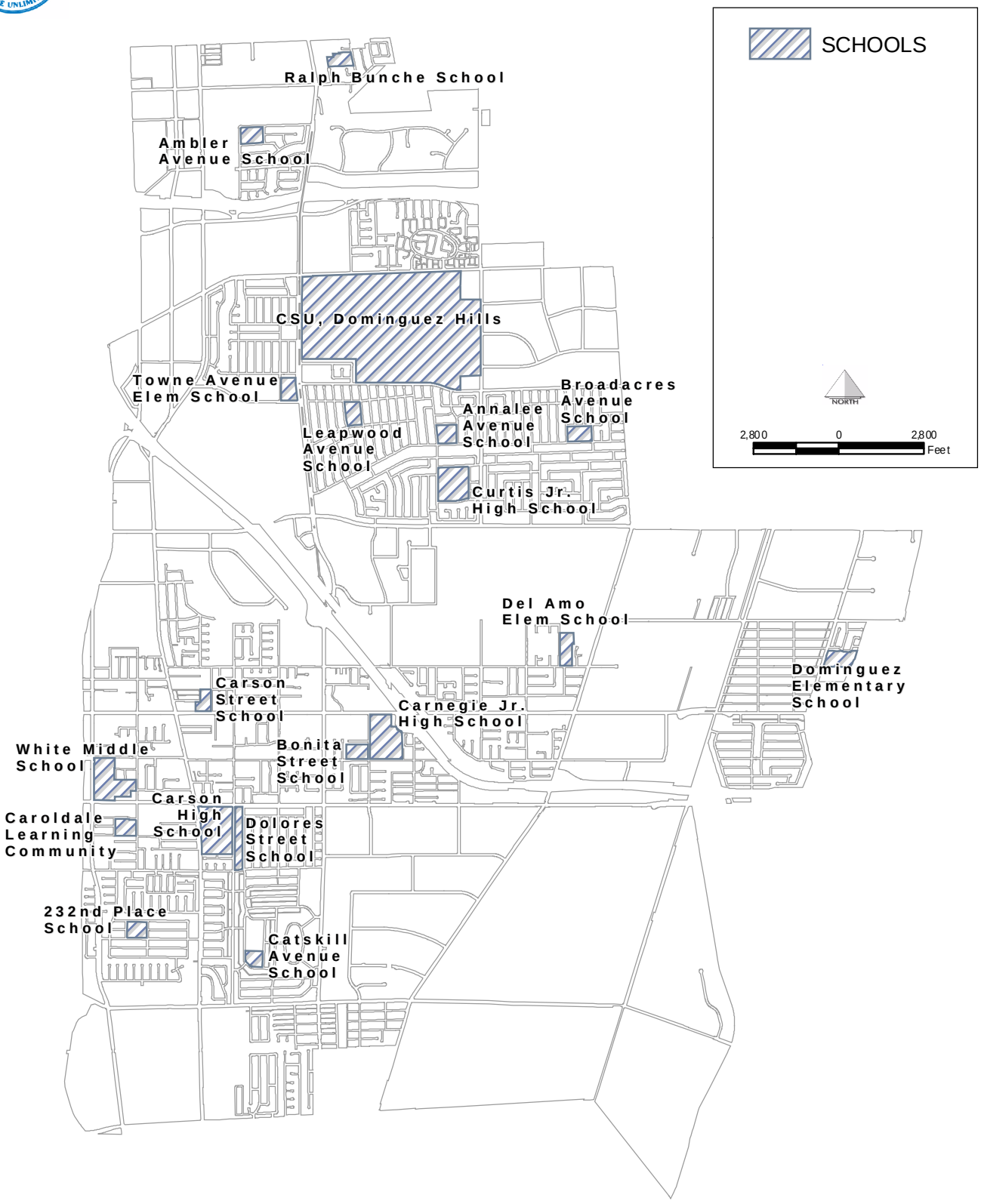
- Peninsula Christian School. This private school has a total capacity of approximately 120 students. The school consists of eight classrooms with instruction for Kindergarten through 8th Grade and provides day care services before and after school.

- St. Philomena Catholic School. This school provides classes for kinder-prep through 8th grade, in addition to before and after daycare service. The school contains ten classrooms for daily instruction, library, computer rooms, music rooms, meeting room and various administrative offices.

- Carson Community Adult School. The adult school serves both the Carson and Wilmington areas by providing ESL (English as a Second Language) classes, high school subject classes leading to a diploma, GED (General Education) test preparation instruction and computer and reading skills classes for the general community. The classes are offered at various facilities throughout the City, including Carson High School, Catskill Avenue Elementary School, Dominguez Elementary School and Carson Park.

- California State University Dominguez Hills. The campus was founded in 1960 and served its first students in 1965. The University provides degree, certificate and credential programs as well as non-credit courses. Programs are offered on campus, via television, teleconferencing and the internet. Quarter enrollment for the 2001-2002 college year averaged 12,967 students.[1]

[1] California State University, Dominguez Hills official website, Institutional Research, September 10, 2002 http: www.csudh.edu/oir/enrollment.htm



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

EDUCATIONAL FACILITIES

EXHIBIT 4.8-2

LIBRARY FACILITIES

The City of Carson is served by the County of Los Angeles Public Library system. The Carson and Victoria Park Libraries are located within the City. The Carson Library is located at 151 East Carson Street in Carson. The service area for the library has a population of 100,980. The library has a collection of 216,146 library material items consisting of books, audio and video materials, DVD's, pamphlets, periodicals and government documents.

The Carson Library has demonstrated a steady increase in the circulation of materials in recent years, serving as a resource to the library system as a whole, with a collection emphasis in the areas of science and technology. Carson Library is the West County Regional Headquarters and provides reference back up for community libraries in the West County Region.

Victoria Park Library is located at 17906 South Avalon Boulevard in Carson. The service area for the library has a population of 15,412. The library has a collection of 42,198 library material items consisting of books, audio and video materials, DVD's, pamphlets, periodicals and government documents. Victoria Park Library is the smaller facility in the City. Circulation for this library has remained stable during the past several years.

The planning standards for the Los Angeles County Library system are 3.09 persons per household, 3.0 library materials items per capita and 0.5 gross square feet per capita for facility space. Currently, both the Carson Library and Victoria Park Library are under served in terms of facility size and library material items. Currently no plans exist for library expansion within the City of Carson by the County.

Funding sources for the City of Carson service areas consist of property taxes, revenues from fines, fees and other miscellaneous revenue sources. Los Angeles County Libraries also receive funds from the Public Library Foundation allocated by the State annually on a per capita basis. For the past several years, the County Board of Supervisors has allocated funds from the County General Fund based upon yearly determination of available funding. However, there is no guarantee for funding and the amounts allocated have continued to decrease year after year.

WATER

Water service is provided to the City of Carson by the California Water Service Company (Cal Water) Dominguez District and by Southern California Water Company (SCWC) Southwest District. SCWC serves approximately 13 percent of the City of Carson with the other 87 percent served by Cal Water. Water is provided to the City from groundwater sources and treated surface water purchased from the Metropolitan Water District (MWD).

CALIFORNIA WATER SERVICE COMPANY (Cal Water)

Cal Water has eight connections with MWD located throughout its service area and a total of 13 wells, eight of which are located within the City of Carson. They provide recycled water purchased from the West Basin Municipal Water District to several large customers for industrial use as well as for irrigation of several parks, the Victoria Golf Course and California State University, Dominguez Hills' campus.

Cal Water maintains a number of large mains located in the City streets of Carson. The larger mains range in size from 12 to 42 inches in diameter. Several residential areas have mains less than 6-inches in diameter. However, these mains provide sufficient flow for both normal use and fire flow. A 6-inch diameter main is the minimum size presently installed per California Public Utilities Commission regulation. These smaller mains are being replaced over time as the capital budget permits. Cast iron mains are also being replaced as part of an ongoing capital improvement program. Currently there are no additional facilities planned. New customers are either connected to existing mains or are required to pay for installation of facilities required to provide service.

SOUTHERN CALIFORNIA WATER COMPANY (SCWC)

There are new water mains in each of the public streets of SCWC's service area within the City of Carson. In addition, SCWC has one connection to the water system of the MWD located within the City of Carson. North of the City is an additional connection to MWD with connecting pipelines between the contiguous area served by these systems. This same area has two deep-water wells and two booster pump/reservoir plant facilities. There are connecting water mains extending westerly through the City of Los Angeles and Los Angeles-San Pedro strip to the main body of the Southwest System. The main system has nine additional MWD connections and a number of deep ground water wells for a total system wide water source capacity in excess of its maximum daily usage.

Upon requests for new customer service, a site-specific evaluation of the existing water system's capacity to serve is completed. If additional water supplies and/or water system facility improvements are required, the developer may be required to pay the cost of all or portions of the needed improvements. Currently SCWC is discussing the addition of a second MWD connection within the City of Carson area and/or increasing the capacity of its existing connection.

SEWER SERVICES

The City of Carson owns the local sanitary sewers within the City. The sewers are constructed of vitrified clay pipe, which have a normal service life in excess of 75 years. The Los Angeles County Department of Public Works Consolidated Sewer Maintenance District (CSMD) maintains these sewers lines. The CSMD collects user fees for operation and maintenance of existing local sewer lines.

The trunk lines and treatment plant within the City are owned and operated by the County Sanitation Districts of Los Angeles County (CSDLAC). Wastewater generated within the City is treated at the Joint Water Pollution Control Plan (JWPCP) located at 24501 South

Figueroa Street in Carson. The JWPCP has a design capacity of 385 million gallons per day (mgd) and processes an average flow of 329.3 mgd.

The design capacities of the Districts' wastewater treatment facilities are based on regional growth forecasts adopted by the Southern California Association of Governments (SCAG). All expansion of Districts' facilities must be sized and service phased in a manner that would be consistent with SCAG's regional growth forecasts. The available capacity of the Districts' treatment facilities would be limited to levels associated with the approved growth identified by SCAG.

SOLID WASTE

Landfill sites throughout California are nearing capacity. New landfill sites are difficult to locate due to limited land resources. In 1989, the State legislature passed AB 939, the California Integrated Waste Management Act. AB 939 required all cities and counties within the State to prepare integrated waste management plans to attain solid waste reduction goals of 50 percent by the end of 2000. The plans were to include components for source reduction, recycling and composting. In 1996, Carson prepared and adopted a source reduction and recycling element (SRRE). Recycling programs adopted in Carson include residential curbside recyclable collection, residential green-waste collection and commercial on-site recycling collection. The City of Carson has five centers for used oil recycling. According to the California Integrated Waste Management Board, Carson achieved an approved diversion rate of 56 percent in 1998. Preliminary diversion rates for 1999 and 2000 are 71 percent and 72 percent, respectively.[2]

Waste Management Incorporated provides residential, commercial and industrial waste collection service for the City of Carson. Waste Management Inc. collects approximately 34,000 tons from residential customers, 40,750 tons from commercial customers and 26,600 tons from industrial customers per year.[3] The disposal service uses traditional methods of solid waste collection using standard trash trucks and crews. The service also includes pickup of sorted recyclable materials, which are taken directly to a company to separate and sell.

Solid waste collected by Waste Management is taken to the company's transfer station at 321 W. Francisco Street in Carson, where it is sorted. The 10-acre facility has a permitted capacity of 5,300 tons per day. After the materials are sorted, special wastes such as tires, green waste, steel and wood are sent to facilities for disposal or recycling while the remaining waste materials are loaded onto trailers and taken to the Bradley Landfill in Sun Valley.

The permit for the Bradley Landfill facility was issued November 10, 1999. The permit allows for acceptance of 10,000 tons of waste per day and a total maximum landfill capacity of 14,629,100 cubic yards. According to the California Integrated Waste

[2] California Integrated Waste Management Board, Jurisdiction Profiles, 2002. http://www.ciwmb.ca.gov/Profiles/Juris.

[3] Reflects 1999 data.

Management Board (CIWMB) the landfill has a remaining capacity of 4,881,000 cubic yards.[4]

ELECTRICITY

Southern California Edison, Compton Service Center, provides electric service to the Carson area. Electricity can be generated from a combination of oil, natural gas, hydroelectric, nuclear or renewable sources (wind and solar). There are three major substations with the Carson boundaries: 1) Carson Substation at Alameda Street and Johns Manville Street, 2) Nola Substation at South Broadway and Victoria Street and 3) Neptune Station at 213th Street and Grace Avenue. There are approximately one dozen transmission facilities (66kV) that extend along Wilmington Avenue and Alameda Street that feed the SCE service area or distribute directly to select high voltage customers. There are also numerous high voltage easements, ranging from 120 kV to 500 kV, that traverse the City of Carson.

NATURAL GAS

Southern California Gas Company, Pacific Region, supplies natural gas to the City of Carson. As a public utility, the Southern California Gas company is under the jurisdiction of Federal and State regulatory agencies. A medium and high-pressure distribution pipeline system and a high-pressure transmission pipeline system transect the Carson boundaries.

TELEPHONE

SBC provides telephone service to the City of Carson. The telephone service facilities consist of both fiber and copper facilities. A light span technique that enhances service is in use in the Carson area. A sonnet ring provides improved service to the general South Bay area. There are both aerial and underground lines within the City of Carson.

4.8.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Public Services and Utilities impacts resulting from the implementation of the proposed General Plan may be considered significant if they cause any of the impacted identified in the following paragraphs:

[4] California Integrated Waste Management Board, Facility/Site Summary Detail, 2002. http://www.ciwmb.ca.gov/SWIS/.

PUBLIC SERVICES

A significant impact would occur if the project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or result in the need for new or physically altered governmental facilities, the construction of which may cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services including fire protection, police protection, schools or other public facilities.

UTILITIES AND SERVICE SYSTEMS

A significant impact would occur if the project:

- Exceeds wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Requires or results in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Requires or results in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Has insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.
- Results in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Is not served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Does not comply with federal, state, and local statutes and regulations related to solid waste.

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for a potentially significant impact. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.8.3 IMPACTS AND MITIGATION MEASURES

FIRE PROTECTION

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN THE NEED FOR ADDITIONAL FIRE FACILITIES OR PERSONNEL.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The LACFD indicates there would be an additional demand for fire services associated with future development in the City of Carson. According to LACFD, the current level of fire protection in general is considered adequate in terms of service.

A significant impact would occur if development authorized by the proposed General Plan would result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, the construction of which would cause significant environmental effects. The LACFD's Five-year Station Plan already includes plans for a new station in the western part of the City near the 405/110 Freeway interchange. However, the LACFD has insufficient funds to allocate to this new station at this time, and no site has been selected.

Any development resulting from implementation of the proposed General Plan would be required to comply with all applicable fire code and ordinance requirements for construction, access, water mains, fire flows and hydrants. Individual projects would be reviewed by the LACFD to determine the specific fire requirements applicable to that development and to ensure compliance with these requirements. Therefore, implementation of the proposed General Plan would result in a less than significant impact in this regard.

Policies in the Proposed General Plan: The Safety Element includes the following policies:

SAF-5.1 Coordinate with the Fire Department to provide fire and paramedic service at standard levels of service.

SAF-5.2 Continue to involve the Fire Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes.

SAF-5.3 Continue to work with the Fire Department to ensure their capability to address fires and other emergencies at refineries, tank farms, and other heavy industrial facilities within the City.

SAF-5.4 Work with the City's Public Information Office and County Fire Department to promote and expand public education programs and seminars on safety and emergency response for those areas surrounding refineries, tank farms, and other heavy industrial facilities.

SAF-5.5 Continue to enforce current regulations which relate to safety from fire, particularly in critical and high occupancy facilities.

SAF-5.6 Work with the City's Public Information Office and the Fire Department to continue to promote and enhance public outreach programs which educate the community about the importance of fire resistant building materials, promote the use of smoke alarms/detectors, and highlight other ways to reduce the public hazard from fire emergencies.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance after Policies/Mitigation: Less Than Significant Impact.

POLICE PROTECTION

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN THE NEED FOR ADDITIONAL POLICE FACILITIES OR PERSONNEL.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City of Carson contracts with the LACSD for police services within the City. Population for the City of Carson is projected to increase approximately 15 percent over the next 20 years. Implementation of the proposed General Plan would result in increased development throughout the City, and as a result an increased demand for police protection services.

Total calls for service received by the LACSD Carson Station increased approximately six percent from 2000 to 2001. Based on current trends, calls for service would increase by an additional nine percent in 2002.[5] Increased retail development may create a need for storefront-type Sheriff substations to provide localized service for patrons and merchants. The need for service increases is determined through consultation between City management and the Sheriff's Department. Factors include crime trends, community priorities, programmatic changes and budget issues.

Carson Sheriff Station is currently over capacity. The Community Oriented Policing Teams and gang investigators are housed in portable trailers within the parking lot. The physical plant is inadequate to accommodate a growing number of female deputies as locker room and overnight sleeping space is grossly inadequate. However, as previously stated, the City of Carson contracts for services with LACSD. The physical buildings are the responsibility of the Sheriff's Department. Although implementation of the proposed General Plan would likely result in an increase in the Law Enforcement Services Contract, the City would pay additional fees for these services, resulting in less than significant impacts.

[5] Correspondence from Captain Michael G. Savidan, County of Los Angeles Sheriff's Department, September 26, 2002.

The City of Carson has identified safety from crime as one of its major issues. The proposed General Plan has developed goals and policies to address these issues and to ensure compliance with standard levels of service. One goal is to strive to provide a safe place to live, work and play for Carson residents and visitors (SAF-6). Another goal is to reduce to the greatest extent possible, the number of violent or criminal acts perpetuated with specific emphasis on youth (SAF-7). The ability of the Sheriff's Department to provide a standard level of service as a result of implementation of the proposed General Plan would be less than significant.

Policies in the Proposed General Plan: The Safety and Traffic and Infrastructure Elements include the following policies:

SAF-6.1 Coordinate with the Sheriff's Department to provide sheriff service at standard levels of service.

SAF-6.2 Continue to involve the Sheriff's Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes. To this end, promote the development of defensible spaces or Crime Prevention Through Design (CPTD) through the use of site and building lighting, visual observation of open spaces, secured areas.

SAF-6.4 Maintain and improve the effectiveness of code enforcement and policing programs such as increased community policing activities, such as foot and bicycle patrols in areas where warranted, and related programs.

SAF-6.5 Continue to promote and enhance the Sheriff Department's public outreach programs.

SAF-6.6 Continue to promote the Neighborhood Watch Program.

SAF-6.7 Continue to support strict enforcement of the California Motor Vehicle Code and local speed limits, particularly in the areas near schools and off-ramps from area freeways.

SAF-7.1 Continue to take a "zero tolerance" approach to gangs and gang activity in Carson.

SAF-7.2 Continue to work with the community, and specifically involve and educate parents, to reduce criminal behavior by Carson's youth.

SAF-7.3 Continue to support immediate, positive consequences for minor criminal behavior by youth, such as graffiti removal programs, restitution programs, and other effective acceptable programs.

SAF-7.5 Working with the City's Public Information Office and the Sheriff's Department to promote community awareness regarding drug use, graffiti, gangs, and other youth related crimes.

SAF-7.6 Consider the implementation of a comprehensive Youth Violence Reduction Program. Said program to include education, intervention, and enforcement strategies.

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

TI-10.2 Require that all civic facilities be maintained and rehabilitated to ensure their continued availability and use.

Additional Policies to be Included in the Proposed General Plan: The Safety Element of the proposed General Plan shall address the need for future Sheriff facilities. In conjunction with the Los Angeles County Sheriffs Department, policies shall be formulated to meet identified facility needs and shall be incorporated into the Safety Element.

Mitigation Measures: No mitigation measures beyond the policies identified and the policies to be added in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

SCHOOL FACILITIES

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN THE NEED FOR ADDITIONAL SCHOOL FACILITIES.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Los Angeles Unified School District (LAUSD) and Compton Unified School District (CUSD) provide school services to the City of Carson. Implementation of the proposed General Plan would result in the construction of 1,839 additional dwelling units. The increase in dwelling units would increase population and enrollment in the local schools servicing Carson. Table 4.8-2, *Projected Student Enrollment*, shows the estimated enrollment increase based on generation rates utilized by LAUSD[6]. Implementation of the proposed General Plan would result in enrollment increases of 365 students for elementary schools, 168 students for middle schools and 162 students for high schools in the City of Carson.

LAUSD recently completed a *School Facilities Needs Analysis* to consider and possibly adopt alternative school facility fees that may be collected from residential development in the District. The analysis included projecting student enrollments based upon the number of projected residential units to be constructed within the District over the next five years. Enrollment generated from the construction of residential units within the District is projected to be 12,158 students.[7]

[6] Generation factors obtained from *School Facilities Needs Analysis For Los Angeles Unified School District*, LAUSD, September 5, 2002.

[7] *School Facilities Needs Analysis For Los Angeles Unified School District*, LAUSD, September 5, 2002.

Table 4.8-2
Projected Student Enrollment

	Elementary School		Middle School		High School	
	Generation rate	Students	Generation Rate	Students	Generation Rate	Students
Low Density 167 units	0.216	36	0.106	18	0.108	18
Medium Density 178 units	0.351	63	0.143	26	0.127	23
High Density 1494 units	0.178	266	0.083	124	0.081	121
Total		**365**		**168**		**162**

As demonstrated in Table 4.8-3, *LAUSD Existing School Facilities Capacity and Student Enrollment*, total capacity for LAUSD existing school facilities is 625,729 students. Student enrollment for school year 2001 to 2002 was 736,675 students. The District's student enrollment exceeded facilities capacity in school year 2001 to 2002 by 110,946 students. In addition, the District has no excess facilities capacity for projected student enrollment resulting from the addition of residential units within the District.

Table 4.8-3
LAUSD Existing School Facilities Capacity and Student Enrollment

School Level	2001-02 Facilities Capacity	2001-02 Student Enrollment	Excess/(Shortage) Capacity
Elementary School (Grades K-6)	387,411	439,159	(51,748)
Junior High School (Grades 7 & 8)	67,457	107,791	(40,334)
High School (Grades 9-12)	170,861	189,725	(18,864)
Total	**625,729**	**736,675**	**(110,946)**

Source: *School Facilities Needs Analysis For Los Angeles Unified School District*, LAUSD, September 5, 2002.

At the time this Draft EIR was completed, a response had not been received from LAUSD regarding the impacts resulting from implementation of the proposed General Plan. However, current school enrollments and capacities for schools servicing the City of Carson were obtained. Table 4.8-4, *Carson Existing School Facilities Capacity and Student Enrollment*, shows available current enrollment numbers[8] and operating capacities[9] for the schools serving Carson. There are three schools serving Carson with enrollment either at or over capacity. In addition, several of the facilities are nearing capacity.

[8] Enrollment numbers as of October 7, 2002 per Larry Carletta, LAUSD, October 21, 2002.

[9] Operating capacity based on estimates completed in April 2002 per Larry Carletta, LAUSD, October 21, 2002.

Table 4.8-4
Carson Existing School Facilities Capacity and Student Enrollment

Elementary Schools			Middle Schools			High Schools		
Name	Enrollment	Capacity	Name	Enrollment	Capacity	Name	Enrollment	Capacity
Ambler	470	585	Curtiss	1535	1896	Carson	3536	3600
Annalee	514	570	Carnegie	2022	2228	Banning	**3310**	**3267**
Bonita	236	783	Peary	**2467**	**2451**	Gardena	3324	3600
Broadacres	457	543	White	2007	2400	Narbonne	3244	3600
Caroldale	1048	1250	Wilmington	2371	2400			
Carson	830	1024						
Catskill	886	963						
Del Amo	532	584						
Dolores	831	913						
Dominguez	**756**	**756**						
Leapwood	401	584						
Towne	444	556						
Van Deene	519	581						
232nd Place	515	540						

Source: Larry Carletta, School Management Services, LAUSD, October 21, 2002.

Compton Unified School District has one elementary school facility located within the City of Carson. Bunche Elementary School currently has 511 students in attendance and a maximum capacity of 607 students. Portable facilities are located on the school site for classroom use. Projections indicate the population at Bunche Elementary School will be increased to approximately 574 students by the year 2010.[10] Based on these projections, CUSD indicates no new schools would be built or expanded upon within the City of Carson or its vicinity.

Both LAUSD and CUSD assess development fees against residential and commercial/industrial development to mitigate impacts resulting from the increase in demand for school related services. However, as school facilities within Carson and the LAUSD are either near or in excess of capacity, significant impacts to school facilities would result from implementation of the proposed General Plan.

Policies in the Proposed General Plan: The Traffic and Infrastructure Element includes the following policies:

[10] Correspondence from James L. Scott, Chief Facilities Officer, September 25, 2002.

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

LIBRARY FACILITIES

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN INCREASED DEMAND FOR LIBRARY SERVICES AND THE NEED FOR ADDITIONAL LIBRARY FACILITIES WITHIN THE CITY.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The population increase resulting from implementation of the proposed General Plan would result in a significant increase in usage of the Carson and Victoria Park County Libraries. Based on the current planning standards for the County Library system, the libraries are under served in terms of facility size and library materials. There are no plans for expansion of the current libraries or for the building of additional facilities.

Current trends in library service in the City include increased demand for Internet access, homework assistance and literary services. Implementation of the proposed General Plan would add 1,839 residential units by 2020. Using the County Public Library's current planning standards of 3.09 persons per household, this would produce a population increase of 5,683 residents and would require an additional 2,842 square feet of library space and 17,049 additional library materials.[11]

The County Library recently completed a library service area-mapping project based on SCAG population projections for 2020. Using these population estimates the increase in population projected for the Carson and Victoria Park Library service areas combined would be 12,867 residents. This increase in population would require 38,601 additional library material items and 6,434 additional square feet of library space.

Policies in the Proposed General Plan: The Traffic and Infrastructure Element include a the following policies:

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

Additional Policies to be Included in the Proposed General Plan: The Parks, Recreation and Human Services Element of the proposed General Plan shall address the need for additional Library facilities and materials. In conjunction with the Los

[11] The population calculation uses the County Public Library's planning standard of 3.09 persons per household as opposed to the actual persons per household in Carson because Los Angeles County and not the individual City determines library services and funding.

Angeles County Library, policies shall be formulated to meet identified needs and shall be incorporated into the Parks, Recreation and Human Services Element.

Mitigation Measures: No mitigation measures beyond the policies identified and the policies to be added in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

WATER

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN INCREASED DEMAND FOR WATER SERVICE WITHIN THE CITY.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Cal Water and SCWC provide water service to the City of Carson. Both providers maintain water mains and connections with MWD within the City streets. Population increases resulting from implementation of the proposed General Plan would result in an increase in usage of the existing water system. Cal Water has indicated that while no additional facilities are planned, there are sufficient water supplies to serve the City of Carson with implementation of the proposed General Plan. SCWC has also confirmed that changes resulting from implementation of the proposed General Plan are within the range of SCWC's present assumptions for the planning for providing of water service to the portion of the City within its service area.

Any request for service resulting from new development would be subject to a site-specific evaluation of the existing water system's capacity to service the development. If improvements to the existing water system is required or additional facilities are needed, the property developer may be required to fund and/or contribute the cost of all or portions of the needed improvements. This would further reduce any impacts to less than significant.

Policies in the Proposed General Plan: The Open Space and Conservation and Traffic and Infrastructure Elements include the following policies:

OSC-2.1 Maintain and improve water quality.

OSC-2.2 Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

OSC-2.4 Conserve the water supply available to the City and promote water conservation in the management of public properties.

OSC-2.5 Educate citizens about water conservation encourage its practice and monitor its effectiveness.

TI-8.1 Continue to maintain, improve and replace aging water and wastewater systems to ensure the provision of these services to all areas of the community.

TI-8.2 As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of uses, as well as existing uses.

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

TI-10.3 Rehabilitate public facilities using technologies, methods, and materials which result in energy and water savings, and implement cost effective, long-term maintenance programs.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

SEWER SERVICES

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN INCREASED DEMAND FOR THE SEWER SYSTEM WITHIN THE CITY.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Implementation of the proposed General Plan would cause additional demand on the existing sewer system from increased sewage flows. The sewer lines, maintained by CSMD, would not be significantly impacted with implementation of the proposed General Plan.

The California Health and Safety Code allows the Districts to charge a fee for connecting to the Districts' Sewerage System or increasing the existing strength and/or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is required to construct an incremental expansion of the Sewerage System to mitigate the impact of individual projects on the present System. The Districts' facilities are sized and service is phased in accordance with SCAG regional growth projections. The proposed General Plan is in line with these projections. Therefore, a less than significant impact would result.

Policies in the Proposed General Plan: The Traffic and Infrastructure Element includes the following policies:

TI-8.1 Continue to maintain, improve and replace aging water and wastewater systems to ensure the provision of these services to all areas of the community.

TI-8.2 As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of uses, as well as existing uses.

TI-10.1 Pursue State, Federal and other available funding sources to improve and enhance public facilities.

TI-10.3 Rehabilitate public facilities using technologies, methods, and materials which result in energy and water savings, and implement cost effective, long-term maintenance programs.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

SOLID WASTE

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN THE INCREASED DEMAND FOR SOLID WASTE SERVICE PROVIDED TO THE CITY.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Implementation of the proposed General Plan would result in increased supply of solid waste and increased demand for solid waste services. Landfills throughout California are rapidly reaching their capacities. The State of California has established 50 percent as the minimum waste reduction rate for all cities. The City of Carson has adopted a Source Reduction and Recycling Element (SRRE) and has achieved 56 percent waste reduction as of 1998. At the time this Draft EIR was completed, a response regarding potential impacts resulting from implementation of the proposed General Plan had not been received. However, it is expected that compliance with State requirements, in addition to the following proposed General Plan policies, would reduce solid waste impacts to a less than significant level.

Policies in the Proposed General Plan: The Open Space and Conservation Element includes the following policies:

OSC-4.1 Reduce the generation of solid waste from sources in the City in accordance with the Source Reduction and Recycling Element for Carson (separate from this General Plan) and state regulations.

OSC-4.2 Develop a public education program to address waste management and proper household waste sorting and handling.

OSC-4.3 Facilitate physical collection of recyclable waste.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

ELECTRICITY

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN INCREASED DEMAND IN ELECTRICITY SERVICE PROVIDED TO THE CITY.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: Implementation of the proposed General Plan would result in increased demand for electricity. Southern California Edison (SCE) has committed $100,000,000 per year for ten years system wide to maintain and replace their facilities as needed. At the time this Draft EIR was completed, a response regarding potential impacts resulting from implementation of the proposed General Plan had not been received from SCE. Difficulties in providing service to the City of Carson as a result of implementation of the proposed General Plan are not expected. Therefore, less than significant impacts are anticipated in this regard.

Policies in the Proposed General Plan: The Open Space and Conservation Element includes the following policy:

OSC-3.3 Work with energy providers to develop and implement programs to reduce electrical demand in residential, commercial and industrial developments.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

NATURAL GAS

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN INCREASED DEMAND FOR NATURAL GAS SERVICE PROVIDED TO THE CITY.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: The Southern California Gas Company provides natural gas for the City of Carson. The availability of natural gas service both present and future is based upon present conditions of gas supply and regulatory policies. New development associated with implementation of the proposed General Plan would generate a need for additional gas services. There are no current deficiencies in the natural gas supply

systems that serve Carson.[12] At the time this Draft EIR was completed, a response regarding potential impacts resulting from implementation of the proposed General Plan had not been received from the Southern California Gas Company. However, it is expected that the Southern California Gas Company would have the facilities to supply natural gas service to future demand anticipated from implementation of the proposed General Plan. Therefore, impacts are less than significant.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential impacts to gas service.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

TELEPHONE

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN INCREASED DEMAND FOR TELEPHONE SERVICE PROVIDED TO THE CITY.**

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: SBC provides telephone service to the City of Carson. At the time this Draft EIR was completed, a response regarding potential impacts resulting from implementation of the proposed General Plan had not been received from SBC. It is expected that SBC would have the facilities to supply the future demand anticipated from implementation of the proposed General Plan. Therefore, impacts are less than significant.

Policies in the Proposed General Plan: The Traffic and Infrastructure Element includes the following policy:

TI-9.2 As development intensifies and/or as redevelopment occurs in the City, encourage the provision of communication, fiber optic and other systems to accommodate any intensification of uses, as well as existing uses.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.8.4 UNAVOIDABLE SIGNIFICANT IMPACTS

Development under the proposed General Plan would create unavoidable significant impacts related to school facilities. These impacts are primarily based on the premise

[12] Reflects 1999 data.

current school facilities within Carson are either nearing or over capacity. Student enrollment projections for LAUSD demonstrate an increase that would exceed existing school capacities, requiring additional school facilities. It is anticipated that these impacts would remain unavoidable and significant. All other impacts for public services and utilities would be less than significant with implementation of the policies in the proposed General Plan, additional General Plan policies and mitigation measures.

4.9 PARKS, RECREATION AND HUMAN SERVICES

This section describes the existing parks, recreation and human services conditions within the City of Carson and analyzes the impacts associated with implementation of the proposed General Plan. Information in this section is based on information from the Carson Community Development Department, the Carson Recreation Element, May 1982 and correspondence with the City of Carson Parks and Recreation Department, 2001 and 2002.

4.9.1 ENVIRONMENTAL SETTING

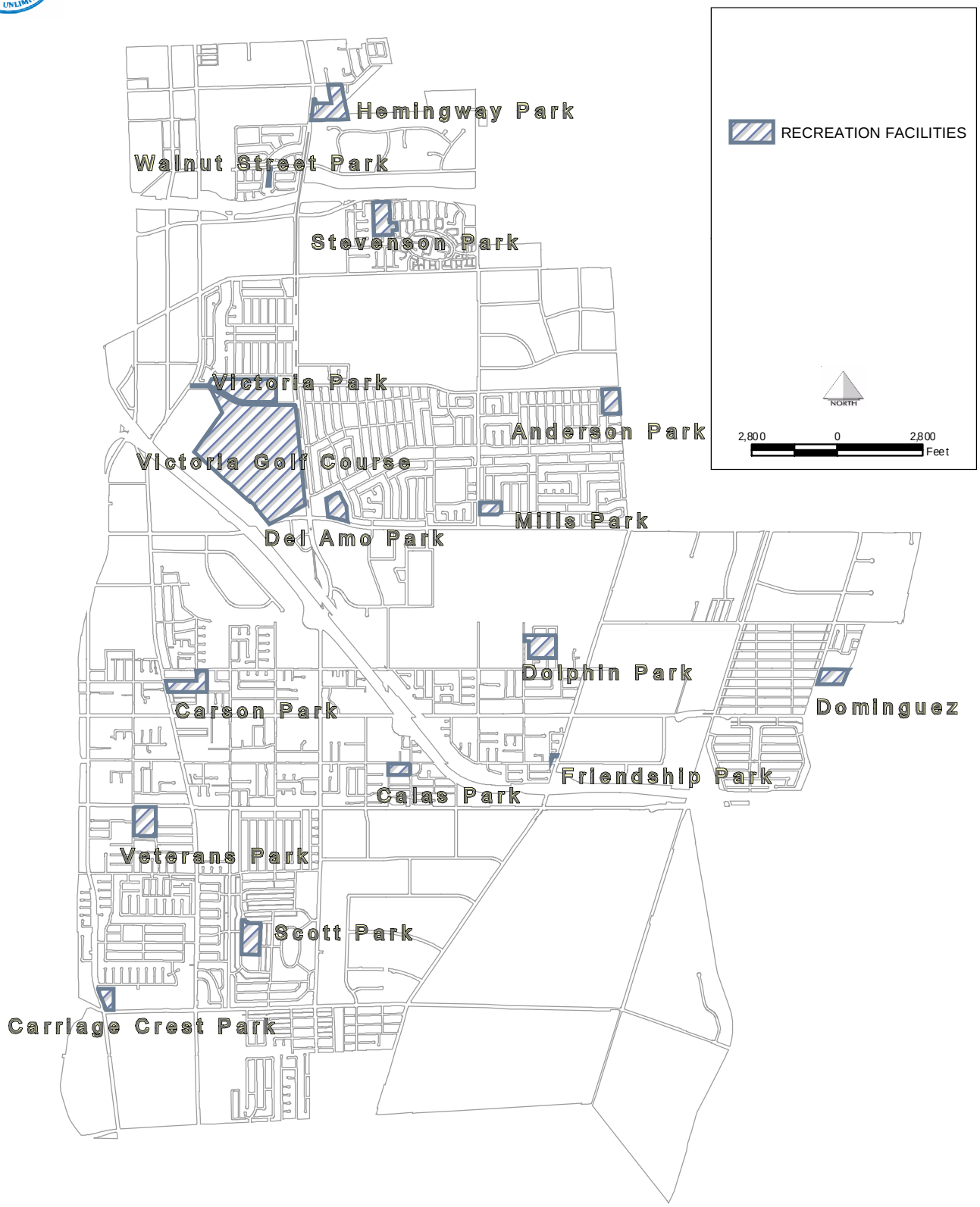
RECREATION FACILITIES

Carson's recreation resources include neighborhood and community parks, community centers, schools, golf courses and privately owned recreation centers. The existing network of recreation facilities is illustrated in Exhibit 4.9-1, *Existing Recreation Facilities*.

The City of Carson has 16 City-operated parks (including four mini parks), one county park (Victoria Park) and two golf courses (Victoria Golf Course and Dominguez Golf Course). In addition, Carson has four public swimming pools and the Carson Community Center that provide additional recreation facilities to the community. Exhibit 4.9-1, *Existing Recreation Facilities* and Table 4.9-1, *Open Space and Park Facility Matrix*, show the location and amenities each recreation facility provides.

The total amount of park space in Carson is 353.9 acres. This includes Victoria County Park, Victoria Golf Course and Dominguez Golf Course. The ratio of park acres to population required by the State of California is three acres per 1,000 people. According to the 2000 U.S. Census, the City's population is 89,730; thus, 269.19 acres of parkland would be required to maintain the park acres to population ratio. The actual park to population ratio is approximately 3.9 acres per 1,000 people. This ratio does not include public school athletic fields or additional recreational facilities that exist within the City.

Regional Parks. A regional park is designed to serve the active and passive recreational needs of the entire community. It is designed for automobile access as well as pedestrian and bicycle access. Carson has one regional park, Victoria Park, which encompasses 36 acres (approximately 10 percent of the total parkland inventory) of land immediately north of Victoria Golf Course. Victoria Park includes ball fields, basketball courts, a swimming pool, gymnasium and tennis courts, play area, recreation building and picnic facilities.



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

EXISTING RECREATION FACILITIES

EXHIBIT 4.9-1

Table 4.9-1
Open Space and Park Facility Matrix

Open Space and Park Sites	Acreage	Baseball	Softball	Soccer Field/Football	Boxing	Basketball	Playground	Tennis Courts	Racquet ball	Volleyball	Par Course	Picnic Tables	Shelter	Restrooms	Cooking Facilities	Parking Stalls	Snack Bar	Meeting Rooms	Fire Ring	Skateboard	Bleacher	Amphitheater	Gym/Fitness Center	Frisbee Golf	Pool	Wading Pools
Mini and Neighborhood Parks:																										
Anderson	8.5					●	●	●				●	●	●	●	●		●				●		●		●
Calas	8.7	●	●	●		●	●	●			●	●		●	●	●	●	●			●					●
Carriage Crest	3.4	●	●	●		●	●		●			●	●	●	●	●	●	●			●					
Carson Park Pool	10.9	●	●	●		●	●			●		●		●	●	●	●	●			●				●	
Del Amo	9.5	●	●	●		●	●		●			●		●	●	●	●	●			●					
Dolphin	11.8	●	●	●		●	●	●		●		●		●	●	●	●	●			●					●
Dominguez Park Pool	9.0	●	●	●		●	●	●			●	●	●	●	●	●	●	●			●			●	●	
Friendship Mini Park	0.3						●					●														
Hemingway	13.0	●	●	●		●	●	●				●		●	●	●	●	●			●			●		
Mills	5.0			●		●	●					●		●	●	●		●						●	●	●
Scott Park and Pool	11.2	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●			●	●	●		●	
Stevenson	11.7	●	●	●		●	●	●		●		●	●	●	●	●	●	●			●		●			
Walnut Street Mini Park	1.5					●	●					●														
Bonita Street Mini Park																										
Perry Street Mini Park																										
Veterans Sports Complex and Park	12.6	●	●	●		●	●	●	●	●		●		●	●	●	●	●		●	●		●			●
Total	***117.1***																									
Other Recreation Facilities:																										
Victoria Park (County)	36.0	●	●			●	●	●				●						●					●		●	
Victoria Golf Course (County)	161.6										●															
Dominguez Golf Course	39.2										●															
Total	***236.8***																									
Community Centers:																										
Carson Community Center	12.0													●		●		●								
Total	***12.0***																									

Neighborhood Parks. Neighborhood parks are intended to serve one neighborhood, and are located within walking or biking distance. These parks provide a wide range of both passive and active recreational opportunities. There are 12 neighborhood parks in the City, ranging in size between 3 acres to 13 acres, as detailed in Table 4.9-1, and comprise a total of 117.1 acres. Facilities vary at each park, but typically include: ball fields, basketball courts, children's play areas and picnic areas. Refer to Table 4.9-1 for a detailed listing of facilities provided at each park.

Mini Parks. Mini parks, also known as "pocket parks" are small, generally passive recreation parks, serving a small area. These parks often serve areas where land is not available for a neighborhood facility, and generally include children's play areas and picnic areas. There are four mini-parks in Carson: Friendship, Walnut Street, Bonita Street and Perry Street Mini Parks.

Schools. Institutional facilities within the City of Carson provide local and community level recreation needs when not in use during school hours, playing a critical role in the citywide open space and recreation inventory. There are 546.1 acres of public schools in the City of Carson with recreational facilities on-site. The City has a Joint Use Agreement with two of the schools in Carson: Carson High School and Caroldale Elementary School. Of the 546.1 acres of public schools, 349.2 acres are associated with Cal State University Dominguez Hills (CSUDH).

The National Training Center (NTC) is currently being developed on 85 acres of the CSUDH's campus. The development includes two stadiums, with associated support facilities such as offices, restaurants, locker rooms, etc., as well as surface parking. One stadium would serve as the home of the Los Angeles Galaxy, as well as home for a potential Los Angeles franchise in the Women's United Soccer Association. One stadium would have permanent seating for approximately 20,000 people, expandable to approximately 27,000 seats. The other stadium would be used primarily for major tennis tournaments and would have permanent seating for approximately 8,000 people, expandable to approximately 13,000 seats. An approximately three-mile jogging trail with fitness stations will be built around the perimeter of the NTC. Various professional or amateur athletes may utilize some of the proposed facilities. In addition, the facilities would be utilized by CSUDH for ongoing university and community programs.

Golf Courses. The City contains two golf courses: Victoria Golf Course (161.6 acres) and Dominguez Golf Course (39.2 acres). The Victoria Golf Course is an 18-hole public regulation golf course operated by the County and located in the western portion of the City. The Dominguez Golf Course is an 18-hole, par 3 golf course that includes a two tier driving range. The Dominguez Golf Course is located immediately adjacent to the I-405 Freeway in the western portion of the City.

Bikeways. The City's bikeways network is a significant recreation facility for residents in the community. Bikeways provide access to schools, parks and other open space areas within a community. Additionally, bikeways offer opportunities for alternative transportation modes by commuters. An inventory of existing and proposed bikeways is included in Exhibit 4.3-4, *Bicycle Plan*, in Section 4.4, *Transportation/Circulation*.

There are three types of bicycle facilities in the City of Carson:

- Class I bikeways (bike paths) are off-street paths with exclusive rights-of-way, serving bicycles and pedestrians only.

- Class II bikeways (bike lanes), are for preferential use by bicycles and are established within the paved area of roadways.

- Class III bikeways (bike routes) are shared routes with motor vehicles within a public right-of-way. No special markings on the pavement are provided. Identification of a bike route is through signing only.

RECREATION PROGRAMS

In addition to the facilities listed above, the City of Carson provides a wide variety of recreation and community services. These include: early childhood classes (preschool), special interest classes that focus on education, hobbies or sports, work-out classes and facilities at the Veterans Sports Complex, an after-school Kids Club, adult sports leagues and tournaments, boxing/weightlifting, park activities, teen activities, recreation for people with special needs, senior recreation and fine arts programs.

GENERAL SERVICES/PROGRAMS

Classes. The Parks and Recreation Department offers a wide variety of classes to meet the needs and interests of the community, including, but not limited to: computer workshops, languages, childcare, safety instruction, exercise classes and arts and crafts classes.

Adult Sports. The Parks and Recreation Department offers a variety of leagues and tournaments for adults in various activities such as softball, flag football and golf.

Park Activities. In addition to the facilities and equipment at Carson's parks, a variety of special activities are also offered including: baseball, softball and t-ball, annual seasonal parties and camping trips.

CHILDREN AND YOUTH SERVICES

Early Childhood. The preschool curriculum is designed to encourage child development at all levels, and includes a variety of school readiness skills, creative experiences, psychomotor skills and social interaction.

Kids Club. This program focuses on "latchkey" children by offering both before and after school activities. Daily schedules consist of: educational activities such as homework and tutoring; group activities revolving around home safety; drug and alcohol awareness; survival skills for children home alone; and recreational activities.

Teen Activities. The City of Carson organizes monthly Teen Summits at City parks, featuring "rap sessions" focusing on positive topics, group games, group sports, skits and

refreshments. A Teen Conference is held annually. Teen dances are held regularly, rotating among the City park facilities.

COMMUNITY FACILITIES

Veterans Sports Complex. Veterans Sports Complex, located in Carson's Veterans Park, is a 25,000-square foot facility offering the public the opportunity to train on state-of-the-art equipment. The Sports Complex contains two gymnasiums. The first gym is 12,000 square-feet and can hold two full-court basketball games simultaneously, or three volleyball games concurrently, with bleachers that seat 1,000. Chairs, tables, a public address system, scoreboards, stages, awards platforms and time clocks are also available. Upon renovation, the second gym will contain a Fitness Strength and Conditioning Center with 3,600 square feet of the latest state-of-the-art fitness equipment, three air conditioned racquet ball courts, a child care center and locker and shower facilities.

Veterans Sports Complex offers many activities, including aerobics, gymnastics, self-defense, machine weights, free weights, cardiovascular area, sports camp, basketball and volleyball leagues, youth fitness services, personal fitness evaluations, childcare and health seminars.

Carson Community Center. The Carson Community Center is approximately 31,000 square feet (s.f.) and contains 26 meeting/craft rooms accommodating 12 to 1,500 guests, a 12,000 s.f. ballroom, state of the art AV equipment and stage and theatrical lighting. It is currently undergoing construction to expand the facility by 5,200 s.f. , which is expected to be completed by January 2003. The Community Center provides significant opportunities for active recreational facilities in addition to its existing social service and community recreation programs.

Pools. The City of Carson offers the community aquatic recreation activities at its public pools.

Civic Center. The Civic Center is located near the geographic center of the City. Facilities located at the Civic Center include the City Hall, Council Chambers, Sheriff's Department and the City Library.

HUMAN SERVICES PROGRAMS

SENIOR SERVICES AND FACILITIES

Senior Recreation. The Senior Social Services Section provides services to protect and improve the socioeconomic conditions of the elderly through the provision of direct social and recreational services. The services include: information and referral, senior assisted living services that include homemaking, visiting and in-home registry, physical and emotional therapy for stroke victims, case management/crisis intervention, senior advocacy and comprehensive educational and recreational programs. There are also a handful of Senior Clubs that are co-sponsored by the City of Carson, yet operate independently.

SPECIAL INTEREST

Special Needs Recreation. These programs are designed to meet the basic recreational, social and physical fitness needs of Carson's disabled population groups, including the physically and sensory disabled and the developmentally disabled.

Special Interest Classes. The City's Community Services Section offers special interest classes to the residents in and around the City of Carson. The needs and interests of the community determine the type of classes offered. Subject areas include computer training, exercise, dance, personal enrichment, self-improvement, arts and crafts, educational classes and workshops. Classes are facilitated by independent contractors and are offered at convenient locations throughout the City, including the Carson Community Center and local parks.

FINE ARTS

There are many opportunities to enjoy or participate in both fine arts and performing arts in Carson. The City funds many individuals and groups to provide art, dance and music exhibitions and performances to the community. The Carson Dominguez Hills Symphony Orchestra offers professional music performances. The Carson Civic Light Opera performs with school children in local schools. The Friends of the Art of Dance, Apollo Players and the Association Cultural de Carson work exclusively with children in dance, drama and the teaching of musical instruments. The Carson Art Association presents monthly workshops with visiting artists. The Carson Chorale and the Filipina Chorale have performances throughout the year. Annual cultural dance and music productions are held in the form of the Martin Luther King Celebration, the Asian Pacific Celebration and the Mariachi Festival. In addition, the City coordinates excursions for residents to art museums, plans and concerts to promote fine art and the performing arts.

4.9.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Parks and recreational impacts resulting from the implementation of the proposed General Plan could be considered significant if they cause any of the following results:

- Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; and/or

- Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.9.3 IMPACTS AND MITIGATION MEASURES

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN SIGNIFICANT IMPACTS TO THE ADEQUATE AVAILABILITY OF PARKLAND AND RECREATINAL FACILITIES WITHIN THE CITY.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City of Carson has approximately 353.9 acres of parkland, including regional, neighborhood, mini parks and golf courses. The State of California standard for park open space is 3 acres for every 1,000 residents. The City has a surplus of approximately 85 acres of public open space, and thus currently meets the State's standard. The City is approximately 83 percent developed, so there is the potential to acquire and develop additional parkland.

The proposed General Plan projects an increase in population of 13,670 people to 103,400 by 2020. Based on the State parkland ratio of 3 acres per 1,000 people, the population increase of 13,670 residents would create a total demand for approximately 310.2 acres of parkland Citywide. Thus, implementation of the proposed General Plan would not create a need for additional parkland.

As the population of Carson increases and the City becomes increasingly developed, locating land for park/open space purposes becomes more difficult. Carson may obtain parkland though parkland dedication requirements, specific plans, parkland lease arrangements, assessment districts, developer land dedications and exactions and local assistance grants.

Funds for park development are limited and financing mechanisms for future facilities must be explored. Financing options to investigate include assessment districts and developer land dedications and exactions.

California Department of Parks and Recreation Local Assistance Grants. The Local Services Section of the State Department of Parks and Recreation administers grant programs that provides funds to local and state agencies and other organizations. Grants are generally for park, recreation and resources related projects.

The passage of the "Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Bond of 2000" (Proposition 12) provides funds for local assistance grants, as

provided for in Sections 5096.310, 5096.331 through 5096.345 and 5096.348 of the Public Resources Code. The following grant programs to be administered by the California Department of Parks and Recreation include: 1) Grant Program for Improvement to those units of the State Park System administered by Local Agencies; 2) California Heritage Grant Program; 3) Per Capita Grant Program I (Statewide); 4) Per Capita Grant Program II (Small Cities and Districts); 5) Roberti-Z'bert-Harris Grant Program; 6) Riparian and Riverine Habitats Grant Program; 7) Non-motorized Trails Grant Program; 8) Murray-Hayden (Urban Youth Services) Grant Program; 9) Dr. Paul Chaffee Zoological Program; 10) National Marine Sanctuaries Grant Program; 11) Urban Centers and Education Grant Program; and 12) Regional Youth Soccer/Baseball Facilities Grant Program.

In addition to current parkland acreage within Carson, the General Plan proposes to increase indoor and outdoor parks and recreational facilities (PRC-1) as one of its goals. Implementation of the proposed General Plan would result in a less than significant impact.

Policies in the Proposed General Plan: The Land Use; Open Space and Conservation; and Parks, Recreation and Human Services Elements include the following policies:

LU-6.4 Coordinate Redevelopment and Planning activities and resources to balance land uses, amenities, and civic facilities to improve the quality of life.

LU-6.6 Attract land uses that generate revenue to the City of Carson, while maintaining a balance of other community needs such as housing, open space, and public facilities.

LU-9.7 Maintain and upgrade the City's parks, eliminating all evidence of vandalism, wear and deterioration.

LU-15.1 Ensure that the City of Carson is a complete and balanced community which contains housing, shops, work places, schools, parks and civic facilities, essential to the daily lives of residents.

LU-15.6 Develop a center focus within the community that combines commercial, civic, cultural and recreational uses.

OSC-1.1 Preserve and enhance the existing open space resources in Carson.

PRC-1.1 Acquire additional parkland in accordance with long-term planning efforts, such as this General Plan and the City's Capital Improvement Program.

PRC-1.2 Work with local governmental and educational agencies and departments to maintain and, wherever feasible, expand the joint use of facilities within the City of Carson.

PRC-1.3 Promote greater cooperation and coordination with other City departments and public agencies, and encourage the construction of new park and human services facilities in developed areas of Carson as infill development occurs.

PRC-1.4 Develop non-traditional approaches to providing supplementary services and programs in areas where there are facility deficiencies.

PRC-4.1 Inventory existing parks and recreational facilities to determine rehabilitation needs through a periodic monitoring program.

PRC-4.2 Plan fiscally responsible rehabilitation and maintenance strategies which enhance the amenity and usability of existing parks.

PRC-4.3 Require park improvements and facilities that are durable and economical to maintain.

PRC-5.1 Pursue innovative methods, such as the use of volunteers, grants, and private sponsorship, to improve the affordability of recreational programs for residents of the City.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance after Policies/Mitigation: Less Than Significant Impact.

4.9.4 UNAVOIDABLE SIGNIFICANT IMPACTS

With implementation of the policies in the proposed General Plan, parks, recreation and human services needs would be less than significant. The proposed General Plan would not result in any significant and unavoidable park, recreation and human service facility impacts.

4.10 PUBLIC HEALTH AND SAFETY

This section describes the means by which hazardous materials are regulated from a federal, state and local perspective and discuss potential adverse impacts to human health and the environment due to exposure of hazards. For this EIR, the term "hazardous material" includes any material that, because of its quantity, concentration, or physical, chemical, or biological characteristics, poses a considerable present or potential hazard to human health or safety, or to the environment. It refers generally to hazardous chemicals, radioactive materials, and biohazardous materials. An extremely hazardous material is defined as a substance that shows high acute or chronic toxicity, carcinogenicity, bio-accumulative properties, persistence in the environment, or is water reactive (California Code of Regulations, Title 22). "Hazardous waste," a subset of hazardous material, is material that is to be abandoned, discarded, or recycled, and includes chemical, radioactive, and biohazardous waste (including medical waste).

4.10.1 ENVIRONMENTAL SETTING

HAZARDOUS MATERIALS REGULATORY SETTING

STATE AND FEDERAL HAZARDOUS WASTE MANAGEMENT

The U.S. Environmental Protection Agency (EPA) and the California Department of Toxic Substance Control (DTSC) have developed and continue to update lists of hazardous waste subject to regulation. Regulation of hazardous wastes is provided on both the State and Federal levels.

REGIONAL

The South Coast Air Quality Management District (SCAQMD) works with the California Air Resources Board (CARB) and is responsible for developing and implementing rules and regulations regarding air toxics on a local level. The SCAQMD establishes permitting requirements, inspects emission sources, and enforces measures through educational programs and/or fines.

In response to the growing Statewide concern of hazardous waste management, State Assembly Bill 2948 (Tanner 1986) enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to assure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within its jurisdiction.

HEALTH HAZARDOUS MATERIALS DIVISION (LOS ANGELES COUNTY FIRE DEPARTMENT)

In the 1970s and 1980s, major hazardous materials incidents nationally and in Los Angeles County focused public attention on the safe handling, storage, transportation, and disposal of hazardous materials and wastes. In May 1982, the Los Angeles County Board of Supervisors established the Hazardous Materials Control Program in the

Department of Health Services. Originally, the program focused on the inspection of hazardous waste generating businesses but since has been expanded to include hazardous materials inspections, criminal investigations, site mitigation oversight, and emergency response operations. On July 1, 1991, the program was transferred to the Fire Department and its name changed to Health Hazardous Materials Division (HHMD). The HHMD mission is to protect the public health and the environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight. The Hazardous Materials Specialists are environmental health professionals dedicated to preventing pollution by serving both the public and business communities in Los Angeles County.

The Los Angeles County Fire Department is the first agency that responds to hazardous material release incidents in Carson. If they require assistance, a hazardous materials response unit is dispatched to the site. The Los Angeles County Fire Department is not part of a Joint Powers Authority (JPA); however, it is a member of a Certified Unified Program Agency (CUPA), which conducts inspections of businesses, manages and reviews various hazardous waste permits for business plans, and oversees cleanups.[1]

There are six primary fire stations that provide fire and emergency medical service to the City of Carson, four of which are located within the corporate boundaries (refer to Section 4.9, *Public Services and Utilities*, for the location of the fire stations located within the corporate limits). In Carson, all of the businesses that store acutely hazardous substances are located within 1.5 miles of a Los Angeles County Fire Station. Average response time for a hazardous materials release in the City is approximately five minutes.

CITY OF CARSON

The City of Carson conducted a hazard analysis study as part of the preparation of its *SEMS Multihazard Functional Plan*. The City of Carson is located within Area E, Los Angeles County (southeast section), Region I, Southern Administrative Region of the State Office of Emergency Services. City staff has been designated to coordinate all State Emergency Management System (SEMS) functions. The City has its own Public Safety, Engineering Services, Community Development, Facilities and Maintenance, Finance, Human Resources, and Recreation and Community Services Departments. The City does not have its own police or fire department, but relies on the County of Los Angeles for the provision of these services. During the response phase, the Carson Sheriff's Station EOC or Watch Commander serves as the coordination and communication point, and the access to the Los Angeles County Operational Area.

[1] Telephone interview with Battalion Chief John Tucker of the Los Angeles County Fire Department on March 17, 1999.

EVACUATION ROUTES

Evacuation, if necessary because of an emergency, would be conducted by the Los Angeles County Sheriff's Department in accordance with the City's Evacuation Plan. Evacuation routes are shown in Exhibit 4.10-1, *Evacuation Routes*. Should the City Hall Emergency Operations Center (EOC) not be available because of damage, an alternate EOC would be activated. Alternate EOC and staging sites are as follows: a) City of Carson Facilities and Maintenance Building at 2930 E. Dominguez Street, b) City of Carson City Hall, second floor Executive Conference Room, and c) mobile command vehicle located at Carson Sheriff's Station parking lot.

LOS ANGELES BASIN CALL WHEEL

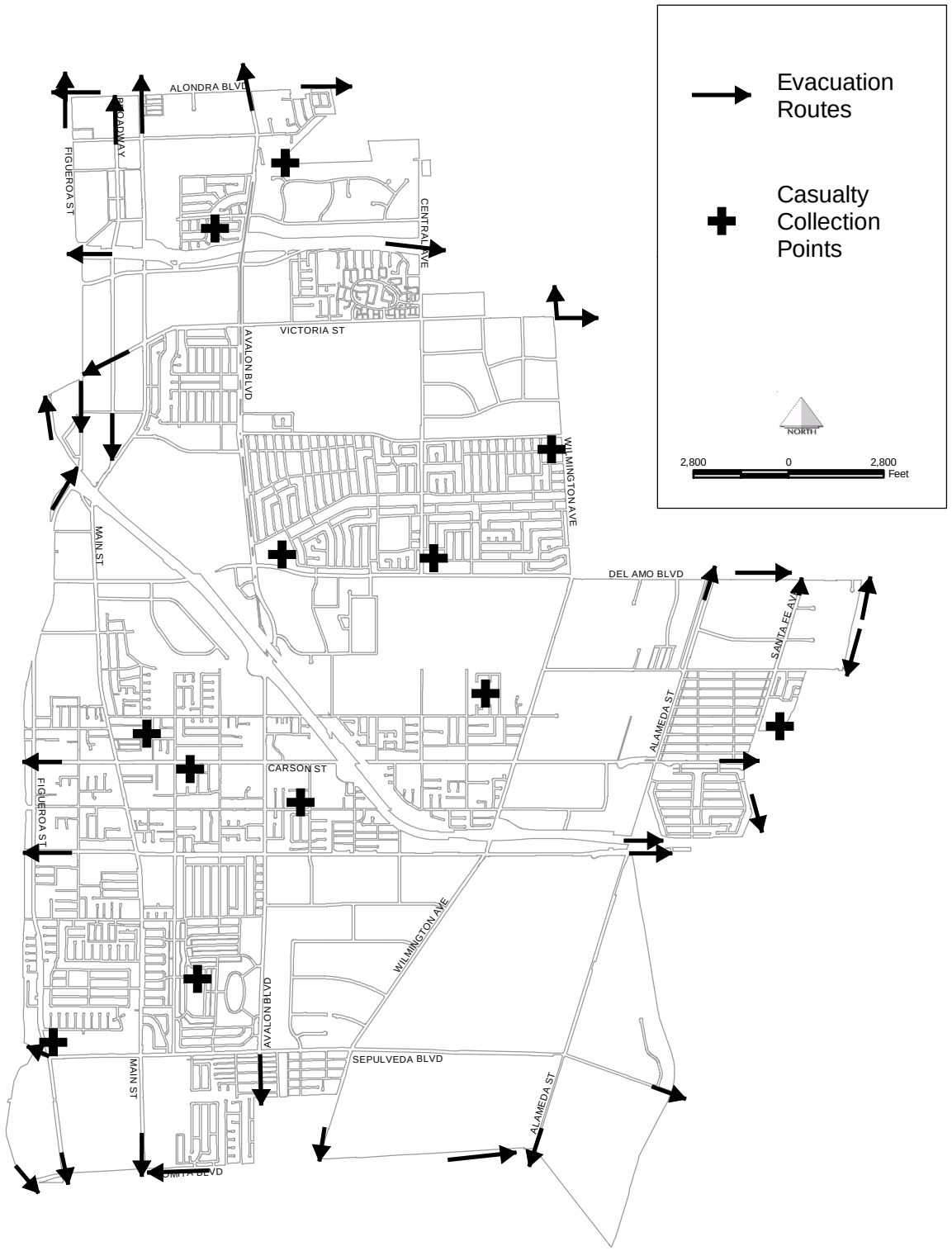
In addition to the Los Angeles County Fire Department, a "Call Wheel" has been prepared for pipeline leak notification by petroleum companies within the Los Angeles Basin. The purpose of the "Call Wheel" is for leak information notification to companies on the Call Wheel and response information on who claimed the leak.

HOUSEHOLD HAZARDOUS WASTE ELEMENT

Adopted by the City in January 1992, the Household Hazardous Waste Element describes existing and future programs to reduce household hazardous waste. The goals and objectives established by the County and supported by the City in this Element include: providing a means for Los Angeles County residents to safely dispose of household hazardous waste; increasing the percentage of collected household hazardous waste that is recycled or reused; decreasing the amount of household hazardous waste by continuing to use public education programs; and monitoring and remaining current on regulatory requirements and participating in improving household hazardous waste management methods.

DISCLOSURE OF HAZARDOUS MATERIALS

All businesses that handle more than a specified amount of hazardous materials are required by both the Federal and State governments to submit a business plan to their local administering agency, quantities for acutely hazardous materials vary according to the substance. In the City of Carson, the administering agency is the Los Angeles County Fire Department. Every handler is required to submit a business plan and an inventory of hazardous substances and acutely hazardous materials to the Fire Department on an annual basis. If the hazardous materials inventory of a business should change, a revised business plan must be submitted. Inspectors from the Los Angeles County Fire Department conduct annual inspections of businesses that have submitted a business plan; they also conduct follow-up inspections as needed.



Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

EVACUATION ROUTES

EXHIBIT 4.10-1

Business and industrial facilities located outside the City limits also may have the potential of causing a hazardous materials release incident that could impact Carson. Hazardous materials stored in warehouses or in refineries have the potential of being released as toxic fumes during an earthquake or fire. The areas of the City that could be impacted by a toxic fume are in part dependent upon wind direction and other climatological controls. However, because of the risk, facilities that store hazardous materials that could pose a toxic-fume threat should not be located near predominantly residential neighborhoods and/or facilities that house immobile populations (i.e., schools, child care centers, convalescent homes, etc.).

HAZARDOUS AND TOXIC MATERIALS IN CARSON

The City of Carson has a relatively long history of urban use, including industrial, commercial, and oil field development dating back to the early 1920s. Many of these uses have involved the use, storage, and/or generation of hazardous materials that were and continue to be required for even the most routine industrial and manufacturing processes. As a result of this long history of industrial and commercial development and the fact that waste management practices and regulations were either not in place or not up to current standards, there are several sites within the City that have the potential to have been impacted by previous releases of contaminated materials.

HAZARDOUS MATERIALS USERS

The primary concern associated with the release of a hazardous material is the short- and long-term effects that exposure to a hazardous substance may have on the public. This is particularly true when a toxic gas is involved because a gaseous toxic plume is more difficult to contain than a soil or liquid spill, and a gas can impact a larger segment of the population in a shorter time span.

As of 1999 there were approximately 324 businesses in the City of Carson that handled hazardous materials and had a business plan on file or pending with the County of Los Angeles Fire Department. As of March 1999, 43 of these businesses handled acutely, or highly hazardous materials. There are 16 businesses, as of 1999, in the City and immediately surrounding unincorporated area that have Risk Management Prevention Plans (RMPPs) on file with the Los Angeles County Fire Department's Hazardous Materials Disclosure Program. This program is intended to manage those materials classified as acutely hazardous materials. The list of businesses that have a RMPP is currently being updated. In addition, the City of Carson contains numerous regulatory program sites (Fee Groups 03-05) as indicated on Exhibit 3.7-1, *Sites With Regulatory Programs*, in the Existing Conditions Report and Table 4.10-1, *City of Carson Regulatory Fee Groups*.

ILLEGAL DUMPING

Clandestine dumping, the criminal act of disposing of toxic material and hazardous waste on public or private property, can trigger a hazardous material incident. As the costs and restrictions increase for legitimate hazardous waste disposal sites, it can be anticipated that illegal dumping of hazardous materials will increase proportionately.

Table 4.10-1
City of Carson Regulatory Fee Groups

Site No.	Name	Location	Fee Group	Reporting District
101	Carbonic Products Inc.	115 W. Victoria St.	03	1610
373	Don Kott Ford	21212 S. Avalon Blvd.	03	1628
406	Dominguez Energy Company	1556 E. Victoria St.	03	1613
418	Penske Truck Leasing Co. LP	19646 Figueroa St.	03	1617
674	Debest Mfg. Co. Inc.	117 E. 162 St.	03	1610
806	Calwest Galvanizing Corp.	2226 E. Dominguez St.	03	1621
809	Gatx Tank Storage Terminals Corp.	2000 E. Sepulveda Blvd.	05	1626
1058	International Paper Company	1350 E. 223rd St.	03	1625
1079	AHF-Ducommun Inc.	444 E. Gardena Blvd.	03	1610
1080	AHF-Ducommun Inc.	268 E. Gardena Blvd.	03	1610
1081	AHF-Ducommun Inc.	140 E. Gardena Blvd.	03	610
1082	AHF-Ducommun Inc.	131 E. Gardena Blvd.	03	1610
1122	Permalite Repromedia Corp.	230 E. Alondra Blvd.	04	1610
1125	Fletcher Oil and Refining Co.	24721 S. Main St. #2	05	1623
1177	Edoco Chemicals	22039 S. Westward Ave.	04	1621
1184	So. Cal. Edison Co. (El Real)	1007 E. Lomita Blvd.	05	1626
1459	Paquet Oneida Inc.	1120 E. Sandhill Ave.	03	1611
1460	Carroll Calif. Ventures	1253 E. Artesia Blvd.	03	1611
2379	Barton Brands of California	2202 E. Del Amo Blvd.	05	1621
2392	Industrial Polychemical Service	17109 Main St.	03	1610
2393	Industrial Polychemical Service	17116 S. Broadway	03	1610
2394	Industrial Polychemical Service	17120 S. Broadway	03	1610
2408	Shell Oil Company	20945 S. Wilmington Ave. #1	05	1620
2434	ARCO Western Pipe Line Co.	24696 S. Wilmington Ave.	05	1626
2588	Rhone-Poulenc Basic Chemicals	20720 S. Wilmington Ave.	05	1621
2590	ARCO-Watson Refinery	1801 E. Sepulveda Blvd.	04	1626
2706	Advanced Packaging & Products Co.	16131 Maple Ave.	03	1610
2924	Easterday Janitorial Supply Co.	17050 Margay Ave.	03	1611
2925	Johnson Laminating & Packaging Co.	20631 Annalee Ave.	03	1620
2947	McCarthy Draying Company	2839 E. 208th St.	04	1622
2950	MCI Telecommunications	17900 Central Ave.	03	1611
3471	Decore Plating Inc.	434 W. 164th St.	03	1610
3614	Washington Iron Works	17926 S. Broadway	03	1610
3625	I C Compound Co.	1120 E. 163rd St.	03	1610
3642	Lesbro Co.	2418 E. 223rd St. #1	04	1626
3651	Van Den Bergh Foods Co.	1135 E. Artesia Blvd.	03	1611
3662	Anitec Image	860 E. 238th St.	03	1625
3824	Apollo Warehouse	1073 E. Artesia Blvd.	03	1611
3825	Flamingo Textile Mills Inc.	1123 E. Sandhill Ave.	03	1611

Table 4.10-1 – Continued
City of Carson Regulatory Fee Groups

Site No.	Name	Location	Fee Group	Reporting District
3827	Nalco Carson Plant	2111 E. Dominguez St.	04	1621
3887	Clothier & Rose Inc.	1000 E. Del Amo Blvd.	04	1620
3906	Sims Welding Supply Co. Inc.	18903 Main St.	03	1614
4007	Lilly Industries	210 E. Alondra Blvd.	04	1610
4078	Volvo North America Corp.	990 E. 233rd St.	03	1625
4079	Huck International Inc.	900 Watson Center Rd.	03	1625
4084	Niklor Chemical Co. Inc.	2060 E. 220th St.	04	1621
4085	Mutual Liquid Gas & Equipment co.	17117 S. Broadway	03	1610
4103	Industrial Process & Chemical Co.	21111 Wilmington Ave.	03	1620
4104	Praxair Distribution Inc.	2006 E. 223rd St.	04	1626
4105	Amerigas Propane L.P.	16800 S. Main St.	04	1610
4134	Alflex Corporation	2630 El Presidio St.	03	1622
4170	Geon Company	2104 E. 223rd St.	05	1626
4340	Brea Canyon Oil Company	17810 S. Central Ave.	04	1611
4571	B.O.C. Gases	1290 E. Sepulveda Blvd.	05	1626
4761	Zynolyte Products	2320 E. Dominguez St. #B	04	1621
4848	Barmet Aluminum Corp.	2211 E. Carson St.	03	1621
4906	Cal-Pacific Dye & Finishing Corp.	505 E. Gardena Blvd.	03	1610
5030	Texaco Refining & Marketing Inc.	23208 S. Alameda St.	05	1626
5031	Air Products & Chemicals Inc.	23320 S. Alameda St. #A	05	1626
5036	Botanicals International	2550 El Presidio St.	03	1622
5041	Pepsi Cola Bottling Group	19700 Figueroa St.	03	1617
5068	Intero Inc.	1906 E. Dominguez St.	03	1621
5074	Western Tube & Conduit Corp.	2001 E. Dominguez St.	03	1621
5078	Candle Corporation of America	2777 El Presidio St.	03	1622
5302	76 Products Co. - Unocal	1520 E. Sepulveda Blvd.	05	1626
5348	Bayer Corporation	20455 Reeves Ave.	04	1621
5353	Chem-Oil Refining Corp.	2365 E. Sepulveda Blvd.	05	1626
5474	Santa Fe Pacific Pipe Lines Inc.	20410 S. Wilmington Ave.	05	1621
5514	American Racing Equipment Inc.	17006 S. Figueroa St.	04	1610
5541	So. Cal. Edison (Neptune)	456 E. 220th St.	03	1618
5543	So. Cal. Edison (Watson)	S/E Sepulveda & Broad	03	1625
5544	So. Cal. Edison (Jersey)	16820 Central Ave.	03	1611
5546	So. Cal. Edison (Shellwat)	24501 Alameda St.	03	1626
5550	So. Cal. Edison (Nola)	S/W Main & Griffith	03	1614
5556	So. Cal. Edison (Refinery)	20945 Wilmington Ave. #2	03	1620
5557	So. Cal. Edison (Alon)	213 Vera St.	03	1620
5740	Mercedes-Benz of North America	851 Watson Center Rd.	03	1625
6221	A & B Auto Parts	17120 Figueroa St.	03	1610

Table 4.10-1 – Continued
City of Carson Regulatory Fee Groups

Site No.	Name	Location	Fee Group	Reporting District
6685	Farwest Corrosion	17311 Main St.	03	1610
6832	Southern Pacific Transportation	2443 E. Carson St.	03	1621
7155	Blue Diamond Materials	354 W. Walnut St.	03	1610
7208	Gary Steel	2400 E. Dominguez St.	03	1621
7212	Western Waste Industries	1970 E. 213th St.	03	1621
7285	Hertz Equipment Rental	17310 Main St.	03	1610
7296	Lorber Industries	17908 Figueroa St.	03	1610
7335	All Waste of So. Cal.	2222 E. Sepulveda Blvd.	03	1626
8249	Rainbow Transport Tank Cleaners	21119 Wilmington Ave. #1	03	1620
8379	Lesbro Company	1850 E. Sepulveda Blvd.	04	1626
8970	Brite - Sol Service Inc.	22606 S. Alameda St.	03	1626
9575	Noble Distribution Systems	20453 Reeves Ave.	03	1621
9583	Neo Tech Cosmetic Mfg. Inc.	20626 Belshaw Ave.	03	1620
9692	Westrux International	1505 E. 223rd St.	03	1628
10015	ARCO Products Co.	2149 E. Sepulveda Blvd.	05	1626
10062	Hanyoung America Inc.	935 E. Artesia Blvd.	03	1611
10095	Southern CA Permanente Med. Grp.	23701 Main St.	03	1623
10826	Carson Cogeneration Co.	17171 Central Ave.	03	1611
11243	Western Synthetic Fiber Inc.	966 E. Sandhill Ave.	03	1611
11258	Shell Oil Company - Carson Plant	1622 E. Sepulveda Blvd.	05	1626
11959	United Refrigeration Inc.	1134 E. Dominguez St.	03	1620
12063	Pioneer Video	1041 E. 230th St.	03	1625
12422	Pep Boys #657	810 E. Dominguez St.	03	1620
12426	RIFA USA, Inc.	17800 Main St. #302	03	1610
12901	So. Cal. Airgas	860 E. 223rd St.	03	1626
16627	Durham Transportation	16627 S. Avalon Blvd. #D	03	1610

NOTE:
03 Major Handler: 2,751 - 50,000 gallons; or 25,001 - 500,000 pounds; or 10,001 - 200,000 cubic feet
04 Major Handler - Large Volume: 50,001 - 175,000 gallons; or 500,001 - 700,000 pounds; or 200,001 - 250,000 cubic feet
05 Major Handler - Complex: 175,001 gallons and over; or 700,001 pounds and over; or 250,001 cubic feet and over; or a total of quantity of two or more hazardous materials when expressed in or converted to points that equals 500,000 pounds or greater, and is either a refinery, chemical plant, distillery, bulk plant, or terminal.

TRANSPORT OF HAZARDOUS MATERIALS

In addition to stationary land uses that have the potential to involve hazardous materials releases, major transportation corridors are also a potential source of accidental releases or environmental incidents that could affect various areas of the City. Heavy truck traffic occurs on the Harbor (I-110), Redondo Beach/Artesia (SR-91), San Diego (I-405), and Long Beach (I-170) freeways each day. In addition, arterial streets, including the Alameda Corridor, are also a potential source of accidental releases of hazardous materials in the event of an accident. Trucks carrying hazardous materials in support of local and regional industry and commerce regularly use these transportation routes. One or more of every 10 commercial vehicles usually carries hazardous materials. In addition, hazardous materials are often transported through the eastern portion of the City by rail lines. The Los Angeles County Fire Department responds to all hazardous materials incidents within the City, including those along the railways. The California Highway Patrol is in charge of abating spills that occur on the freeway, with the local police and fire departments and Caltrans responsible for additional enforcement and routing assistance.

OIL AND GAS WELL INVENTORY

For the purposes of this EIR, an oil well is defined as a hole drilled from the surface into the earth for prospecting for, or production of oil, natural gas, or other hydrocarbon substances. This definition also encompasses a well or a hole used for the subsurface injection into the earth of oil field waste, gases, water, or liquid substances, including any well or hole that has not been abandoned and is now in existence. The depth of an oil or gas well can range from a few hundred feet below ground surface (bgs) to more than 20,000 bgs.

Portions of the City of Carson are located within the Dominguez and Wilmington Oil Fields. According to the *1998 Preliminary Report of California Oil and Gas Production Statistics*, dated January 1999, the Dominguez Oil Field produced approximately 237,000 barrels of oil and the on-shore oil production portion of the Wilmington Oil Field produced approximately 4.4 million barrels of oil. Table 4.10-2, *Oil and Gas Well Inventory*, provides the number of the different type of wells located within the City of Carson as provided by the Department of Oil, Gas, and Geothermal Resources (DOGGR).

OIL PRODUCTION HAZARDS

Gas Migration. Development within an oil field could result in construction of structures over abandoned wells. If the wells are leaking, methane and hydrogen sulfide gas could migrate upward and could accumulate beneath developed areas where concrete and asphalt surfaces prevent the natural migration of the methane gas to the atmosphere. Migration of gas through cracks in concrete foundations into the interior of structures could create the potential for an explosion and/or fire.

Table 4.10-2
Oil and Gas Well Inventory

Well Type		Number of Wells
Plugged and Abandoned Oil	Oil well has been plugged and abandoned.	236
Plugged and Abandoned Dry Hole	Dry well which has been plugged and abandoned.	63
Plugged and Abandoned Waterflood	Plugged and abandoned waterflood well.	9
Idle-Oil	Oil well which has been drilled and closed, however has not been properly abandoned pursuant to DOGGR regulations.	5
Completed Oil Waterflood	Former oil well which has been converted to a waterflood well. These wells are capable of being utilized, however, are not currently used.	55
Completed Oil CO_2	Former oil well which has been converted to a CO_2 producing well. These wells are capable of being utilized, however, are not currently used.	2
Plugged and Abandoned Oil Waterflood	Plugged and abandoned oil waterflood well.	74
Completed Gas	Completed (drilled) gas well that is capable of producing. Current well status is available at DOGGR.	2
Completed Oil	Completed (drilled) oil well that is capable of producing. Current well status is available at DOGGR.	136
Drilling Idle	Well which has been drilled and closed, however has not been properly abandoned pursuant to DOGGR regulations.	2
Completed Waterflood CO_2	Former waterflood well which has been converted to a CO_2 producing well. These wells are capable of being utilized, however, are not currently used.	3

Source: Wildcat Map #125, dated August 8, 1998
Wildcat Map #126, dated December 28, 1998
Wildcat Map #128, dated October 24, 1998
Regional Wildcat Map #01-1, dated July 4, 1998

NOTE: All closed and abandoned wells have not necessarily been abandoned pursuant to State of California, Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) regulations. Current well status should be confirmed at the appropriate division of Oil and Gas District Office.

Soil Contamination. Oil contaminated soil is known to occur in oil fields particularly adjacent to oil wells. Unrefined oil contains a variety of hazardous constituents, including polyaromatic hydrocarbons (PAH), which are carcinogens, benzene, toluene, xylene, ethylbenzene and heavy metals; however, it should be noted that all oil-contaminated soil is considered hazardous under Federal and State standards. Due to the historic drilling activities within the City, contaminated soils may exist in the City.

Blowouts. Blowout prevention devices are generally used by well operators whenever oil wells are being drilled or reworked. However, improper installation or faulty devices could potentially create a blowout at a drilling facility.

PIPELINES

There are several crude oil and petroleum product pipelines that transect the City. Several petroleum handlers (i.e., Equilon, Tosco, a portion of the Texaco Refinery, and Arco, which was acquired by British Petroleum (BP)) are located within the City. The Southern Pacific Pipeline transports an unlimited amount of various products through the City from several locations.

In the event of a ruptured pipeline within the City, the local fire department is responsible for contacting the operator of the damaged pipeline and, in the case of fire or explosion, for fire suppression. The Los Angeles County Fire Department has the emergency, 24-hour telephone numbers of the operators of the hazardous pipelines that transect the City. In addition, the Fire Department has to report any pipe rupture, fire, or explosion to the State Office of Emergency Services.

SUPERFUND SITES

A search of the EPA's database of Superfund Sites revealed a total of eight hazardous waste sites in Carson. However, none of the sites have been placed on the National Priorities List.[2]

UNDERGROUND STORAGE TANKS

Based on a review of the California Environmental Protection Agency (CalEPA), Hazardous Waste and Substance Sites (CORTESE) list, and the State Water Resources Control Board list of Releases of Hazardous Substances from Underground Storage Tanks (USTs), as of 1999, at least 72 Leaking Underground Storage Tanks (LUSTs) have been reported in Carson. Of these, approximately 18 cases currently have remedial activities underway, while further site assessment/investigation activities are reported for the remaining 54 LUST sites.

CLOSED AND INACTIVE LANDFILLS

In addition to commercial and industrial uses within the City of Carson, several solid waste landfills have been documented to exist in the area. The 1988 Federal Comprehensive Environmental Response, Compensation and Liability Act Information System (CERCLIS) list of potentially hazardous waste sites included 14 sites within the City that were investigated by the Federal EPA. The CERCLIS inventory lists sites that have been identified as having a potential for releasing hazardous substances into the environment (refer to Appendix B, in the *Carson General Plan Update Existing Conditions Report*). According to information provided by VISTA Information Solutions, Inc., there are no Federal National Priorities Listings (NPL) within the City. However, these 14 sites are currently being reviewed/ assessed for possible inclusions on the NPL.

[2] Source: http://www.epa.gov/superfund. November 16, 2001.

The composition of waste materials disposed of in several of these facilities is not well known and many of these facilities are undergoing site investigation and/or monitoring for contaminant constituents, including the generation of methane gas associated with waste decomposition. The locations of these facilities are indicated on Exhibit 4.10-3, *Landfills*. Table 4.10-3, *Carson Landfill Inventory*, corresponds with the landfills identified on Exhibit 4.10-3 and provides the landfill class and status.

Table 4.10-3
Carson Landfill Inventory

Site No.	Landfill	Class	Status
1	BKK (Victoria Golf Course)	II	Closed
2	Cal Compact (Metro Mall Site)	II	Closed
3	Martin Adams, Inc. (Imperial Carson MHP)	II	Closed
4	Southwest Conservation	II	Closed
5	Gardena Valley 1 & 2	II	Closed
6	Gardena Valley 4	II	Closed
7	Gardena Valley 5	II	Closed
8	Broadway & Main Corporation Yard	II	Closed
9	Alameda Street Dump	II	Closed
10	Hardwick Disposal Pits	II	Closed
11	California By-Products	II	Closed
12	Southwest Steel Mills #1	III	Closed
13	Sanitation Districts	III	Closed
14	Shell Chemical	III	Closed
15	Werdin Site (Vista del Loma MHP)	III	Closed

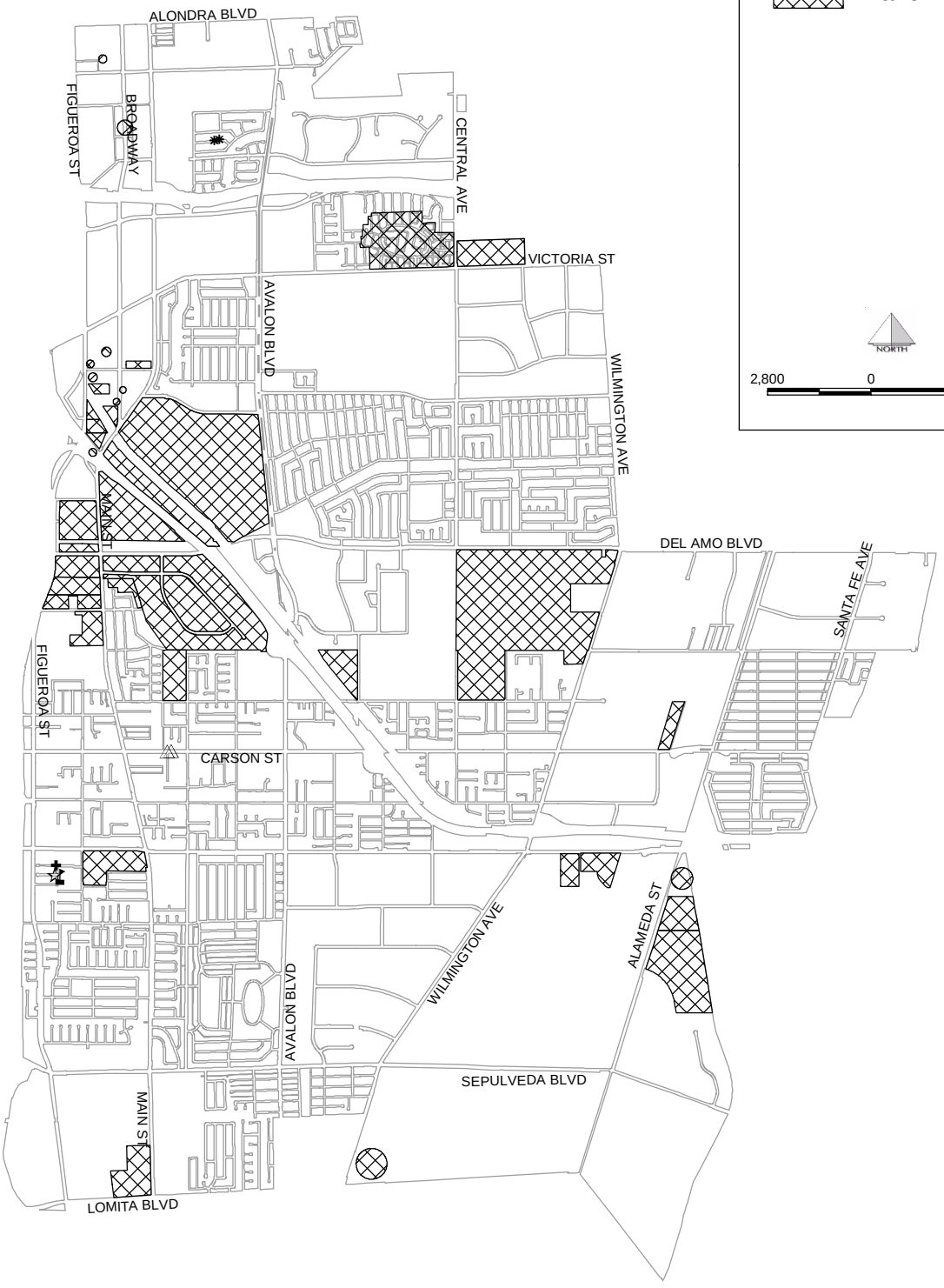
Class I: For toxic or hazardous substances
Class II: For chemically or biologically decomposable substances
Class III: For non-water soluble, non-decomposable inert solids

The City currently has 15 inactive sanitary landfills and no active landfills. Although none of these landfills currently accepts materials that decompose chemically or biologically, some of these sites may produce landfill gases. Other sites will probably not produce landfill gases since they contain non-water soluble, non-decomposable inert solids.

Some areas of the City are sites of previous organic landfill activity and may be subject to decomposition and the production of landfill gases. Any future development proposed on or near these sites should be carefully studied and a landfill gas control plan and monitoring system may be required for safety.

REGULATORY SITES

VISTA Information Solutions, Inc., has searched governmental sources for listed regulatory sites within the City of Carson. Upon completion of their search, VISTA provided their findings dated March 9, 1999 (refer to Appendix C, *Hazardous Materials*, in the *Carson General Plan Update Existing Conditions Report*). The review of VISTA's findings can only be as current as their listings and may not represent all known or



CARSON GEOGRAPHIC SERVICES

Source: Sanitation Division, L A County Engineer, 8-81
OCTOBER 22, 2002

LANDFILLS

EXHIBIT 4.10-2

potential hazardous waste or contaminated sites. To reduce the potential for omitting possible hazardous material sites within the City, sites may be listed in the report if there is any doubt as to the location because of discrepancies in map location, zip code, address, or other information. Table 4.10-4, *Regulatory Sites Within the City of Carson*, provides this information.

AIR TRAFFIC AND RAIL LINE HAZARDS

AIRCRAFT OVERFLIGHT

Aircraft originating and departing from a number of airports located within Southern California heavily occupy the skies over Carson. The airports nearest to Carson that handle the greatest amount of air traffic are described below.

- Los Angeles International Airport (LAX). It is the fourth busiest airport in the world and in 2001 served 61.6 million annual passengers. Planes arrive and depart at a rate of one per minute. This airport is located 12.7 miles northwest of the City of Carson.

- Long Beach Airport. In 1995, the Long Beach Airport served 400,000 passengers. Planes arrive and depart at a rate of 1.5 every two minutes. This airport is located 13 miles southeast of the City of Carson.

- John Wayne Airport. It is ranked tenth nationally in terms of air traffic and served 7.8 million annual passengers in 2000. This airport is located approximately 23 miles southeast of Carson.

- Ontario Airport. In 2001, 6.7 million annual passengers were served at the Ontario Airport, which is experiencing a three percent growth rate that is projected to continue. This airport is located 70 miles east of the City of Carson.

- Burbank Airport. In 2001, 5 million annual passengers were served at this airport. This airport is located approximately 26 miles north of Carson.

Aircraft flying over Carson are located in the Los Angeles Terminal Control Area (TCA). The TCA is airspace restricted to large, commercial airliners. Each TCA has an established maximum and minimum altitude in which a large aircraft must travel. Smaller aircraft desiring to transit the TCA may do so by obtaining Air Traffic Control clearance. The aircraft may then proceed to transit when traffic conditions permit. Aircraft departing from other than LAX, whose route of flight would penetrate the TCA, are required to give this information to Air Traffic Control on appropriate frequencies. Pilots operating small aircraft often rely on landmarks, rather than charts, to indicate their locations. If a pilot is unfamiliar with the geographical landmarks within the Southern California Basin, he/she may inadvertently enter the restricted TCA airspace. This misunderstanding may result in a mid-air collision.

Table 4.10-4
Regulatory Sites Within the City of Carson

Database Searched within City Boundary		Site Distribution Summary			
Regulatory Agency	Type of Records	Name/Description of Records	Number of Regulatory Sites within City Boundary[1]	Description[2] (Status/Summary of Regulatory Occurrences)	Breakdown Of Occurrences
US EPA	NPL CORRACTS	National Priority List: the National Priorities List (NPL) is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program.	0	No NPL sites have been identified within the City boundaries	0
US EPA	CORRACTS (TDS)	RCRA Corrective Action and Associated TSD: The EPA maintains this database of RCRA facilities which are undergoing "corrective action". A "corrective action order" is issued pursuant to RCRA Section 3008 (h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility.	13	Priority Status: Low Medium High	 3 6 3
				Storage/Treatment and Disposal of Wastes	1
STATE	SPL	State Equivalent Priority List: The Cal Sites database contains information on properties (or "sites" in California where hazardous substances have been released, or where the potential for such a release exists.	5	Annual Work Plan	5
STATE	SCL	State Equivalent CERCLIS List: The Cal Sites database includes both known and potential sites. Two-thirds of these sites have been classified, based on available information, as needing "No Further Action" by the DTSC. The remaining sites are in various stages of review and remediation to determine if a problem exists at the site. Several hundred sites have been remediated and are considered certified. Some of these sites may be in long-term operation and maintenance.	19	Referred to Another Agency	14
				Preliminary Site Assessment	3
				Certified/Operation and Maintenance	2
US EPA	CERCLIS/ NFRAP	Site Currently Under Review By US EPA: The CERCLIS List contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.	14	Preliminary Assessment	4
				High Priority	5
				Low Priority	4
				Clean Up	1
US EPA	TSD	RCRA Permitted Treatment, Storage, Disposal Facilities: TSDs are facilities which treat, store and/or dispose of hazardous waste.	0	No TSD sites have been identified within the City boundaries	0
STATE REG CO	LUST	Leaking Underground Storage Tanks: This database is provided from the Regional Water Quality Control Board (RWQCB) and California EPA.	72	Remedial Action Underway	18
				Further Site Assessment	54

Table 4.10-4 – Continued
Regulatory Sites Within the City of Carson

Database Searched within City Boundary		Site Distribution Summary			
Regulatory Agency	Type of Records	Name/Description of Records	Number of Regulatory Sites within City Boundary[1]	Description[2] (Status/Summary of Regulatory Occurrences)	Breakdown Of Occurrences
STATE REG CO	SWLF	Solid Waste Landfill: The California Solid Waste Information System (SWIS) database consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.	11	Active/Open (Transfer Station)	2
				Abandoned/ Unpermitted	1
				Review of Permit	9
STATE	DEED RSTR	Deed Restrictions: These are voluntary deed restriction agreements with owners of property who propose building residences, schools, hospitals, or day care centers on property that is "on or within 2,000 feet of a significant disposal of hazardous waste."	2	No Description Available	0
STATE	CORTESE	CORTESE: State index of properties with hazardous waste.	72	Leaking Tanks	65
				Cal Sites	7
STATE	TOXIC PITS	Toxic Pits: This list is provided the Water Quality Control Board and summarizes the Toxic Pits Cleanup Facilities.	0	No Toxic Pits sites have been identified within the City boundaries	0
USGS/ STATE	WATER WELLS	Water Wells: Federal and State drinking water sources.	17	No contamination reported	17
US EPA	RCRA Viol	RCRA Violations/enforcement Actions: RCRA Violators are facilities which have been cited for RCRA violations at lease once since 1980. RCRA Enforcements are enforcement actions taken against RCRA violators.	25	Various Violations	25
US EPA	TRIS	Toxic Release Inventory Database: Section 313 of the Emergency Planning and Community Right-to-Know Act (also known as SARA Title III) of 1986 required the EPA to establish an inventory of Toxic Chemicals emissions from certain facilities (Toxic Release Inventory System). Facilities subject to this reporting are required to complete a Toxic Chemical Release form for specified chemicals.	27	Various Chemical Releases	27
STATE	UST/ AST	UST/AST: Registered aboveground or underground storage tanks.	381	Reported (Status Not Confirmed)	81
				Permitted	103
				Active/In-Service	591
COUNTY	UNIQUE CO	Unique Co.: Unique County Databases.	90	No Description Available	90

Table 4.10-4 – Continued
Regulatory Sites Within the City of Carson

Database Searched within City Boundary		Site Distribution Summary			
Regulatory Agency	Type of Records	Name/Description of Records	Number of Regulatory Sites within City Boundary[1]	Description[2] (Status/Summary of Regulatory Occurrences)	Breakdown Of Occurrences
US EPA	ERNS	Emergency Response Notification System of Spills: ERNS is a national database used to collect information on reported releases of oil and hazardous substances.	352	Release of hazardous materials at various locations throughout the City	352
US EPA	GNRTR	RCRA registered small or large generators of hazardous waste: The RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal.	284	RCRA-Large: Generates at least 1,000 kg/month of non-acutely hazardous waste (or 1 kg/month of acutely hazardous waste).	43
				RCRA-Small: Generates 100 kg/month but less than 1,000 kg/month of non-acutely hazardous wastes	241

Notes: The governmental sources have been searched by VISTA Information Solutions, Inc. (at the request of RBF), for sites located within the corporate limits of the City of Carson. Upon completion of their search, VISTA provided RBF with their findings dated march 9, 1999. RBF makes no claims as to the completeness or accuracy of the referenced sources. Our review of VISTA's findings can only be as current as their listings and may not represent all known or potential hazardous waste or contaminated sites. For a complete list of individual regulatory site addresses, the supporting site map and associated regulatory database(s) identified, refer to Appendix B.

The findings of the VISTA Report were updated accordingly after an interview with Western Waste Industries on May 12, 1999.

1. Individual properties may be listed o more than one database (i.e., UST, LUST, CORTESE).
2. Status of individual sites may not have been provided within the regulatory database. Summary of regulatory occurrences are approximate and the status of any individual site is subject to change due to on-going remedial activities and/or a change due to regulatory review.

TRAIN DERAILMENT

The City of Carson is served by three railroads and one light rail system. All three railroads are transcontinental systems: Union Pacific, Southern Pacific and Santa Fe. Thus virtually every industry and business is on a direct transcontinental rail line. The Union Pacific runs along the eastern section of the City, as it converges onto the Los Angeles City container transfer facility, which borders the west side of Long Beach. The Southern Pacific runs along the central, southern and eastern section of the City. The Santa Fe extends into the eastern section of the City.

In addition to the rail lines that serve business and industrial uses, the Metro Blue Line traverses through the City's boundaries. The Metro Blue Line, part of the Metro Rail system, operates as part of the multimodal transportation system developed by the Los Angeles County Transportation Authority (LACTA). The Metro Blue Line is operated by the Metropolitan Transportation Authority (MTA). The Blue Line runs through the eastern portion of the City, running north of downtown Los Angeles and south through Long Beach. In the event of a major earthquake, segments of the line from the Long Beach to the Del Amo passenger station and from the Artesia passenger station to the Slauson passenger station, as well as segments of the line from the Slauson to the 7th and Flower station are expected to sustain serious damage. There are also off-system hazards that may impact the system, including facilities that store or process hazardous materials, high voltage lines, petroleum pipelines and natural gas mains.

Public safety hazards typically associated with train operations can be broken down into two groups: 1) accidents associated with population exposure to rail operations (primarily pedestrian and vehicular accidents involving trains) and 2) accidents involving the trains themselves (i.e., derailments). A major train derailment could encompass many threats, such as hazardous materials incident, fire, and severe damage to either adjacent buildings or vehicles, and the loss of life to pedestrians and those in adjacent buildings or vehicles. (For locations of railroad lines within the City of Carson, please refer to Section 4.3, *Transportation/Circulation)*.

4.10.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Public health and safety impacts resulting from the implementation of the proposed General Plan could be considered significant if they cause any of the following results:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area (refer to Section 9.0, *Effects Found Not To Be Significant*);

- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or

- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (refer to Section 9.0, *Effects Found Not to Be Significant*).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.10.3 IMPACTS AND MITIGATION MEASURES

HAZARDOUS MATERIALS USE, GENERATION AND TRANSPORT

❍ **NEW COMMERICAL OR INDUSTRIAL DEVELOPMENT IN ACCORDANCE WITH THE PROPOSED GENERAL PLAN MAY RESULT IN AN INCREASED RISK OF UPSET ASSOCIATED WITH THE ROUTINE USE, GENERATION, AND TRANSPORTATION OF HAZARDOUS MATERIALS, WHICH MAY POTENTIALLY POSE A HEALTH OR SAFETY HAZARD.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Many types of businesses utilize hazardous substances as part of their routine operations. Currently, there are a variety of existing business operations in the City of Carson that use, store, or transport hazardous substances, as well as generate

hazardous waste. New non-residential development within Carson may result in an increase in commercial and industrial land uses involving the use of hazardous materials or generation of hazardous waste. The types and quantities of hazardous materials utilized by the various types of businesses that could locate in the City would vary tremendously and, as a result, the nature of potential hazards would also be varied. Such substances can range from common automobile oil and household pesticides to chlorine, dry-cleaning solutions, ammonia, or substances used in commercial and industrial operations. Since the proposed General Plan does not include any specific development projects, no specific type of hazard associated with these materials can be identified and the likelihood of a hazard presenting a serious health or safety to the public cannot be determined at this time. However, it can be generally concluded that any additional non-residential development within the City would result in an increase in the use and transport of hazardous materials and an increase in generation of hazardous waste. The consequence of this increased presence of hazardous materials in the City is an increase in the potential for human exposure to these substances, with possible public health and safety consequences.

However, with implementation of the proposed General Plan, the amount of acres dedicated to heavy industrial uses would decrease by over 778 acres. Study Area 6, which has residential uses located to the east and south, currently consists of 328,184 square feet of commercial uses and 8,020 square feet of heavy industrial. With implementation of the proposed General Plan, general commercial and business park uses would replace the heavy industrial uses in order to provide a buffer between the heavy industrial uses to the west and the residential uses to the east and south. Study Area 18 currently contains 120,000 square feet of heavy industrial uses with residential areas located within the southern portion of the Area and along the northern and southern border. Under the proposed General Plan, this area would be designated low density residential which would be compatible with the surrounding residential uses. In addition, Study Areas 7, 8a, 9a, 9b, 13, and 23 would all change their existing heavy industrial designation to either light industrial, general commercial or mixed use. The total decrease of over 19 percent of the acres dedicated to heavy industrial uses would result in a decrease in the amount of hazardous materials used, generated or transported.

New development that locates near residential areas or within ¼-mile from a school could expose these sensitive land uses to greater risk of exposure to hazardous materials, wastes or emissions. In fact, three schools are currently located within ¼-mile of a known hazardous materials handler (refer to Table 4.10-4). Del Amo Elementary School, Ambler Avenue School, and Ralph Bunche School are within proximity of the following hazardous material handlers: Industrial Process and Chemical Company, Rainbow Transport Tank Cleaners, Amerigas Propoane L.P., Cal-Pacific Dye and Finishing Corporation, respectively. The majority of future development in the City would occur in the vacant and underutilized areas located in the west-central portion of the City, near Del Amo Boulevard and the San Diego Freeway; the area east of California State University Dominguez Hills, near Victoria Street and Wilmington Avenue; and areas in the eastern portion of the City near the San Diego Freeway and Alameda Street. These areas are primarily designated as light and heavy industrial and mixed use. These uses may utilize, transport, and/or store chemicals, creating a possible fire hazard. The accidental release or combustion of these hazardous materials could

endanger individuals within the community. Goals LU-3 and LU-7 in the Land Use Element of the proposed General Plan to ensure that adjacent land uses are compatible with one another so that sensitive receptors are protected from the impacts associated with hazardous materials, reducing impacts to a less than significant level.

Heavy truck traffic occurs on the Harbor (I-110), Redondo Beach/Artesia (SR-91), San Diego (I-405), and Long Beach (I-710) Freeways each day. In addition, arterial streets are also a potential source of accidental releases of hazardous materials in the event of an accident. Also, hazardous materials are often transported through the eastern portion of the City by rail lines.

While the risk of exposure to hazardous materials cannot be eliminated, measures can be implemented to maintain risks to acceptable levels. Recognizing the importance of protecting public safety relating to the handling and exposure of the community to hazardous materials, the proposed General Plan has established Goal SAF-4 "Minimizing the threat to the public health and safety and to the environment posed by a release of hazardous materials", within its Safety Element. Finally, as described previously, there are several federal, state and local regulatory agencies that oversee hazardous materials handling and management. Oversight by the appropriate agencies and compliance with applicable regulations are considered adequate to offset the negative effects related to the use and transport of hazardous materials in the City. In addition, the following proposed General Plan policies would further reduce hazardous materials impacts to a less than significant level.

Policies in the Proposed General Plan: The Land Use, Air Quality, Traffic and Infrastructure, and Safety Elements include the following policies:

LU-7.4 Promote the use of buffers between more intensive industrial uses and residential uses.

LU-7.5 Through the discretionary review process, ensure that the siting of any land use which handles, generated, and/or transports hazardous substances, as defined by state and federal regulations, will not negatively impact existing sensitive receptors/land uses.

TI-1.1 Enforce the City's revised truck route system.

AQ-5.2 Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

SAF-4.2 Periodically review and amend the appropriate ordinances which regulate the storage and handling of hazardous materials to conform

with the standards and definitions of the State and other regulatory agencies.

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

SAF-4.4 Explore the possibility of identifying specific routes for the transport of hazardous materials, to include both railroad and street systems.

SAF-4.5 As truck routes within the City are altered, inform Caltrans and transporters of hazardous materials of the changes.

SAF-4.6 Develop an educational awareness program which encourages proper residential management of hazardous materials.

SAF-4.7 Continue to implement the goals, policies and programs identified in the City's Household Hazardous Waste Element.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS

❍ **ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS USES, STORED, OR TRANSPORTED IN THE CITY MAY RESULT IN A PUBLIC HEALTH RISK.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City of Carson has an extensive history of industrial, commercial and oil field development uses dating back to the early 1920s. Many of these uses have involved the use, storage and/or generation of hazardous materials that were and continue to be required for even the most routine industrial and manufacturing processes. As a result of this long history of industrial and commercial development and the fact that waste management practices and regulations were either not in place or not up to current standards, there are numerous sites in the City that have the potential to have been impacted by previous releases of contaminated materials and thus may require soil and/or ground water remediation.

While it is less likely for newer uses to have involved hazardous material releases, the potential for accidental releases, while minimized under current regulations, is inherent to industrial areas. As of 1999, there were approximately 324 business in the City that handled hazardous materials and had a business plan on file or pending with the County of Los Angeles Fire Department. There are approximately 16 businesses, as of 1999, in the City and immediately surrounding unincorporated area that have a Risk Management Prevention Plan on file with the Los Angeles County Fire Department's

Hazardous Material Disclosure Program. This program is intended to manage those materials classified as acutely hazardous material. Commercial and industrial areas are distributed through the City, but the primary concentration of businesses are located in the northwest section of the City, north of Gardena Freeway and west of Central Avenue, and the southeast section of the City, south of Del Amo Boulevard and east of Avalon Boulevard. These areas are located near sensitive land uses, such as residential neighborhoods. Heavy and light industrial uses in the City of Carson may utilize, transport, and/or store chemicals, creating a possible fire hazard. Further, the accidental release or combustion of these hazardous materials could endanger individuals within the community. However, with implementation of the proposed General Plan, the number of businesses that handle hazardous materials is anticipated to decrease as a result of the decrease of 778 acres designated for heavy industrial uses and an overall decrease of 200 acres designated for industrial uses. In addition, goals and policies have been established in the Land Use Element of the proposed General Plan to ensure the compatibility of adjacent land uses.

Business and industrial facilities located outside the City limits also may have the potential of causing a hazardous materials release incident that could impact Carson. Hazardous materials stored in warehouses or in refineries have the potential of being released as toxic fumes during an earthquake or fire. The areas of the City that could be impacted by a toxic fume are in part dependent upon wind direction and other climatological controls. However, because of the risk, facilities that store hazardous material that could pose a toxic-fume threat should not be located near predominately residential neighborhoods and/or facilities that house immobile populations (i.e., schools, child care centers, convalescent homes, etc.). In order to address these potential hazards, the Air Quality Element has established goals that are dedicated to ensuring that all protective measures are in place and that adequate response is taken if a toxic fume were to affect the City's air. Also, refer to the impact discussion under Air Toxic Emissions.

The greatest probability of a major hazardous materials incident is from a transportation accident. The Harbor Freeway (I-110) borders the western edge of Carson, the San Diego Freeway (I-405) bisects the City, the Long Beach Freeway (I-710) runs from north to south touching the eastern perimeter of the City, and the Redondo Beach/Artesia Freeway (SR-91) runs east to west across the northern portion of the City. Further, hazardous materials are often transported through the eastern portion of the City by rail lines. A number of freight trains also traverse the City, hauling various types of cargo, including hazardous and explosive materials. Due to the hazards associated with the transport of hazardous materials, the proposed General Plan establishes Goal T1-1 in order to, "Minimize impacts associated with truck traffic through the City, as well as the parking locations." With the associated policies, the proposed General Plan works to establish guidelines that would reduce any impacts associated with the transport of hazardous materials.

The use and storage of hazardous substances is regulated by CalEPA, the State Water Resources Control Board, the Los Angeles County Fire Department (Hazardous Materials Response Plan), and the Los Angeles County Health Care Agency (Hazardous Materials Section). The California Highway Patrol and the California Department of Transportation enforce hazardous substance transportation regulations.

The Los Angeles County Fire Department is the first agency that responds to hazardous material release incidents in Carson. If they require assistance, a hazardous materials response unit is dispatched to the site. The Hazardous Materials Release Response Plans and Inventory Law of 1985 (or the Business Plan Act) requires that a business that uses, handles, or stores hazardous materials above a certain quantity prepare a plan which must include an inventory of hazardous substances on the premises. A Risk Management and Prevention Plan (RMPP) may be required for businesses that use acutely hazardous substances and are located in proximity to sensitive land uses. As part of the RMPP, businesses that handle acutely hazardous materials must include a hazard and operability study (HAZOP) which analyze potential hazards to sensitive populations in the vicinity. The Los Angeles County Fire Department oversees the submittal of Business Emergency Plans which are intended to mitigate potential release of a hazardous substances and minimize potential harm or damage. Oversight by the appropriate agencies and compliance with applicable regulations are considered adequate to offset the negative effects related to the accidental release of a hazardous materials in the City. In addition, the following proposed General Plan policies and mitigation measures would help to reduce hazardous materials impacts.

Policies in the Proposed General Plan: The Land Use, Safety and Air Quality Elements include the following policies:

LU-7.3 Promote the use of buffers between more intensive industrial uses and residential uses.

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

SAF-3.1 Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress.

SAF-3.2 Maintain and update, as necessary, the SEMS Multi-Hazard Functional Plan which identifies emergency response and recovery actions in the event of an incident.

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

SAF-4.2 Periodically review and amend the appropriate ordinances which regulate the storage and handling of hazardous materials to conform with the standards and definitions of the State and other regulatory agencies.

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

SAF-4.4 Explore the possibility of identifying specific routes for the transport of hazardous materials, to include both railroad and street systems.

SAF-4.5 As truck routes within the City are altered, inform Caltrans and transporters of hazardous materials of the changes.

SAF-4.6 Develop an educational awareness program which encourages proper residential management of hazardous materials.

SAF-4.7 Continue to implement the goals, policies and programs identified in the City's Household Hazardous Waste Element.

SAF-4.8 Maintain cooperative relationships with the chemical handlers, response agencies and community representatives through such organizations as South Bay Community Awareness and Emergency Response (CAER), to ensure an informed and coordinated response to chemical emergencies.

AQ-5.2 Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.

Mitigation Measures: No mitigation measures beyond the policies in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

AIR TOXIC EMISSIONS

- **DEVELOPMENT OF THE CITY OF CARSON IN ACCORDANCE WITH THE PROPOSED GENERAL PLAN MAY RESULT IN ADDITIONAL SOURCES OF AIR TOXIC EMISSIONS, POTENTIALLY INCREASING EXPOSURE OF RESIDENTS AND EMPLOYEES TO AIR TOXICS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: As a result of implementation of the proposed General Plan, new commercial and industrial uses developed in the City would increase the potential sources of air toxic emissions. Additional sources of air toxic emissions in the City would contribute to risk of human exposure to toxic substances. Human exposure to toxic air emissions could have potential health effects depending on a variety of factors, including the nature and concentration of the toxic substance and the degree of exposure. As with other toxic substances, people who face the greatest potential for exposure to toxic air emissions are those who reside or work in close proximity to emission sources. Toxic air emissions differ from other hazardous substances in that they can be easily transported by air currents. While this allows these emissions to be quickly carried over relatively large distances when released into the open air (depending on atmosphere conditions), it can also cause the emissions to be readily

dispersed into lower concentrations. As a result of these potential hazards, the proposed General Plan has established Goal AQ-5 in the Air Quality Element, to "Reduce emissions related to industry to enhance air quality."

In addition, the (SCAQMD) works with the California Air Resources Board (CARB) and is responsible for developing and implementing rules and regulations regarding air toxics on a local level. The SCAQMD establishes permitting requirements, inspects emission sources, and enforces measures through educational programs and/or fines. Existing regulations, permitting requirements, and inspections by the SCAQMD are considered adequate to reduce this impact. The following proposed General Plan policies would help to reduce air toxic emission impacts.

Policies in the Proposed General Plan: The Safety and Air Quality Elements include the following policies:

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

AQ-5.1 Through the City's Planning processes, monitor air pollutant emissions by mitigating air quality impacts, to the greatest extent possible, associated with facilities/industries in Carson.

Mitigation Measures: In addition to the policies listed above, the following mitigation measure is recommended to further reduce any impacts.

MM-PHS-1 Prior to new development, the development site should be thoroughly assessed for the possible presence of contaminated materials. The level of inquiry should be commensurate with the current and former activities of a particular site. Where site contamination is identified, an appropriate remediation strategy should be implemented prior to project approval. The remediation activities shall be performed by qualified and licensed professionals in the particular problem identified and all work shall be performed under the supervision of the appropriate regulatory oversight program.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

OIL CONTAMINATION

- **DEVELOPMENT IN ACCORDANCE WITH THE PROPOSED GENERAL PLAN MAY POSE A HEALTH OR SAFETY HAZARD AS A RESULT OF THE EXISTING OIL FACILITIES.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Numerous active, idle and abandoned oil wells exist throughout the City that could impact future development. In addition, there are other oil and gas related facilities, existing and abandoned, such as pipelines, sumps, and oil and gas treatment facilities within the City that could impact future development.

Areas throughout the City are comprised of numerous plugged and abandoned oil wells, some of which may create hydrogen-sulfide hazards, especially if the wells were not abandoned properly.

If the wells are leaking, methane and hydrogen sulfide gas could migrate upward and could accumulate beneath developed areas where concrete and asphalt surfaces prevent the natural migration of the methane gas to the atmosphere. Migration of gases through cracks in concrete foundations into the interior of structures could create the potential for an explosion or fire. As previously noted, not all of these wells have necessarily been abandoned pursuant to the State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) regulations. Implementation of the proposed General Plan could result in development within proximity to these abandoned wells. Proper well abandonment procedures on existing wells or reabandonment of previously abandoned wells prior to development of the proposed project would reduce potential gas migration impacts to less than significant levels.

Oil contaminated soil is known to occur in oil fields particularly adjacent to oil wells. Unrefined oil contains a variety of hazardous constituents, including polyaromatic hydrocarbons (PAH), which are carcinogens, benzene, toluene, xylene, ethylbenzene and heavy metals; however, it should be noted that not all oil-contaminated soil is considered hazardous under State and Federal standards. Due to the historic oil drilling activities within the City there is the potential for oil-contaminated soil to exist. Additionally, there is the potential for blowout prevention devices that were either faulty devices or improperly installed which could create a blowout at a drilling facility. Removal of contaminated soil would reduce potential impacts to less than significant levels. The Land Use Element works to provide adaptive reuse of "brownfields" by including goals and policies that allow for the productive reuse of "brownfield" sites. The following proposed General Plan policies would help to reduce the impacts associated with oil contamination.

Policies in the Proposed General Plan: The Safety and Land Use Elements include the following policies:

SAF-4.1 Strictly enforce Federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

SAF-4.2 Periodically review and amend the appropriate ordinances, which regulate the storage and handling of hazardous materials to conform with the standards and definitions of the State and other regulatory agencies.

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

LU-1.1 Consider launching a Brownfield Redevelopment Program.

LU-1.3 Continue to monitor federal, state and regional programs and funding sources designed to reclaim brownfields.

LU-1.4 As projects are proposed at brownfield sites, establish a task force to include representatives from the city and state, developer consultant team, and if necessary, county and/or federal representatives. The purpose of each task force will be to ensure appropriate and timely development of the brownfield site.

LU-1.5 Support, monitory and participate in the United States Conference of Mayors and their Brownfields Redevelopment Expanded Action Agenda.

LU-7.5 Through the discretionary review process, ensure that the siting of any land use which handles, generated, and/or transports hazardous substances, as defined by state and federal regulations, will not negatively impact existing sensitive receptors/land uses.

Mitigation Measures: In addition to the policies listed above, the following mitigation measures are recommended to further reduce any impacts.

MM-PHS-2 Prior to new development, the development site should be thoroughly assessed for the possible presence of contaminated materials. The level of inquiry should be commensurate with the current and former activities of a particular site. Where site contamination is identified, an appropriate remediation strategy should be implemented prior to project approval. The remediation activities shall be performed by qualified and licensed professionals in the particular problem identified and all work shall be performed under the supervision of the appropriate regulatory oversight program.

MM-PHS-3 If any structure is to be placed over or in close proximity to a previously plugged or abandoned oil or gas well, the well may need to be re-abandoned and the surrounding area remediated in accordance with current regulation. All activities related the abandonment or re-abandonment will need to be approved by the California Department of Conservation Division of Oil and Gas.

MM-PHS-4 If applicable, project applicants shall complete the State of California, Department of Conservation information packet entitled, Construction Project Site Review and Well Abandonment Procedure, for submittal and review by the Department.

MM-PHS-5 Unless underground utility locations are well documented, as determined by the City of Carson Engineering Services Department, the project applicant shall perform geophysical surveys prior to excavations to identify subsurface utilities and structures. Pipelines or conduits which may be encountered within the excavation and graded areas shall either be relocated or be cut and plugged according to the applicable code requirements.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

LANDFILLS

- **DEVELOPMENT IN ACCORDANCE WITH THE PROPOSED GENERAL PLAN MAY POSE A HEALTH OR SAFETY HAZARD AS A RESULT OF THE EXISTING LANDFILLS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City currently has 15 inactive sanitary landfills and no active landfills. Although none of these landfills currently accepts materials that decompose chemically or biologically, some of these sites may produce organic gases associated with decomposition. Potential sources of concern for risk of upset include the buried waste, groundwater and landfill gases. However, the major problem associated with most landfills is the production of leachate, which tends to degrade the quality of ground or surface water draining from landfills. Leachate is a complex fermentation of organic matter, dissolved inorganic matter and gasses, which is carried by circulating ground water through the landfill. The composition of waste materials disposed of in several of these facilities is not well known and many of these facilities are undergoing site investigation and/or monitoring for contaminant constituents, including the generation of methane gas associated with waste decomposition.

These inactive landfills are primarily located in the west-central portion of the City, generally bounded by 213th Street to the south, Figueroa Street to the west, 192nd Street to the north and Avalon Boulevard to the east. Former landfill sites also occur within the eastern portion of the City, adjacent to Alameda Street. The following land uses are located within the former landfill sites: High Density Residential, Light Industrial, Heavy Industrial, Business Park/Limited Industrial, Public Facilities, Regional Commercial, and General Commercial. Any future development proposed on or near these sites should be carefully studied and a landfill gas control plan and monitoring system may be required for safety. The proposed General Plan identifies the need for the adaptive reuse of "brownfields" as an imperative issue within the Land Use Element. As such, Goal LU-1 establishes the importance of allowing for the productive reuse of "brownfield" sites. The following proposed General Plan policies would help to reduce impacts associated with development on landfills.

Policies in the Proposed General Plan: The Safety and Land Use Elements include the following policies:

SAF-4.2 Periodically review and amend the appropriate ordinances, which regulate the storage and handling of hazardous materials to conform with the standards and definitions of the State and other regulatory agencies.

SAF-4.3 Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

LU-1.1 Consider launching a Brownfield Redevelopment Program.

LU-1.2 Explore the opportunities associated with the establishment of a landfill improvement district and/or like options.

LU-1.3 Continue to monitor federal, state and regional programs and funding sources designed to reclaim brownfields.

LU-1.4 As projects are proposed at brownfield sites, establish a task force to include representatives from the city and state, developer consultant team, and if necessary, county and/or federal representatives. The purpose of each task force will be to ensure appropriate and timely development of the brownfield site.

LU-1.5 Support, monitory and participate in the United States Conference of Mayors and their Brownfields Redevelopment Expanded Action Agenda.

LU-7.5 Through the discretionary review process, ensure that the siting of any land use which handles, generated, and/or transports hazardous substances, as defined by state and federal regulations, will not negatively impact existing sensitive receptors/land uses.

Mitigation Measures: In addition to the policies listed above, the following mitigation measure is recommended to further reduce any impacts.

MM-PHS-5 A landfill gas protection plan prepared by a licensed Civil Engineer will be required prior to the issuance of building permits.

Also, refer to Mitigation Measures MM-PHS-2 and MM-PHS-4.

Level of Significance After Policies/Mitigation: Significant and Unavoidable Impact.

AIRCRAFT OVERFLIGHT

- **THE ACCIDENT POTENTIAL FROM AIRCRAFT OVERFLIGHTS MAY IMPACT STRUCTURES AND INDIVIDUALS WITHIN THE FLIGHT PATTERN OF THE LOS ANGELES TERMINAL CONTROL AREA.**

Level of Significant Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: As a result of development associated with the proposed General Plan, structures and individuals within the vicinity of the TCA could be subjected to the potential of off-airport accidents. Aircraft flying over Carson are located in the Los Angeles Terminal Control Area (TCA). The TCA is airspace restricted to large, commercial airliners. Each TCA has an established maximum and minimum altitude in which a large aircraft must travel. Smaller aircraft desiring to transit the TCA may do so by obtaining Air Traffic Control clearance. The aircraft may then proceed to transit when traffic conditions permit. Aircraft departing from other than LAX, whose route of flight would penetrate the TCA, are required to give this information to Air Traffic Control on appropriate frequencies. Pilots operating small aircraft often rely on landmarks, rather than charts, to indicate their locations. If a pilot is unfamiliar with the geographical landmarks within the Southern California Basin, he/she may inadvertently enter the restricted TCA airspace. This misunderstanding may result in a mid-air collision.

Development within this area is regulated to ensure that land uses are not people intensive, as demonstrated by the City's and County's commitment to prohibiting new residential development in noise impact areas and avoiding excessively tall buildings or large concentrations of people in areas detrimental to the airport. The land use restrictions in the TCA area provide the necessary limitations to reduce the potential impacts of off-airport accidents to persons and property on the ground. Specific land use regulations regarding FAA notification imaginary surfaces, aircraft noise and building heights have been implemented according to the TCA to reduce impacts due to aircraft overflight to a less than significant level.

Policies in the Proposed General Plan: No policies are identified in the proposed General Plan.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

RAIL LINE HAZARDS

- **DEVELOPMENT IN ACCORDANCE WITH THE PROPOSED GENERAL PLAN MAY RESULT IN AN INCREASE HAZARD ASSOCIATED WITH TRAIN OPERATIONS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: There are a number of safety issues that would typically face the general public and rail operators from daily rail operations. These issues include the potential for accidents between vehicles and trains at grade crossings and accidents involving pedestrians and trains. The established railroad right-of-way provides separation from the rail lines to existing and future land uses, thereby reducing the

potential impact of a train derailment. Future structures constructed according to land use designations would provide additional physical separation from rail lines. The development of the Alameda Corridor through the City could increase these hazards and risks, as the Corridor will traverse not only industrial land uses but also residential communities.

The Alameda Corridor is a 20-mile railroad express line that connects the Ports of Los Angeles and Long Beach to the transcontinental rail network east of downtown Los Angeles. It will create a faster, more efficient way to move cargo throughout the United States and to overseas markets. Traffic conflicts at approximately 200 street-level railroad crossings will be eliminated as a direct result of this program, allowing trains to travel more quickly and easing traffic congestion. The corridor generally parallels Alameda Street along most of the route.

The improvements associated with the Alameda Corridor will produce the following benefits:

- Improve efficiency of cargo distribution;
- Reduce traffic conflicts at 200 rail crossings;
- Significant reductions in train emission;
- Significant reductions in idling-related and truck emissions; and
- Significant reductions in noise pollution from trains.

Separate environmental review was conducted for the Alameda Corridor. An EIR was certified in 1993 and a subsequent Environmental Impact Statement (EIS) was approved in 1996.

Adherence with applicable Federal, State and local regulations related to carrier operation procedures would reduce the significance of potential impacts associated with rail operations. The policies, as stated below, would further reduce potentially significant impacts to public health and safety from a derailment to less than significant levels.

Policies in the Proposed General Plan: The Land Use Element includes the following policy:

LU-10.2 Work with the existing applicable task forces and prepare a special study for those areas adversely impacted by the development of the Corridor.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.10.4 UNAVOIDABLE SIGNIFICANT IMPACTS

Development under the proposed General Plan would create unavoidable significant impacts related to hazardous materials releases, air toxic emissions, oil contamination and

landfills. These impacts are primarily based on the premise that the pollutant sources throughout the City are numerous. Although measures related to remediation would be implemented on a project-by-project basis, it is anticipated that these impacts would remain significant and unavoidable.

4.11 CULTURAL RESOURCES

This section describes the cultural and historical resources within the City of Carson. Identification of cultural and historical resource impacts that could result from implementation of the proposed General Plan and appropriate mitigation measures are provided.

4.11.1 ENVIRONMENTAL SETTING

HISTORICAL DEVELOPMENT OF CARSON

The first private land grant in the area, Rancho San Pedro, was conveyed to Juan Jose Dominguez in 1784. This land grant covered approximately 75,000 acres of the South Bay region, from the Los Angeles River on the east to the Pacific Ocean on the west. It encompassed what are now Carson, Torrance, Redondo Beach and the Los Angeles Harbor. The land was used primarily for cattle ranching, which severely diminished the ground vegetation and threatened the Native Americans' way of life. Also, the San Pedro Harbor was flourishing by 1800, and the Carson area felt the effects of travel between the harbor area and Los Angeles along routes now comprising the Harbor Freeway and Wilmington Avenue.

The end of Mexico's rule, California statehood in 1850 and the California gold rush increased the trade and commerce importance of the greater Los Angeles area leading to the county's opening of portions of such streets as Victoria, Dominguez, Carson, Del Amo, Wilmington and Sepulveda. This also increased the development pressures in the Carson area.

Although surrounding areas were developing, the lack of available water delayed development of the Carson area until the establishment of the Dominguez Water Company in 1911. By this time, cattle ranching had given way to sheep grazing, which in turn was later replaced by dairy farming. With the provision of water and other utilities, the Carson area began to urbanize. Initial residential development began in the Keystone neighborhood and commercial development began along Avalon Boulevard and Carson Street. Farming was slowly phased out as residential, commercial and industrial development occurred.

By the time Carson finally incorporated as a city in 1968, its landscape was pockmarked with the dozens of refuse dumps, landfills and auto dismantling plants that none of the neighboring cities would allow within their boundaries. As a result, the history of the City of Carson since 1968 has been the struggle of dealing with these problems.

Following its incorporation, the City acted swiftly to close down most of the unwanted facilities that had been forced upon the city in the past by enforcing a strict building and landscaping code and by attracting new commercial ventures to the City. As a result, most of the heavy industry of the past has been replaced.

PRESENT DAY HISTORICAL RESOURCES

To determine any existing evaluations and designations in the City of Carson, a records search and review of the National Register of Historic Places and the 1995 California Historic Resources Inventory maintained by the State Office of Historic Preservation was conducted.

RESOURCES LISTED FOR HISTORIC PRESERVATION

The City of Carson does not have any historical resources listed on the National Register of Historic Places. However, the State of California Office of Historic Preservation (OHP) has designated the site of the initial United States Air Meet as a historic site within Carson. The first air show demonstrated early airplanes from all over the world to crowds of over 175,000 people. In 1910, this represented more than half of the entire population of Los Angeles. A special commemorative bronze plaque stands at 18501 South Wilmington Avenue, approximately one-half mile southeast of this location, on Dominguez Hill. The first air meet in the United States was held from January 10 to January 20, 1910.

A 170-year old Dominguez Rancho Adobe home located at 18127 Alameda Street, in Compton has been listed as a California Historic Landmark. Although not located within Carson, this area is part of the City's sphere of influence. If in the future this area is annexed into the City of Carson, its preservation would be maintained. The home is located on the Rancho San Pedro, which came to be known as the Dominguez Ranch. The ranch began as a generous gift of 75,000 acres of land to a Spanish soldier, Juan Jose Dominguez, in 1784. Forty-three years later, in 1827, his nephew, Manuel Dominguez, built the adobe home for his new bride. The rancho was the scene of the skirmish known as the "Battle of Rancho Dominguez" in 1846, during the U.S.-Mexican War. The rancho later provided lodging for travelers on horseback or for those taking the stagecoach between the Pueblo and the San Pedro port. The home is now a historical museum, open to the public for informative guided tours, during which visitors can learn more about life in the early days of Old California.

CULTURAL RESOURCES

Native Americans established villages in the Rancho San Pedro area 6,000 years before the first white men arrived in Southern California. The Suangna village of Native Americans was located near the southeast corner of 239th Street and Utility Way, which is now surrounded by modern, high-tech factories. In the Watson Industrial Center, next to the Pioneer building, a bronze plaque, Los Angeles Historical marker No. 13, commemorates the discovery of relics from these tribes. The Suangna tribe traded with their neighbors and made tools, weapons and grinding implements from stone and other natural materials. Many of these objects were discovered at this site in Carson. In 1784, the village became part of the Rancho San Pedro.

PALEONTOLOGICAL RESOURCES

There are no paleontological resources within the City of Carson. The area has undergone significant transition and development. Today, Carson is approximately 83 percent built out. During the late 1700s, the Carson area was predominately used for cattle ranching, which severely diminished the ground vegetation in the area. Cattle ranching was replaced by sheep grazing, which was replaced by dairy farming in the early 1900s. Farming was slowly phased out as residential, commercial and industrial development occurred. Prior to incorporation, much of the area consisted of refuse dumps, landfills and auto dismantling plants.

4.11.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Cultural impacts resulting from the implementation of the proposed General Plan could be considered significant if they cause any of the following results:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and/or
- Disturb any human remains, including those interred outside of formal cemeteries.

Based on these standards, the effects of the proposed project have been characterized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant impact level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.11.3 IMPACTS AND MITIGATION MEASURES

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN THE DEGRADATION OR LOSS OF HISTORIC STRUCTURES OR RESOURCES.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: Carson is predominately developed with a majority of land dedicated to industrial uses. Carson, along with the State of California, has designated two sites as historic sites within the City. The City continues to aggressively promote and protect the historic significance of these areas. In addition, the Carson Indian Historical Committee and Watson Industrial Properties maintain the area of the industrial center near the Pioneer building, which once contained the village of the Suangna Native American tribe. Implementation of the proposed General Plan would result in the development of approximately 919 acres of vacant land. An evaluation of potential impacts regarding development of this land would be conducted on a project-by-project basis. Each incremental development is required to comply with all applicable State and Federal regulations concerning preservation of historic resources. Therefore, potential impacts on historical structures or resources would be less than significant.

Policies in the Proposed General Plan: The Parks, Recreation and Human Services Element includes the following policies:

PRC-9.1 Promote the preservation of historic resources in the City through the Fine Arts and Historical Commission.

PRC-9.2 Coordinate with the Departments of History and Anthropology at Cal State University Dominguez Hills in order to mutually enrich both the educational and general communities.

PRC-9.3 Create an oral history program that would archive the City's history from long time Carson residents.

Mitigation Measures: In addition to the policies listed above, the following mitigation measures are recommended to further reduce any impacts.

MM-CR-1 Require, as part of the environmental review procedure, an evaluation of the significance of paleontological, archaeological and historical resources and the impact of proposed development on those resources.

MM-CR-2 Promote the preservation of significant historical resources and encourage other public agencies or private organizations to assist in the purchase and/or relocation of sites, buildings and structures deemed to be of historical significance.

Level of Significance after Policies/Mitigation: Less Than Significant Impact.

❍ **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN THE ADVERSE CHANGE OF ARCHAEOLOGICAL RESOURCES.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City of Carson is predominately developed with approximately 919 acres of vacant land remaining. As previously stated, the Suangna Native American tribe was at one time located near the Pioneer building at the Watson Industrial Center. The Carson Indian Historical Committee and Watson Industrial Properties maintain

this area. No additional archaeological sites or resources are known to exist within the City. Any development resulting from implementation of the proposed General Plan would undergo individual analysis to identify and mitigate any archaeological impacts.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential archaeological impacts.

Mitigation Measures: Refer to mitigation measure MM-CR-1. In addition, the following mitigation measures are recommended to further reduce any impacts.

MM-CR-3 Require monitoring of grading operations by a qualified paleontologist or archaeologist when the site is reasonably suspected of containing such resources. If, as a result, evidence of resources is found, require the property to be made available for a reasonable period of time for salvage of known paleontological and archaeological resources by qualified experts, organizations or educational institutions.

MM-CR-4 Require development on land containing known archaeological resources to use reasonable care to locate structures, paving, landscaping and fill dirt in such a way as to preserve these resources undamaged for future generations when it is the recommendation of a qualified archaeologist that said resources be preserved in situ.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN THE DESTRUCTION OF A UNIQUE PALEONTOLOGICAL RESOURCE OR SITE OR UNIQUE GEOLOGIC FEATURE.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City of Carson is predominately developed. No known paleontological resources or sites or unique geologic features are known to exist within the City of Carson. Implementation of the proposed General Plan would result in the development of approximately 919 acres of vacant land. An evaluation of potential impacts regarding development of this land would be conducted on a project-by-project basis. Each incremental development is required to comply with all applicable State and Federal regulations concerning paleontological resources. Therefore, potential impacts on paleontological resources or sites would be less than significant.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential paleontological resource impacts.

Mitigation Measures: Refer to mitigation measures MM-CR-1 and MM-CR-3. No additional mitigation measures are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

- **IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY RESULT IN THE DISTURBANCE OF HUMAN REMAINS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City of Carson is predominately developed. Implementation of the proposed General Plan would result in the development of approximately 919 acres of vacant land. No known human remain or burial sites are known to exist on these properties. Development of these properties would require an extensive analysis of the land on an individual basis. Each incremental development is required to comply with all applicable State and Federal regulations concerning burial sites, reducing any impacts to less than significant.

Policies in the Proposed General Plan: No policies within the proposed General Plan apply to potential impacts regarding human remains or burial sites.

Mitigation Measures: Refer to mitigation measure MM-CR-1. No additional mitigation measures are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.11.4 UNAVOIDABLE SIGNIFICANT IMPACTS

With implementation of policies proposed in the General Plan, historic and cultural resource impacts would be less than significant. The proposed General Plan would not result in any significant and unavoidable historic and/or cultural impacts.

4.12 AESTHETICS

This section evaluates the visual quality of Carson and assesses the potential for visual impacts with implementation of the proposed General Plan. Where significant impacts are identified, mitigation measures are provided to reduce these impacts to a less than significant level.

Difficulties arise when evaluating visual quality and the degree of impact resulting from visual change. This is because few objectives or quantitative standards exist to analyze visual quality and individual responses differently to changes in the visual environment. What may be considered to be an adverse visual condition to one person may represent an improved visual scene to another.

4.12.1 ENVIRONMENTAL SETTING

The City of Carson began as part of the Rancho San Pedro land grant. The land was primarily used for cattle ranching and later gave way to sheep grazing and then dairy farming. Although surrounding areas were developing, the lack of available water delayed development of the Carson area until the establishment of the Dominguez Water Company in 1911. Initial residential development began in the Keystone neighborhood and commercial development began along Avalon Boulevard and Carson Street. Farming was slowly phased out as residential, commercial and industrial development occurred. Carson incorporated in 1968.

Along with incorporation, the City had to deal with an extensive number of refuse dumps, landfills and auto dismantling plants that had been forced into its boundaries. The City enforced a strict building and landscaping code to eliminate unwanted facilities and to attract new commercial projects to the City. New industrial parks, such as the Watson Industrial Center, have become models of cleanliness and attention to appearance within the City. In addition, continued beautification efforts by the City have resulted in numerous landscaped center medians, lighting projects and street improvements.

NATURAL FEATURES AND OPEN SPACE

Topographically, Carson is relatively flat with elevations ranging from sea level to approximately 195 feet above mean sea level (msl) at the top of Dominguez Hills. No known natural resources exist within the City (i.e., significant areas of plant and animal wildlife, areas of ecological and other scientific study value, rivers, streams, bays and estuaries, coastal beaches, lake shores, etc.). Open space within Carson consists of recreational open space, such as parks and public golf courses and general open space, such as utility transmission corridors, drainage, flood control facilities and street medians.

There are approximately 62 acres of property under agricultural production within the City of Carson. The City does not have specific agricultural zoning classifications,

however agricultural uses are permitted within the Residential-Agricultural, General Commercial and Open Space zones.

DEVELOPED AREAS

The City of Carson is approximately 83 percent developed. Existing urban development is broadly dispersed throughout the City. Approximately 919 acres of vacant land exist within the City, of which approximately 131 acres is designated for residential uses.

Residential Areas. Approximately 28.4 percent of the City of Carson is developed with residential land uses. Most of the existing residential units were built prior to 1970. Residential uses are categorized as low density, medium density and high density.

Non-Residential Areas. Existing commercial and industrial uses comprise approximately 60 percent of developed land within Carson. Industrial land uses represent the largest portion of development (54 percent). While general commercial uses are distributed throughout the City, regional commercial uses are concentrated around the San Diego Freeway (I-405). The largest concentrations of industrial land uses are in the eastern and southeastern portions of the City, along the Alameda Corridor, as well as in the northwest and southwest corners of the City.

EXISTING POLICIES AND REGULATIONS

The following existing City policies, plans and regulations are intended to protect and enhance the visual character of Carson and ensure quality development.

LAND USE ELEMENT

The City of Carson's Land Use Element strongly influences the visual character of the City by determining the type, intensity and location of development to occur within Carson. The Land Use Element includes specific goals and policies to ensure compatible development throughout the City. As a result potential visual impacts related to urban development are reduced.

CONSERVATION AND OPEN SPACE ELEMENT

The Conservation and Open Space Element allows the City of Carson to establish long-term goals and policies for the creation and preservation of open space areas. Open space areas improve the visually quality of the City in addition to providing recreational areas for the community.

SCENIC HIGHWAY ELEMENT

There are no designated scenic highways in the City of Carson. However, the City has adopted the beautification of views along its roads as one of its objectives. Carson has identified several policies in order to improve the visual quality of the City from its roads. They include architectural review of buildings and signs in redevelopment and environmentally sensitive areas, undergrounding utilities, providing parkway trees along

local streets and highways, landscaping medians, abating nonconforming billboard signs and establishing monument signs at entrances to the City.

PARKWAY ELEMENT

Carson has identified the utilization of parkway strips as a means of beautifying the overall view from the streets and highways and screening traffic from adjacent land uses. Low- and medium-density residential areas have parkway landscaping between the back of the curb and the sidewalk. High-density residential and commercial areas have full width sidewalks with tree well spaces for parkway trees. Industrial areas have full-width sidewalks at the back of the curb. If sidewalks are not required, landscaping is installed at the back of the curb. Special development areas have meandering sidewalks with alternating landscaped areas at the front and rear of the parkway section.

DESIGN OVERLAY ZONE

The City of Carson regulates the design of the built environment through its General Plan and Zoning Ordinance. The City's Municipal Code includes provisions for special design review. The D-Design Overlay Zone allows for special site plan and design review for selected areas throughout the City.

SPECIFIC PLANS

The City of Carson utilizes the Specific Plan process to establish the type, location and character of development to take place on a property. Although a Specific Plan allows flexibility in each development area in regards to exact land use and design concepts, overall design guidelines are required to be followed, ensuring land use compatibility. Prior to development, project Covenants, Conditions and Restrictions (CC&Rs) are written to address design specifics. A Specific Plan includes goals that directly pertain to the visual character and quality of development within the City. Design guidelines, including landscaping and development standards written into a Specific Plan provide a planning framework with clear design and direction and provide for quality development.

Refer to Section 4.1, *Land Use,* for information on individual Specific Plans adopted by the City of Carson.

REDEVELOPMENT PROJECT AREAS

The City of Carson has adopted four Redevelopment Project Areas (Project Area No. 1, merged Project Areas No. 2 and No. 3 and Project Area No. 4). The City's objective in adopting and implementing the redevelopment plans are to alleviate the causes and effects of blight within the community, thereby improving the overall aesthetic character of the City.

Project Area No. 1. The project objectives for Project Area No. 1 focus on improving the visual quality of the area. The objectives include elimination of incompatible land uses, obsolete and aged building types and deteriorated public improvements. They also

include assembling land parcels for integrated development, re-planning, redesign and develop areas which are stagnant or improperly utilized and to obtain the participation of owners and tenants in the revitalization of their own properties.

Project Areas No. 2 and No. 3. The objectives for the merged and amended project area are the same as in Project Area No. 1. The overall objective is to eliminate blight within the project area, allowing for long-term visual improvements throughout the City.

Project Area No. 4. The redevelopment plan for Project Area No. 4 also contributes to improving the visual quality of Carson. The objectives include the construction of infrastructure, improving and/or constructing public facilities and public uses, promoting improvements in commercial, industrial and residential areas, removing or alleviating the negative effects of hazardous materials and improving, increasing and preserving the community's housing stock.

CARSON STREET MIXED USE RESIDENTIAL OVERLAY

The City of Carson adopted the Carson Street Mixed-Use Residential Overlay Corridor to reshape Carson Street into a major focal point for community activity. The Overlay regulates design elements and architectural quality along Carson Street. The purpose of the Overlay is to provide new opportunities for development and ensure compatibility within the land uses along this critical arterial. Street standards are used to improve pedestrian-oriented development and the visual experience along Carson Street.

4.12.2 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA guideline, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Aesthetic impacts resulting from the implementation of the proposed General Plan may be considered significant if they cause any of the following results:

- Have a substantial adverse effect on a scenic vista (refer to Section 7.0, *Effects Found Not To Be Significant*);

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway (refer to Section 7.0, *Effects Found Not To Be Significant*);

- Substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- Create new sources of substantial light or glare which would adversely affect day or nighttime views in the area.

Based on these standards, the effects of the proposed Project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impact. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.12.3 IMPACTS AND MITIGATION MEASURES

IMPLICATIONS OF THE PROPOSED GENERAL PLAN

Preparation of the proposed General Plan involved the establishment of 24 study areas throughout the City. These areas are comprised of lands that are predominately vacant, underutilized or are brownfield areas. The areas are in need of redevelopment and/or need to be re-evaluated in terms of their land use designation due to their location to surrounding uses. The proposed General Plan identifies obtaining a clear direction for development of the special study areas as one of its goals (LU-16). Focused development of these areas would enhance the visual appearance of the City.

Implementation of the proposed General Plan would allow for the redesignation of certain land uses to further improve the visual quality of Carson. The General Plan proposes designating several acres of existing Heavy Industrial land uses to either Light Industrial or Business Park. This decrease in Heavy Industrial uses would contribute to improving the overall quality of the City. Also, refer to Section 4.1, *Land Use.*

In addition, the General Plan proposes the creation of a "Signature Project" to create a focal point for the City of Carson (LU-11). A signature project would provide the City with an identifying feature. The encouragement of interesting and attractive streetscapes and the enhancement of freeway corridors as gateways throughout Carson are also goals identified by the City (LU-13 and LU-14). The policies proposed in the General Plan establish specific actions to achieve these goals.

VISUAL QUALITY

❍ **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY DEGRADE THE VISUAL QUALITY OF THE SURROUNDING ENVIRONMENT WITHIN THE CITY.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: There are no officially designated scenic vistas or scenic highways within Carson. Development as a result of implementation of the proposed General Plan would alter Carson's visual environment and character. However, development projects would under go environmental and design review on a project-by-project basis to ensure visual compatibility and enhancement with the surrounding environment. Carson has identified "City Image" as an issue requiring attention in the City. The proposed General Plan lists several goals and policies addressing the City's image and visual appearance. One of the goals of the City is to create a visually attractive appearance throughout Carson (LU-12). Implementation of the policies (LU-12.1 to

LU-12.6) to achieve this goal would improve the overall visual quality of the City. In addition, implementation of the policies listed below along with project-specific environmental and design review by the City, would reduce visual quality impacts to a less than significant level.

Policies in the Proposed General Plan: The Land Use, Economic Development, Traffic and Infrastructure, Safety, Open Space and Conservation, and Parks, Recreation and Human Services Elements include the following policies:

LU-2.1 Require property owners to remove abandoned and/or boarded up buildings that pose safety hazards.

LU-2.2 Continue to aggressively enforce the Property Maintenance Ordinance in order to maintain properties in transition, abandoned commercial and industrial buildings and properties.

LU-2.3 Develop an incentive rehabilitation program to compliment mandatory code enforcement and property maintenance programs.

LU-3.1 Continue to aggressively enforce the Non-Conforming Use Ordinance in order to eliminate non-conforming and/or incompatible land uses, structures and conditions.

LU-3.2 Through the zoning ordinance, control uses such as salvage yards, automobile dismantling, and scrap metal recycling operations which are not compatible with existing and anticipated development.

LU-3.3 Encourage compatible land uses to locate in appropriate areas of the City.

LU-7.4 Promote the use of buffers between more intensive industrial uses and residential uses.

LU-7.7 Coordinate with adjacent landowners, cities and the County in developing compatible land uses for areas adjacent to the City's boundaries.

LU-7.8 Coordinate with California State University at Dominguez Hills in the planning of its property to ensure compatible land uses.

LU-9.1 Continue to institute an active code enforcement program.

LU-9.2 Develop incentive programs for the improved appearance of residential, commercial and industrial areas.

LU-9.3 Continue to promote and expand programs such as the Carson Beautiful Program which recognize excellence in property upkeep in residential areas.

LU-9.4 Continue to promote programs which offer loans and grants for home repairs.

LU-9.5 Develop design standards to address permanent and effective screening of areas in transition, and heavy industrial uses such as outdoor storage yards, pallet yards, salvage yards, auto dismantling yards, and similar uses.

LU-9.6 Continue to maintain graffiti suppression and removal programs.

LU-9.7 Maintain and upgrade the City's parks, eliminating all evidence of vandalism, wear and deterioration.

LU-9.8 The City shall maintain properties in compliance with applicable regulations and shall incorporate design and maintenance standards to represent a model for private development.

LU-12.1 Develop and implement a Citywide Urban Design Plan.

LU-12.2 Adopt a "Carson Green" program to encourage public/private partnerships in the landscaping of the community.

LU-12.3 Review landscape plans for new development to ensure that landscaping relates well to the scale of structures, the land uses it serves, as well as to the surrounding area.

LU-12.4 Consider amending the landscaping requirements in the Zoning Ordinance to enhance the appearance of the community and to provide for the use of trees to provide shade.

LU-12.5 Improve City appearance by requiring landscaping to screen, buffer and unify new and existing development. And ensure continued maintenance and upkeep of landscaped areas.

LU-12.6 Consider the establishment of an ad hoc Carson Beautification Committee.

LU-13.1 Promote a rhythmic and ceremonial streetscape along the City's arterial roadways, continuing the use of landscaped medians.

LU-13.2 Develop a street tree planting and replacement program for the City's arterial roadways.

LU-13.3 Continue and, when possible, accelerate the undergrounding of utility lines throughout the City.

LU-13.4 Encourage architectural variation of building and parking setbacks along the streetscape to create visual interest, avoid monotony and enhance

the identity of individual areas. And encourage pedestrian orientation by appropriate placement of buildings.

LU-13.5 Continue to require landscaping treatment along any part of a building site which is visible from City streets.

LU-13.6 Consider the use of contrasting paving for pedestrian crosswalks to add visual interest to the streetscape and create pedestrian amenities.

LU-13.7 Ensure proper maintenance of parkways along arterial streets and landscaping of private property visible from the public right-of-way.

LU-14.1 Work with Caltrans to provide and maintain an attractive freeway environment in Carson, including access ramps.

LU-14.2 Require new commercial or industrial development adjacent to, and visible from, the freeways and their ramps, to incorporate full architectural and landscape treatment of the building on the freeway side.

LU-14.3 Seek all available funds and consider using redevelopment funds to enhance freeway portals to the City.

LU-16.2 Based on City priorities, determine whether a Specific Plan, redevelopment program, urban design plan, streetscape improvement program, or other plan(s), program(s), and/or document(s) are the desirable implementation tool(s). The City should then embark upon such a study.

ED-3.9 Leverage public improvements to facilitate economic development.

ED-3.10 Provide rehabilitation assistance in targeted commercial districts to enable the upgrading of commercial properties.

ED-7.2 Improve the actual and perceived image of the City through improved design standards, amenities, security, continuing public improvements, and positive advertising campaigns.

ED-11.1 Encourage the redevelopment and cleanup of underutilized and contaminated land.

TI-4.2 Provide appropriate pedestrian access throughout the City. Develop a system of pedestrian walkways, alleviating the conflict between pedestrians, automobiles and bicyclists where feasible.

SAF-6.8 Ensure appropriate signage, street striping and other markings at crosswalks for pedestrian safety. And ensure the visibility of signage and markings through proper landscape maintenance including trimming of shrubbery and trees.

OSC-1.1 Preserve and enhance the existing open space resources in Carson.

OSC-1.2 Maintain the existing landscaping along the City's major streets and expand the landscaping program along other arterial streets throughout the community.

OSC-1.3 Continue to require that adequate, usable and permanent private open space is provided in residential developments.

OSC-1.4 Require access between open space and recreation areas and adjacent developments, where appropriate.

PRC-1.1 Acquire additional parkland whenever it is financially feasible.

PRC-1.4 Promote greater cooperation and coordination with other City departments and public agencies, and encourage the construction of new park facilities in developed areas of Carson as infill development occurs.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

LIGHT AND GLARE

- **LIGHT AND GLARE FROM NEW DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED GENERAL PLAN MAY ADVERSELY AFFECT SENSITIVE RECEPTORS SUCH AS RESIDENTIAL USES.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: During evening hours, street lights, security lighting, recreational lighting and lighting from multi-story structures, if not adequately focused or screened, may cause spill-over lighting and glare that may present a nuisance to residential uses. During daylight hours, glare from materials used in new buildings may also present a nuisance or potential safety hazard by distracting motorists. Although Carson is predominately developed, implementation of the proposed General Plan would allow for the development of vacant and underutilized parcels. New development would incrementally contribute to the existing built environment. Future development projects would under go environmental and design review on a site-specific basis to ensure that glare impacts would not substantially impact adjacent uses. Therefore, the policies proposed in the General Plan listed below, along with project-specific environmental and design review by the City, would reduce lighting and glare impacts to a less than significant level.

Policies in the Proposed General Plan: The Land Use Element includes the following policies:

LU-7.2 Periodically review, and amend if necessary, the City's Zoning Ordinance to ensure the compatibility of uses allowed within each zoning district.

LU-7.4 Promote the use of buffers between more intensive industrial uses and residential uses.

LU-9.8 The City shall maintain properties in compliance with applicable regulations and shall incorporate design and maintenance standards to represent a model for private development.

LU-12.5 Improve City appearance by requiring landscaping to screen, buffer and unify new and existing development. And ensure continued maintenance and upkeep of landscaped areas.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.12.4 UNAVOIDABLE SIGNIFICANT IMPACTS

With implementation of policies proposed in the General Plan, aesthetic impacts would be less than significant. The proposed General Plan would not result in any significant and unavoidable aesthetic impacts.

4.13 CUMULATIVE IMPACTS

This section analyzes potential impacts resulting from reasonably foreseeable growth, including the proposed General Plan.

4.13.1 INTRODUCTION

The CEQA Guidelines Section 15355 defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts ..." The CEQA Guidelines Section 15130, as revised October 26, 1998, state that the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great a detail as is provided for the effects attributable to the project alone. This discussion is guided by the standards of practicality and reasonableness, and focuses on the cumulative impact to which the identified on-going projects contribute, rather than the attributes of other projects that do not contribute to the cumulative impact. The following elements are necessary in an adequate discussion of cumulative impacts:

(1) Either:

a. A list of relevant past, present and probable future projects, producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or

b. A summary of projections contained in an adopted General Plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

1. When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resources being examined, the location of the project and its type.

2. "Probable future projects" may be limited to those projects requiring an agency approval for an application which has been received at the time the notice of preparation is released, unless abandoned by the applicant; projects included in an adopted capital improvements program, general plan, regional transportation plan, or other similar plan; projects included in a summary of projections or projects (or development areas designated) in a previously approved project (e.g., a subdivision); or those public agency projects for which money has been budgeted.

Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

(2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.

(3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigation or avoiding the project's contribution to any significant cumulative effects.

(4) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinance or regulations rather than the imposition of conditions on a project-by-project basis.

Cumulative impacts may be discussed in terms of proposed General Plan impacts, in combination with impacts anticipated for future development (including approved and planned development within the project area and surrounding affected area). The geographic area for each impact varies, depending on the nature of the impact, whether it is regional, such as air quality, or local, such as noise.

Quantification can be difficult for cumulative impacts, as it requires speculative estimates of impacts including, but not limited to the following: the geographic diversity of impacts (impacts of future development may affect different areas); variations in time of impacts; and data for buildout projections may change following subsequent approvals. However, every attempt has been made herein to make sound qualitative judgments of the combined effects of, and relationship between, land uses and potential impacts.

This EIR assesses the overall environmental effects of the proposed General Plan at a program level of detail. This EIR evaluates the overall (cumulative) effects of development in accordance with the land use designations, land use assumptions, and all goals, policies and implementing strategies contained in the proposed General Plan. Therefore, the environmental analysis in Sections 4.1 through 4.12 of this EIR addressed cumulative effects of development within the City.

In compliance with CEQA Guidelines Section 15130(1)(b), this section of the EIR describes the environmental effects of the proposed General Plan in combination with the effects of regional buildout, as forecasted in the Southern California Association of Governments (SCAG) Regional Comprehensive Plan and Guide (RCPG).

As of January 1, 2001, the California Department of Finance (DOF) estimated the City of Carson's population to be 92,000 persons. These residents receive public services from the public agencies discussed in Section 4.8. The City of Carson is substantially developed (approximately 83 percent). The City is anticipated to have a maximum population of 103,400 in the year 2020. Therefore, an additional 11,400 residents are anticipated in the City under implementation of the proposed General Plan conditions.

The Southern California Association of Governments projects that Los Angeles County's population is estimated to grow from 9,519,338 in 2000 to approximately 11,760,000 in the year 2020. This would represent an increase in population of approximately 2,240,662 people over this 20-year time period. The number of households in Los Angeles County is projected to increase from approximately 3,270,909 in 2000 to approximately 4,054,050 in the year 2020. The number of jobs in Los Angeles County is projected to increase from approximately 4,312,264 in 2000 to approximately 5,156,000 in the year 2020.

Los Angeles County as a whole is largely built out. Therefore, most of the County's future growth would be accomplished through infill development within existing urban areas. Environmental constraints such as: water supply, landfill capacity, energy demand, air quality, traffic constraints and others, will become predominate issues of concern as Los Angeles County approaches ultimate buildout.

4.13.2 CUMULATIVE ANLYSIS

Potential cumulative impacts of the proposed General Plan, in combination with SCAG projections as described, are discussed below. Pursuant to Section 15355(b) of the CEQA Guidelines, "The cumulative impact...is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects."

Cumulative development associated with the proposed General Plan and future growth within the City of Carson would result in potential impacts to the following resource areas:

- Land Use;
- Population, Employment, and Housing;
- Transportation/Circulation;
- Air Quality;
- Noise;
- Geologic and Seismic Hazards
- Hydrology and Drainage;
- Public Services and Utilities;
- Parks/Recreation;
- Public Health and Safety;
- Cultural Resources; and
- Aesthetics.

LAND USE

The General Plan proposes the addition of Business Park (BP) as a new land use category in addition to the existing land use categories of Light Industrial (LI) and Heavy Industrial (HI). The General Plan also proposes that the City's open space uses receive land use designations separate and apart from "Public Facilities". The proposed open space designations are General Open Space (GOS) and Recreational Open Space (ROS). All other land use designations would remain unchanged.

Increased land use intensity would result in the loss of vacant areas located throughout the City of Carson. Continued urbanization and intensification of land uses resulting from development in the region would result in the loss of open space. Opportunities for mitigation would be limited to dedication of additional lands in the region as open space. The City of Carson has approximately 919 acres of vacant land in addition to approximately 863 acres of underutilized land for development.

The proposed General Plan would result in less than significant land use impacts. All future projects under regional and proposed General Plan development would be required to mitigate any land use impacts on a project-by-project basis. Therefore, the incremental impact of the proposed General Plan, when considered in combination with buildout of the region would not result in cumulatively significant impacts related to land use.

POPULATION, EMPLOYMENT AND HOUSING

Table 4.2-1, *Regional Population Projections*, provides data regarding population, housing and employment relevant to the City of Carson, County of Los Angeles and region extending into the year 2020. Current projections shown in Table 4.2-1 represent the numeric interpretation of the Carson General Plan, Los Angeles County General Plan and regional plans. The proposed General Plan is intended to update the policies for future growth within the City of Carson. Los Angeles County projections include these considerations and account for the proposed development within the City.

As shown in Table 4.2-1, the Los Angeles County region is anticipating relatively significant growth over the next 20 years. Implementation of the proposed General Plan would result in a small increase in population, employment and housing within the City of Carson and Los Angeles County. SCAG projects that by the year 2020 the City of Carson would contribute 103,400 individuals, 67,900 jobs and 26,880 households to the County's totals. It is important to note that the City of Carson estimates a lower population by the year 2020 than SCAG. The proposed General Plan projects a population of 98,602 individuals for the year 2020. As such, the analysis in this EIR is based on SCAG's higher population projections, and therefore represents a worse case scenario. SCAG's projections would result in Carson accounting for less than one percent of the County's total population, approximately 1.3 percent of the County's total jobs and less than one percent of the County's total households.

The proposed General Plan would contribute to regional growth with respect to population, housing and employment. However, implementation of the proposed General Plan would not significantly alter regional growth rates, because the anticipated growth has been included in both County and regional projections. Thus, implementation of the proposed General Plan would not result in significant cumulative impacts with respect to population, employment or housing. Growth in general may have the potential to result in other significant environmental consequences. However those issues are addressed elsewhere in this EIR.

TRANSPORTATION/CIRCULATION

The Transportation and Infrastructure Element of the proposed General Plan considers the impacts of traffic traveling through, as well as within the City of Carson. Future cumulative travel patterns within and through the City would be directly influenced by changes to the surrounding regional transportation system. The proposed General Plan does not involve any major changes to existing land use designations. However, implementation of the proposed General Plan would result in an additional 14 roadway segments operating at unacceptable service levels over existing conditions. LOS standards would be exceeded along the I-405 freeway at two monitoring locations, along the SR-91 at one monitoring location and along the I-710 freeway at one monitoring location, affecting the regional transportation system.

Regional buildout in accordance with SCAG 2020 projections would result in future development that would increase vehicle trips and traffic congestion on County roadways. When considered in combination with increases in regional traffic congestion under buildout of the region, the proposed General Plan impacts are considered cumulatively significant.

AIR QUALITY

The proposed General Plan, in conjunction with cumulative development in the region, would contribute to increased air pollutant emissions. The General Plan proposes the development of available areas within Carson. Development would include infill construction and the development of existing Redevelopment Plan and Specific Plan areas. The proposed General Plan includes measures intended to minimize the necessity and length of vehicular trips. Additionally, the proposed General Plan includes measures to minimize stationary source emissions. On a regional basis, the South Coast Air Quality Management District has addressed mitigation of air quality impacts. However, with mitigation, air quality impacts would remain cumulatively significant.

NOISE

Increased traffic volumes resulting from implementation of the proposed General Plan and buildout of surrounding municipalities in the County are anticipated to result in cumulatively substantial increases in vehicular noise levels along major thoroughfares in the area. Although residences and other sensitive land uses located along these segments may be currently impacted by existing traffic noise, buildout conditions would be expected to further such impacts. However, since modifications proposed to the existing land use designations are from higher intensity to lower intensity uses, the General Plan would not directly result in increased traffic noise in the area.

In addition to traffic noise, future projects under the proposed General Plan would increase the ambient noise levels within the City as a result of short-term construction activities and long-term operations. In order to mitigate adverse noise impacts, development proposals would continue to be reviewed for compliance with criteria set forth in the proposed General Plan. Acoustical studies shall be required and noise attenuation features incorporated into new development where necessary to comply

with specific interior and exterior noise levels. Future projects under regional buildout conditions would be required to satisfy the similar noise criteria and requirements of the municipality in which such projects are undertaken. The incremental impact of implementation of the proposed General Plan when considered in combination with regional buildout would be less than significant.

GEOLOGIC AND SEISMIC HAZARDS

The City of Carson is 83 percent built out. Future development projects would occur on vacant and underutilized land. Any future development in the Los Angeles County area or in the City of Carson would encounter geologic and seismic risks based on their individual site constraints. Implementation of the proposed General Plan would not result in any significant geologic and seismic impacts. The geologic and seismic impacts of individual project development under the proposed General Plan would be site-specific and would not contribute to cumulative impacts.

HYDROLOGY AND DRAINAGE

The proposed General Plan would result in significant unavoidable impacts regarding groundwater depletion. Water resources are of concern throughout the entire Southern California region. Growth and development resulting from implementation of the proposed General Plan would further constrain water resources. Future development projects in the Los Angeles County area or in the City of Carson would be required to mitigate specific hydrologic impacts on a project-by-project basis. However impacts associated with groundwater depletion would contribute to cumulative impacts.

PUBLIC SERVICES AND UTILITIES

Implementation of the proposed General Plan would not result in significant public services and utilities impacts with the exception of school facilities. Population growth resulting from implementation of the proposed General Plan would contribute to inadequate school facilities located in Carson and the Los Angeles Unified School District (LAUSD). Projected student enrollment would result in the need for additional school facilities. Increased demand for school services resulting from implementation of the proposed General Plan would increase school facility deficiencies.

Individual projects proposed under implementation of the General Plan would be required to pay school fees in proportion to the square footage of the development, and/or directly provide facilities as mitigation for these impacts. Payment of these fees and/or implementation of facilities on a project-by-project basis would offset cumulative school impacts by providing funding for new and/or renovated school equipment and facilities.

PARKS, RECREATION AND HUMAN SERVICES

Implementation of the proposed General Plan would result in less than significant parks, recreation and human services impacts. According to the State of California's parks to population ratio of 3 acres of parkland for every 1,000 residents, the City has a

surplus of parkland. Future development would be required to pay parkland fees in proportion to the square footage of the development, and/or directly provide facilities as mitigation for any future impacts.

Development of future projects in the region, as well as under implementation of the proposed General Plan, would result in increased demand upon existing City and regional parks and recreation facilities. The proposed General Plan would not substantially burden the current parks, recreation and human services facilities. As such, the incremental impact associated with implementation of the proposed General Plan when considered in combination with regional buildout would not be cumulatively significant for parks, recreation and human services.

PUBLIC HEALTH AND SAFETY

Implementation of the proposed General Plan would create unavoidable significant impacts related to hazardous materials releases, air toxic emissions, oil contamination and landfills. The City of Carson contains various pollutant sources, including oil wells and 15 inactive sanitary landfills. Development of these areas may result in ground water contamination and air toxic emissions, adversely affecting the surrounding region.

Regional projects and projects resulting from implementation of the proposed General Plan would be required to evaluate their respective public health and safety impacts on a project-by-project basis. Although measures related to remediation would be implemented on a project-by-project basis, implementation of the proposed General Plan would result in cumulatively significant impacts in regards to public health and safety.

CULTURAL RESOURCES

Future development in the region may encounter cultural resources. The cultural resource impacts of developing individual projects proposed under the General Plan would be specific to each site and would not combine to cause cumulative impacts. New development would be required to comply with existing federal and state laws protecting archaeological, paleontological and historic resources on a project-by-project basis, and thus would not be cumulatively significant.

AESTHETICS

The City of Carson is 83 percent developed and the surrounding region is predominately built out. Any new develop would contribute to the urban character of the region. New development within Carson and surrounding cities would be required to undergo design review, according to individual City standards, to ensure compatibility with surrounding land uses on a project-by-project basis. Implementation of the proposed General Plan would not result in significant cumulative aesthetic impacts.

4.13.3 CONCLUSION

Implementation of the proposed General Plan in combination with regional growth would result in cumulatively significant impacts with regard to:

- Transportation/Circulation;
- Air Quality;
- Hydrology;
- Public Health and Safety.

5.0 ALTERNATIVES TO THE PROPOSED ACTION

5.1 INTRODUCTION

Section 15126.6 of the California Environmental Quality Act (CEQA) requires the identification and evaluation of reasonable alternatives designed to feasibly achieve the most basic objectives of the project, while avoiding or substantially lessening any of the significant environmental effects of the project. In addition, CEQA requires a comparative evaluation of the merits of the alternatives.

Pursuant to Section 15126.6 (f)(1) of the CEQA Guidelines, factors that may be taken into account when addressing the feasibility of alternatives include, but are not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). Although these factors do not present a strict limit on the scope of reasonable alternatives to be considered, they help establish the context in which "the rule of reason" is measured against when determining an appropriate range of alternatives sufficient to establish and foster meaningful public participation and informed decision-making.

The City of Carson identified certain objectives to be met through completion of the proposed General Plan and associated Program EIR.

- Update the City's environmental baseline conditions to the year 2000/2001.
- Update the General Plan development projections for the year 2020, including projections for dwelling units, non-residential square footage, population and employment.
- Conform with Section 21000 et. seq. of CEQA, which requires that environmental impacts be addressed and mitigated.
- Prepare and certify a General Plan EIR (Program EIR) that will serve as a first tier environmental document, consistent with the requirements of Section 15152 of the CEQA Guidelines.
- Provide a basis for informative decisions when considering the 2020 development associated with implementation of the proposed General Plan in the City of Carson.
- Provide a legally defensible environmental foundation upon which decisions may be evaluated and justified.

The potentially significant impacts that would result from implementation of the proposed General Plan are set forth in Section 4.0 of this EIR. The proposed General Plan would result in significant and unavoidable impacts with regard to:

- Traffic/Circulation;
- Air Quality;
- Noise
- Hydrology and Drainage;
- Public Services and Utilities; and
- Public Health and Safety.

Implementation of the identified goals, policies and/or mitigation measures can mitigate all other potentially significant impacts to less than significant levels. This section considers alternatives to otherwise avoid or minimize these impacts.

The following alternatives have been identified for analysis in this section:

- No Project/No Development;
- Existing General Plan;
- Modified Plan 1 - Alternative C; and
- Modified Plan 2 - Alternative D.

The analysis of alternatives includes the assumption that all applicable goals, policies or mitigation measures associated with the proposed General Plan would be implemented with the Modified Plan 1 – Alternative C and Modified Plan – Alternative D alternatives analyzed in this section. A description of each alternative and a comparative environmental evaluation to the impacts identified for the proposed General Plan is provided below.

5.2 NO PROJECT/NO DEVELOPMENT

5.2.1 DESCRIPTION

Implementation of the No Project/No Development Alternative assumes that no additional development would occur; thus, the City of Carson would maintain the status quo of existing land use conditions and levels of development in the City. Any development that would occur as part of implementation of the proposed General Plan would not occur under this Alternative. By definition, this Alternative prohibits the issuance of any further building permits. This situation would void the implementation of any current or future General Plan for Carson, and would therefore be in direct conflict with California statutes requiring General Plans, the Subdivision Map Act, and the rights of land owners to develop their property.

5.2.2 IMPACT EVALUATION

The following impact evaluation provides a comparison between the existing land use conditions and levels of development, which would remain unchanged with the No

Project/No Development Alternative. An analysis is provided for each of the impact areas identified in this EIR. The evaluation is followed by a conclusion.

LAND USE

The No Project/No Development Alternative would result in no changes to existing land uses within the City of Carson. As no future development would be permitted, existing land uses as well as levels of development would remain unchanged. Under this Alternative, amendments to the Land Use Element described in Section 3.0, *Project Description*, would not be instituted.

Under this Alternative, vacant land that is planned or zoned for development under an appropriate Specific Plan or zoning designation, respectively, would not be developed. This would void the implementation of the current General Plan for Carson, and would therefore, directly conflict with State planning, zoning and environmental statues. In addition, this Alternative does not allow the City to enforce provisions in the Zoning Code that require non-conforming uses to convert to more appropriately zoned uses. The proposed General Plan would not conflict with the City's existing plans for buildout, nor would it result in conflicts with State law. Thus, the No Project/No Development Alternative is considered environmentally inferior to the proposed General Plan in this regard.

POPULATION, HOUSING AND EMPLOYMENT

This Alternative would result in the City neglecting its obligation to maintain a current Housing Element, which must include the City's plan for attempting to meet its share of the region's future housing needs. Under the No Project/No Development Alternative, the City of Carson would not develop any additional housing units, which would not allow the City to meet its quantified objectives for housing as outlined in the Housing Element. Opportunities to increase employment within the City would also be lost with this Alternative, as no additional development within the City would occur. In this regard, the No Project/No Development Alternative is considered environmentally inferior to the proposed General Plan.

TRANSPORTATION/CIRCULATION

Development under the proposed General Plan would result in numerous roadway segments exceeding the level of service performance criteria established by the Plan. Additionally, numerous roadway segments would have average daily traffic volumes that would exceed the roadway capacity, resulting in significant and unavoidable impacts for year 2020 Traffic Volumes/Roadway Capacity. When compared to the proposed General Plan, the No Project/No Development Alternative is considered environmentally superior to the proposed General Plan since average daily traffic volumes would not increase and the levels of service at streets/intersections would not worsen as expected with the proposed General Plan. Refer to Section 4.3, *Traffic/Circulation*, for a detailed discussion regarding the aforementioned roadway segments and intersections.

AIR QUALITY

Development of the residential, commercial, and industrial designated areas anticipated with the proposed General Plan would not occur with the No Project/No Development Alternative. As a result, none of the short-term construction-related emissions resulting from the anticipated development would occur with this Alternative. Additionally, the associated stationary and mobile emissions would not occur since new uses would not be constructed and traffic volumes would not increase. Overall, none of the long-term air quality impacts anticipated with the proposed General Plan would occur with this Alternative, including impacts to the ozone, PM_{10} levels, CO hot spots, toxic air emissions and odors. The proposed General Plan would result in a significant and unavoidable impact with regard to air quality. This Alternative would avoid the significant and unavoidable air quality impact of the proposed General Plan. In this regard, the No Project/No Development Alternative is considered environmentally superior to the proposed General Plan.

NOISE

Implementation of this Alternative would result in no new development that could result in an increase in noise impacts. Potential noise impacts associated with construction, traffic, railroads and stationary noise sources would not occur with this Alternative. Development pursuant to the proposed General Plan would result in additional noise from construction activities and the resulting increase in traffic associated with future development. These potential noise impacts would not occur with this Alternative since the projected growth in population/development would not occur. In this regard, the No Project/No Development Alternative is considered environmentally superior to the proposed General Plan.

GEOLOGIC AND SEISMIC HAZARDS

Implementation of the proposed General Plan would result in an increase in both population and new development (i.e., new residential, commercial, and industrial land uses). As no development would occur under this Alternative, impacts such as an increase in the number of structures/people potentially exposed to substantial adverse effects associated with rupture of a known earthquake fault or severe ground shaking would not occur. In this regard, the No Project/No Development Alternative is considered environmentally superior to the proposed General Plan.

HYDROLOGY AND DRAINAGE

Implementation of this Alternative would result in no new or additional development that could be impacted by potential hydrology and drainage hazards (i.e., flood hazards). The demand for the City's water supply would remain stable, since no new development would occur. Development anticipated under the proposed General Plan would result in significant and unavoidable impacts in regards to water supply. These impacts would not occur under this Alternative. Therefore, the No Project/No Development Alternative is considered environmentally superior to the proposed General Plan.

PUBLIC SERVICES AND UTILITIES

Generally, the level of service and demand for service would remain similar to what currently exists in the City. No additional impacts to services and utilities are anticipated if no further development was to occur. In this regard, the No Project/No Development Alternative is considered environmentally superior to the proposed General Plan.

PARKS AND RECREATION

The No Project/No Development Alternative would not result in the expansion of, or improvement to, the existing parks and recreation facilities as would occur with the proposed General Plan. The City of Carson has approximately 353.9 acres of parkland, including regional, neighborhood, mini parks and golf courses. The State of California standard for parks is 3 acres for every 1,000 residents. The City has a surplus of approximately 85 acres of public open space, and thus currently meets the State's standard. The City is approximately 83 percent developed, so there is the potential to acquire and develop additional parkland. The proposed General Plan projects an increase in population of 13,670 people to 103,400 by 2020. Based on the State parkland ratio of 3 acres per 1,000 people, the population increase of 13,670 residents would create a demand for approximately 41 acres of parkland. Given that the City currently has a surplus of 85 acres, the additional demand created by the proposed General Plan could be met with existing facilities. Therefore, the No Project/No Development Alternative is considered neither environmentally superior nor inferior to the proposed General Plan with regard to parks and recreation.

PUBLIC HEALTH AND SAFETY

As no development would occur under this Alternative, impacts such as an increase in the number of residents potentially exposed to substantial adverse effects associated with the exposure to hazardous materials would not occur. Implementation of the proposed General Plan would result in an increase in both population and new development (i.e., new residential, commercial, and industrial land uses). Development under the proposed General Plan would create unavoidable significant impacts related to hazardous materials releases, air toxic emissions, oil contamination and landfills. Since this Alternative assumes no new development, these impacts would not occur. In this regard, the No Project/No Development Alternative is considered environmentally superior to the proposed General Plan.

CULTURAL RESOURCES

The potential degradation or loss of historic, archaeological, and paleontological resources would not occur with this Alternative since the urban area would not be expanded. The No Project/No Development Alternative is considered environmentally superior to the proposed General Plan with respect to cultural resources.

AESTHETICS

The No Project/No Development Alternative would result in no net change to the landform and visual character of the area given that no development beyond existing levels would be permitted. Development standards specified in planning documents, such as adopted Specific Plans, would not be applied given that no development would be permitted under this Alternative. Thus, the aesthetic character of the City would remain the same as it exists today. In this regard, the No Project/No Development Alternative is considered environmentally inferior to the proposed General Plan.

5.2.3 CONCLUSION

The No Project/No Development Alternative would result in no change to the existing conditions within the City of Carson. Therefore, no new or additional environmental impacts would result directly from this Alternative. However, the No Project/No Development Alternative would prevent the City of Carson from making needed improvements to existing properties, infrastructure, and public services. Existing conditions, under this Alternative would be maintained, but not improved.

Although the No Project/No Development Alternative fails to accomplish the project objectives, it would avoid significant unavoidable impacts of the proposed General Plan with respect to traffic/circulation, air quality, noise, hydrology and drainage, public services and utilities, and public health and safety given that no additional development would be permitted. Thus, the No Project/No Development Alternative is considered environmentally superior to the proposed General Plan.

5.3 EXISTING GENERAL PLAN

5.3.1 DESCRIPTION

As required by Section 15126.6(e) of the CEQA Guidelines, the Existing General Plan Alternative describes buildout of the Carson area in accordance with existing zoning and general plan land use designations under the policies and implementing strategies of the current General Plan, with various elements adopted in the early 1980s through the late 1990s.

This Alternative assumes that ultimate buildout of the Existing General Plan would occur. The Existing General Plan encompasses the same geographic area as that in the proposed General Plan. The proposed General Plan proposes the following revisions to the Existing General Plan:

- Update of existing conditions, with year 2000/2001 serving as the baseline year.
- Update the General Plan development projections to the year 2020. Projections for population, employment, residential development and non-residential development have been updated for the year 2020.

- Amendment of the Land Use Element, including:
    - Establishment of building intensities for all commercial, industrial and institutional land use categories.
    - Refinement of uses within the Public Facilities designation, which includes separating the uses into three land use designations:
        - Public and Institutional Uses;
        - General Open Space (new designation); and
        - Recreational Open Space (new designation).
    - Creation of two new land use designations: Business Park/Limited Industrial and Mixed Use.
    - Creation of a new Land Use Policy Map.

- Amendment of the remaining General Plan elements to reflect items 1 and 2, above.

- Additions, Deletions or Modification to the General Plan Goals, Policies and Implementation Programs.

While the proposed General Plan creates a new land use designation for Mixed Use, the City currently has a zoning category that allows for mixed use development.

This Alternative assumes that the Existing General Plan would continue to provide outdated information regarding several issues, such as City traffic conditions, land use database, community noise levels and air quality data. In addition, the Existing General Plan would not include the changes or modifications noted above or detailed in Section 3.0, *Project Description*, of this EIR.

5.3.2 IMPACT EVALUATION

The following impact evaluation provides a comparison between the Existing General Plan and the proposed General Plan. An analysis is provided for each of the impact areas identified in this EIR. The evaluation is followed by a conclusion.

LAND USE

The proposed General Plan revises the existing Land Use Element by updating the land use database, as well as assigning density/intensity standards for both residential and non-residential uses. These standards are required by State planning law. Under the Existing General Plan Alternative, the Land Use Element would continue to provide outdated information that does not reflect the current conditions in the City. Additionally, it would not include the addition of the Business Park/Limited Industrial land use designation, which would be utilized to allow for more compatible land uses, or the density/intensity standards for non-residential uses. The proposed General Plan also reduces the acreage dedicated to heavy industrial uses in order to provide a balance of land uses within the City. Therefore, implementation of this Alternative would maintain existing conditions of incompatible uses, building intensities that are not congruent with surrounding uses and information that no longer reflects the current

conditions of the City. In this regard, the Existing General Plan Alternative is considered environmentally inferior to the proposed General Plan.

POPULATION, HOUSING AND EMPLOYMENT

The Existing General Plan population, housing and employment projections extend to the year 2000, while the proposed General Plan projections extend to 2020 and reflect the most current trends of the County and the overall regional development. Since there would be changes to the acres designated for residential, commercial, industrial and other land uses, impacts to population, employment and housing would be different from those in the Existing General Plan. Development and growth anticipated under the proposed General Plan are anticipated to be greater than under the Existing General Plan. In this regard, the Existing General Plan Alternative would be considered environmentally superior to the proposed General Plan.

A key difference between the Existing General Plan and the proposed General Plan as it relates to population, employment and housing is the planning horizon of each Plan. The Existing General Plan planning horizon extended to 2000, while the proposed General Plan horizon extends to 2020. Two objectives for the proposed General Plan are to update the City's environmental baseline conditions to 2000/2001 and to update the General Plan development projections for the year 2020, which would include projections for dwelling units, non-residential square footage, population and employment. Given the two objectives stated in the previous sentence, the Existing General Plan does not reflect the most current population, employment and housing numbers or projections. In this regard, the Existing General Plan Alternative is considered environmentally inferior to the proposed General Plan.

TRANSPORTATION/CIRCULATION

Under the Existing General Plan Alternative, the City would continue with an outdated traffic model, which does not reflect current conditions regarding regional growth or traffic. The updated traffic model has identified significant and unavoidable impacts for numerous roadway segments that were not identified in the Existing General Plan. However, it anticipated that similar significant and unavoidable impacts would occur under the Existing General Plan. In this regard, the Existing General Plan Alternative is considered environmentally neither environmentally superior not inferior to the proposed General Plan.

AIR QUALITY

The proposed General Plan would result in a significant and unavoidable impact with regard to impacts related to construction, mobile sources and stationary sources. These impacts would occur under the Existing General Plan as well. Thus, the Existing General Plan Alternative would not avoid the significant and unavoidable air quality impacts. Given that anticipated increases in residential uses and non-residential uses would occur under both the Existing General Plan Alternative and the proposed General Plan, impacts associated with air quality are anticipated to be similar for either

alternative. Thus, the Existing General Plan Alternative is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

NOISE

With the proposed General Plan, noise levels along freeways and along numerous arterial streets would increase. Existing sensitive land uses, primarily residential areas, may be exposed to increased noise levels due to traffic increases. However, noise impacts associated with the implementation of the proposed General Plan would be less than significant with the imposition of goals, policies and mitigation measures. Given that anticipated increases in residential uses and non-residential uses would occur under both the Existing General Plan and the proposed General Plan, impacts associated with noise are anticipated to be similar for either alternative. Thus, the Existing General Plan Alternative is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

GEOLOGIC AND SEISMIC HAZARDS

Implementation of the proposed General Plan would result in an increase in both population and new development (i.e., new residential, commercial, and industrial land uses). However, geologic and seismic hazards would be less than significant with implementation of goals, policies and mitigation measures. Thus, impacts with this Alternative relative to the exposure of structures/people to substantial adverse effects associated with faulting, severe ground shaking, seismically-induced ground deformation, including liquefaction, landsliding and slope instability, erosion, or expansive soils, would be similar to the proposed General Plan. Therefore, the Existing General Plan Alternative is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

HYDROLOGY AND DRAINAGE

Potential water quality degradation from surface runoff/erosion associated with forecasted growth would occur with this Alternative. Grading and development of future projects, the addition of impervious surfaces (i.e., roadways, parking lots, and hardscape), and the introduction of landscaping irrigation associated with future development would also occur. This would result in an increase in the population of the City that could be impacted by hydrology or drainage hazards. The impacts would be similar under with the Existing General Plan or proposed General Plan.

Both this Alternative and the proposed General Plan include goals and policies regarding the construction of necessary storm drain improvements to eliminate potential flood hazards. These goals involve the provision of adequate storm drainage facilities to protect City residents from flooding and maintenance of a comprehensive storm drainage system that serves all urban development within the City. In addition, both Plans propose policies to undertake drainage programs that would serve all currently developed portions of the City not presently served by adequate storm drainage systems; and to pursue individual drainage plans where they are most needed.

It should be noted that certain activities presently occurring in the City that have the potential to degrade water quality would with this Alternative or with the proposed General Plan. These activities would be subject to continued compliance with legal/regulatory requirements (i.e., NPDES Permit Program).

Growth anticipated under with the Existing General Plan or the proposed General Plan would result in significant and unavoidable impacts in regards to water supply. Therefore, the Existing General Plan is considered neither environmentally superior nor inferior to the proposed General Plan with respect to hydrology and drainage.

PUBLIC SERVICES AND UTILITIES

Generally, the level of service and demand for service would increase under either this Alternative or the proposed General Plan. The additional impacts to services and utilities would be similar under either alternative. In this regard, the No Project/No Development Alternative is considered neither environmentally superior nor inferior to the proposed General Plan.

PARKS AND RECREATION

The Parks, Recreation and Human Services Element in the proposed General Plan addresses parks and recreation facilities within the City, as does the Recreation Element in the Existing General Plan. Information regarding these issues is largely unchanged, but has been updated in the proposed General Plan. It is anticipated that growth under the Existing General Plan would result in similar impacts to parks and recreational facilities in the City as the proposed General Plan. Thus, the Existing General Plan Alternative is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

PUBLIC HEALTH AND SAFETY

Given the current nature of the City with numerous oil fields, closed landfills and industrial businesses that create hazardous chemicals and toxic air emissions, this could pose a significant and unavoidable impact to public health and safety. The proposed General Plan revises the Land Use Plan to include less heavy industrial uses and provide a transition of industrial areas (proposed as Light Industrial or Business Park) into commercial and residential uses, and thus, seeks to reduce the health and safety impacts in the community. In addition, the proposed General Plan would result in certain heavy industrial uses becoming legal non-conforming uses that would be subject to abatement. Therefore, the Existing General Plan is considered environmentally inferior to the proposed General Plan.

CULTURAL RESOURCES

The potential degradation or loss of historic, archaeological, and paleontological resources would occur with this Alternative since the urban area would be expanded. It is anticipated that the same areas would be developed under either alternative. Thus, the vacant sites would be developed under both of these scenarios at similar levels

because both development scenarios include increased residential and non-residential development in areas where development has not occurred. Therefore, impacts to cultural resources under this Alternative would be similar to those under the proposed General Plan. In this regard, the Existing General Plan Alternative is considered neither environmentally superior nor inferior to the proposed General Plan.

AESTHETICS

It is anticipated that the same areas would be developed under either the Existing General Plan or the proposed General Plan. Thus, the vacant sites would be developed under both of these scenarios at similar levels because both development scenarios include increased residential and non-residential development in areas where development has not occurred. Both the Existing General Plan and the proposed General Plan include goals and policies regarding the improvement of the visual character of the City. Therefore, aesthetic impacts under this Alternative would be similar to those under the proposed General Plan. In this regard, the Existing General Plan Alternative is considered neither environmentally superior nor inferior to the proposed General Plan.

5.3.3 CONCLUSION

Implementation of this Alternative assumes that ultimate buildout of the Existing General Plan would occur. The Existing General Plan encompasses the same geographic area, but includes different buildout projections than the proposed General Plan. The Existing General Plan has a planning horizon year of 2000, while the proposed General Plan has a planning horizon year of 2020. The proposed General Plan proposes an increase of acres designated for residential use and commercial use with a decrease in the amount of acres designated for industrial uses. In addition, the proposed General Plan establishes building intensities for commercial, industrial and institutional land uses.

The Existing General Plan Alternative would result in similar environmental impacts for all issues, except for land use. It is anticipated that the Existing General Plan would result in greater land use incompatibility impacts than the proposed General Plan. In conclusion, the Existing General Plan Alternative is not considered environmentally superior when compared to the proposed General Plan.

5.4 MODIFIED PLAN 1 – ALTERNATIVE C

5.4.1 DESCRIPTION

For this alternative, a different development scenario is proposed for the amount of acreage dedicated to residential, commercial, and industrial land uses (refer to Table 3-3, in Section 3.0, *Project Description*, of this EIR and Exhibit 5-1, *Alternative C Land Use Plan*). However, the addition of two new land use designations including Business Park/Limited Industrial and Mixed Use and the refinement of uses within the Public

Facilities designation, which includes separating the uses into three land use designations, remains the same under this Alternative. Additionally, the amount of acres dedicated to the three new Public Facilities designations would be the same as in the proposed General Plan.

Alternative C provides for additional Low Density Residential (12 acres) but reduces the amount of acreage dedicated to Medium Density (13.1 acres) and High Density (1.7 acres) Residential uses. Alternative C does provide for an increase in total commercial land uses by 26.6 acres. General Commercial uses would increase by 139 acres and Regional Commercial Uses would increase by 118.4 acres when compared to the proposed General Plan. However, the amount of acres designated Mixed Use would total 16.2 acres, which is 230.8 acres less than that in the proposed General Plan. Finally, acreage designated for industrial land uses would be lower than that in the proposed General Plan. Business Park uses would be equivalent to that designated in the proposed General Plan at 153.2 acres. Specifically, the Business Park designation is recommended for Carson Town Center, located in Study Area No. 6. However, there would be 16.7 more acres of Light Industrial uses and 40.5 fewer acres of Heavy Industrial uses proposed in Alternative C as compared to the proposed General Plan. As mentioned earlier, the amount of acres designated Recreational Open Space (316.5 acres), General Open Space (284.5 acres) and Public Facilities (587.4 acres) are the same as that in the proposed General Plan.

5.4.2 IMPACT EVALUATION

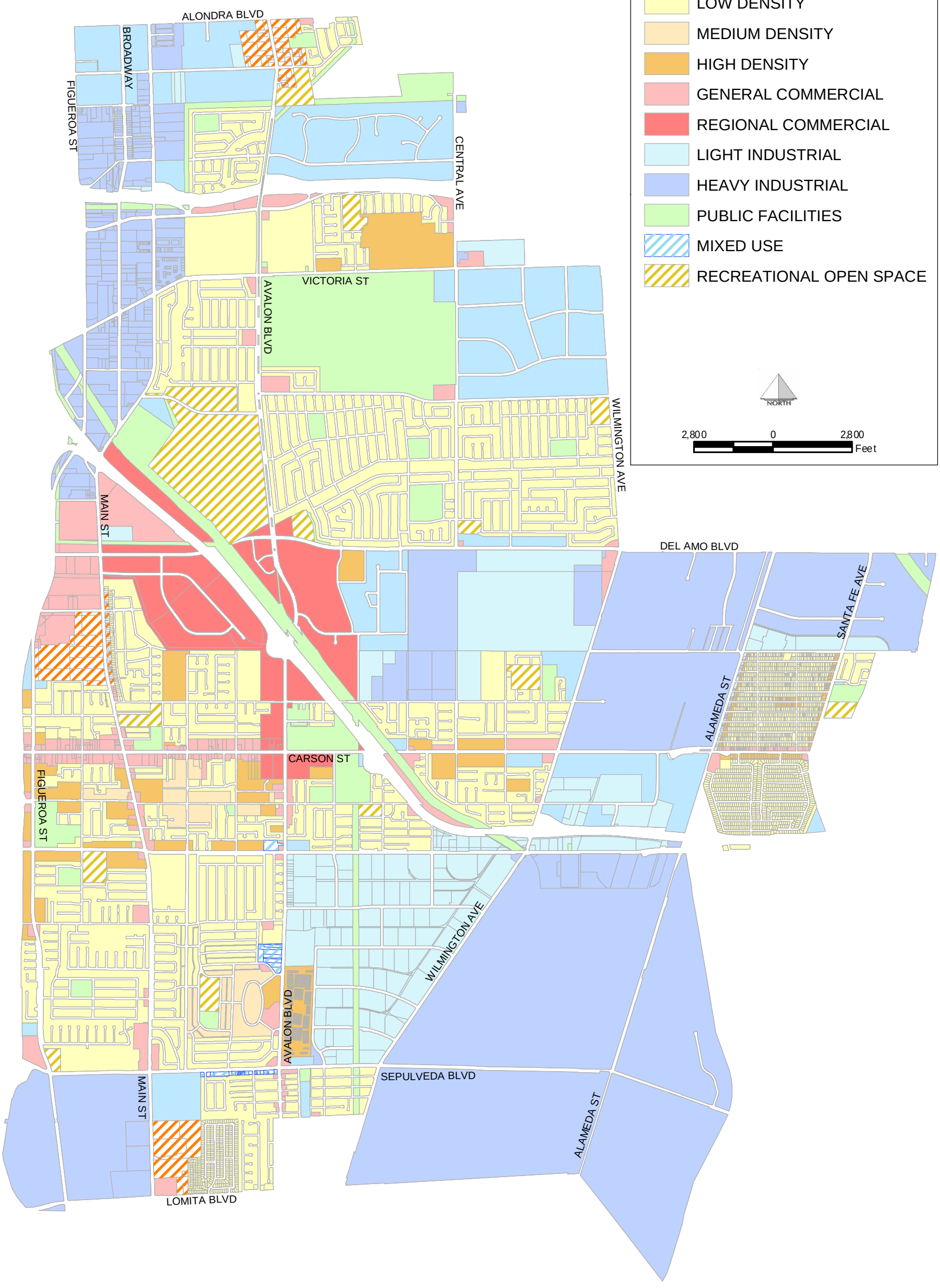
The following impact evaluation provides a comparison between Modified Plan 1 - Alternative C and the proposed General Plan. An analysis is provided for each of the impact areas identified in this EIR. The evaluation is followed by a conclusion.

LAND USE

The proposed General Plan revises the existing Land Use Element by updating the land use database, as well as assigning density/intensity standards for both residential and non-residential uses. The same land use designations would apply to this Alternative as under the proposed General Plan.

It is anticipated that the same areas would be developed under either alternative. Thus, the vacant sites would be developed under both of these scenarios at similar levels because both development scenarios include increased residential and non-residential development in areas where development has not occurred. Therefore, implementation of this Alternative would result in similar impacts related to compatibility with applicable plans, policies or regulations or between land uses. Land use impacts under this Alternative would be similar to those under the proposed General Plan. In this regard, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan.

CARSON GENERAL PLAN EIR



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

ALTERNATIVE C
LAND USE PLAN

EXHIBIT 5-1

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POPULATION, HOUSING AND EMPLOYMENT

Development and growth anticipated under this Alternative and the proposed General Plan would be similar, although this Alternative has more acres designated for General and Regional Commercial.

Two objectives for the proposed General Plan are to update the City's environmental baseline conditions to 2000/2001 and to update the General Plan development projections for the year 2020, which would include projections for dwelling units, non-residential square footage, population and employment. This would occur under either alternative. In this regard, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan.

TRANSPORTATION/CIRCULATION

The proposed General Plan has updated the City's traffic model to reflect current and buildout conditions, which would also apply to this Alternative. The updated traffic model has identified significant and unavoidable impacts for numerous roadway segments, which would not be eliminated by implementing this Alternative. Therefore, transportation/circulation impacts would be similar to those under the proposed General Plan. In this regard, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan.

AIR QUALITY

Development of the residential, commercial, and industrial designated areas as anticipated with the proposed General Plan would be similar to those anticipated under this Alternative. The proposed General Plan would result in a significant and unavoidable impact with regard to impacts related to construction, mobile sources and stationary sources. This Alternative would not avoid these significant and unavoidable air quality impacts. In this regard, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan.

NOISE

With the proposed General Plan, noise levels along freeways and along numerous arterial streets would increase. Existing sensitive land uses, primarily residential areas, may be exposed to increased noise levels due to traffic increases. This Alternative would produce similar noise impacts. In this regard, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan.

GEOLOGIC AND SEISMIC HAZARDS

Implementation of this Alternative would result in an increase in both population and new development (i.e., new residential, commercial, and industrial land uses) similar to that of the proposed General Plan. Thus, impacts with this Alternative relative to the exposure of structures/people to substantial adverse effects associated with faulting,

severe ground shaking, seismically-induced ground deformation, including liquefaction, landsliding and slope instability, erosion, or expansive soils, would be similar to the proposed General Plan. Therefore, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

HYDROLOGY AND DRAINAGE

Potential water quality degradation from surface runoff/erosion associated with forecasted growth would occur with this Alternative. Grading and development of future projects, the addition of impervious surfaces (i.e., roadways, parking lots, and hardscape), and the introduction of landscaping irrigation associated with future development would also occur. This would result in an increase in the population of the City that could be impacted by hydrology or drainage hazards. The impacts would be similar for either the Modified Plan 1 – Alternative C or the proposed General Plan.

Both this Alternative and the proposed General Plan include goals and policies regarding the construction of necessary storm drain improvements to eliminate potential flood hazards. These goals involve the provision of adequate storm drainage facilities to protect City residents from flooding and maintenance of a comprehensive storm drainage system that serves all urban development within the City. In addition, both Plans propose policies to undertake drainage programs that would serve all currently developed portions of the City not presently served by adequate storm drainage systems; and to pursue individual drainage plans where they are most needed.

It should be noted that certain activities have the potential to degrade water quality under either this Alternative or the proposed General Plan. These activities would be subject to continued compliance with legal/regulatory requirements (i.e., NPDES Permit Program).

With implementation of the proposed General Plan, growth scenarios would result in significant and unavoidable impacts in regards to water supply. These impacts would not be eliminated by implementing this Alternative.

In conclusion, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

PUBLIC SERVICES AND UTILITIES

Generally, the level of service and demand for service would increase under either this Alternative or the proposed General Plan. The additional impacts to services and utilities would be similar under either alternative. Therefore, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

PARKS AND RECREATION

Parks and recreation impacts would be similar under either alternative. Therefore, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

PUBLIC HEALTH AND SAFETY

It is anticipated that the same areas would be developed under either alternative. Thus, the vacant sites would be developed under both of these scenarios at similar levels because both development scenarios include increased residential and non-residential development in areas where development has not occurred. The significant public health and safety impacts identified for the proposed General Plan would not be reduced or eliminated by implementing this Alternative. Therefore, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

CULTURAL RESOURCES

The potential degradation or loss of historic, archaeological, and paleontological resources would occur with this Alternative since the urban area would be expanded. It is anticipated that the same areas would be developed under either alternative. Thus, the vacant sites would be developed under both of these scenarios at similar levels because both development scenarios include increased residential and non-residential development in areas where development has not occurred. Therefore, impacts to cultural resources under this Alternative would be similar to those under the proposed General Plan. In this regard, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan.

AESTHETICS

It is anticipated that the same areas would be developed under either alternative. Thus, the vacant sites would be developed under both of these scenarios at similar levels because both development scenarios include increased residential and non-residential development in areas where development has not occurred. The goals and policies included in the proposed General Plan regarding the improvement of the visual character of the City would also be applicable to this Alternative. Therefore, aesthetic impacts under this Alternative would be similar to those under the proposed General Plan. In this regard, Modified Plan 1 - Alternative C is considered neither environmentally superior nor inferior to the proposed General Plan.

5.4.3 CONCLUSION

The Modified Plan 1 – Alternative C would result in similar environmental impacts to the proposed General Plan for all environmental issues. Implementation of this Alternative does not eliminate significant transportation/circulation, air quality, noise, hydrology and drainage, public services and utilities, or public health and safety impacts.

Thus, Modified Plan 1 – Alternative C is not considered environmentally superior to the proposed General Plan.

5.5 MODIFIED PLAN 2 – ALTERNATIVE D

5.5.1 DESCRIPTION

As with Alternative C and the proposed General Plan, the development scenario for Alternative D would include the addition of two new land use designations including Business Park/Limited Industrial and Mixed Use and the refinement of uses within the Public Facilities designation, which includes separating the uses into three land use designations.

Alternative D designates a total of 38.4 less acres for residential use. This Alternative provides for a decrease of 19.6 acres for Low Density Residential, a decrease of 14.9 acres for Medium Density Residential and a decrease of 3.9 acres of High Density Residential compared to the proposed General Plan. There would be an increase of 49.8 acres for Regional Commercial uses and an increase of General Commercial by 63.9 acres, resulting in a total decrease of 34.3 acres for commercial uses. The decrease in acres designated for residential uses and commercial uses would result in a higher amount of acres designated for industrial uses. While there would be a decrease of 10.7 acres for Business Park uses and a decrease of 298.7 acres designated for Light Industrial Uses, there would be an increase of 382.1 acres designated for Heavy Industrial. The Business Park designation is recommended for the Village Center located in Study Area No. 2. The amount of acres dedicated for Recreational Open Space, General Open Space and Public Facilities would remain the same as that in the proposed General Plan. Refer to Exhibit 5-2, *Alternative D Land Use Plan*.

5.5.2 IMPACT EVALUATION

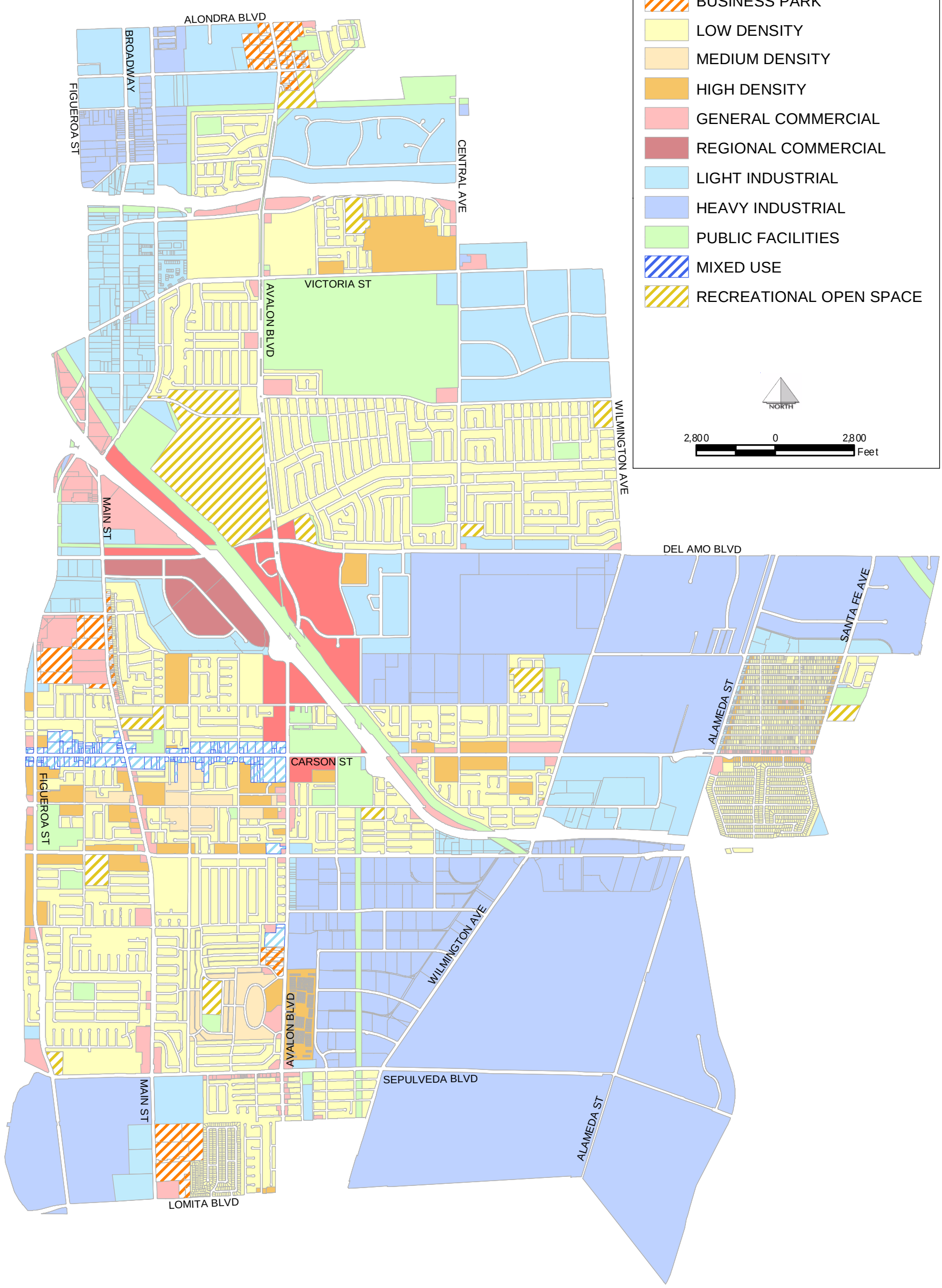
The following impact evaluation provides a comparison between Modified Plan 2 - Alternative D and the proposed General Plan. An analysis is provided for each of the impact areas identified in this EIR. The evaluation is followed by a conclusion.

LAND USE

The proposed General Plan revises the existing Land Use Element by updating the land use database, as well as assigning density/intensity standards for both residential and non-residential uses. The same land use designations would apply to this Alternative as under the proposed General Plan.

It is anticipated that the same areas would be developed under either alternative. Thus, the vacant sites would be developed under both of these scenarios at similar levels because both development scenarios include increased residential and non-residential development in areas where development has not occurred. Therefore, implementation

CARSON GENERAL PLAN EIR



CARSON GEOGRAPHIC SERVICES

Source: GIS Data, City of Carson, October 2002
OCTOBER 22, 2002

ALTERNATIVE D
LAND USE PLAN

EXHIBIT 5-2

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of this Alternative would result in similar impacts related to compatibility with applicable plans, policies or regulations or between land uses. Land use impacts under this Alternative would be similar to those under the proposed General Plan. Therefore, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan.

POPULATION, HOUSING AND EMPLOYMENT

Development and growth anticipated under this Alternative and the proposed General Plan would be similar, although this Alternative has more acres designated for General and Regional Commercial and less acres designated for Mixed Use, which would provide slightly less higher density acres and housing units.

Two objectives for the proposed General Plan are to update the City's environmental baseline conditions to 2000 and to update the General Plan development projections for the year 2020, which would include projections for dwelling units, non-residential square footage, population and employment. This would occur under either Alternative. In this regard, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan.

TRANSPORTATION/CIRCULATION

The proposed General Plan has updated the City's traffic model to reflect current and buildout conditions, which would also apply to this Alternative. The updated traffic model has identified significant and unavoidable impacts for numerous roadway segments, which would not be eliminated by implementing this Alternative. Therefore, transportation/circulation impacts would be similar to those under the proposed General Plan. In this regard, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan.

AIR QUALITY

Development of the residential, commercial, and industrial designated areas as anticipated with the proposed General Plan would be similar to those anticipated under this Alternative. The proposed General Plan would result in a significant and unavoidable impact with regard to impacts related to construction, mobile sources and stationary sources. This Alternative would not avoid these significant and unavoidable air quality impacts. In this regard, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan.

NOISE

With the proposed General Plan, noise levels along freeways and along numerous arterial streets would increase. Existing sensitive land uses, primarily residential areas, may be exposed to increased noise levels due to traffic increases. This Alternative would produce similar noise impacts. In this regard, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan.

GEOLOGIC AND SEISMIC HAZARDS

Implementation of this Alternative would result in an increase in both population and new development (i.e., new residential, commercial, and industrial land uses) similar to that of the proposed General Plan. Thus, impacts with this Alternative relative to the exposure of structures/people to substantial adverse effects associated with faulting, severe ground shaking, seismically-induced ground deformation, including liquefaction, landsliding and slope instability, erosion, or expansive soils, would be similar to the proposed General Plan. Therefore, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

HYDROLOGY AND DRAINAGE

Potential water quality degradation from surface runoff/erosion associated with forecasted growth would occur with this Alternative. Grading and development of future projects, the addition of impervious surfaces (i.e., roadways, parking lots, and hardscape), and the introduction of landscaping irrigation associated with future development would also occur. This would result in an increase in the population of the City that could be impacted by hydrology or drainage hazards. The impacts would be similar for either the Modified Plan 2 – Alternative D or the proposed General Plan.

Both this Alternative and the proposed General Plan include goals and policies regarding the construction of necessary storm drain improvements to eliminate potential flood hazard. These goals involve the provision of adequate storm drainage facilities to protect City residents from flooding and maintenance of a comprehensive storm drainage system that serves all urban development within the City. In addition, both Plans propose policies to undertake drainage programs that would serve all currently developed portions of the City not presently served by adequate storm drainage systems; and to pursue individual drainage plans where they are most needed.

It should be noted that certain activities have the potential to degrade water quality under either this Alternative or the proposed General Plan. These activities would be subject to continued compliance with legal/regulatory requirements (i.e., NPDES Permit Program).

With implementation of the proposed General Plan, growth scenarios would result in significant and unavoidable impacts in regards to water supply. These impacts would not be eliminated by implementing this Alternative.

In conclusion, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

PUBLIC SERVICES AND UTILITIES

Generally, the level of service and demand for service would increase under either this Alternative or the proposed General Plan. The additional impacts to services and utilities would be similar under either alternative. Therefore, Modified Plan 2 -

Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

PARKS AND RECREATION

Parks and recreation impacts would be similar under either alternative. Therefore, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

PUBLIC HEALTH AND SAFETY

It is anticipated that the same areas would be developed under either alternative. Thus, the vacant sites would be developed under both of these scenarios at similar levels because both development scenarios include increased residential and non-residential development in areas where development has not occurred. The significant public health and safety impacts identified for the proposed General Plan would not be reduced or eliminated by implementing this Alternative. Therefore, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan in this regard.

CULTURAL RESOURCES

The potential degradation or loss of historic, archaeological, and paleontological resources would occur with this Alternative since the urban area would be expanded. It is anticipated that the same areas would be developed under either alternative. Thus, the vacant sites would be developed under both of these scenarios at similar levels because both development scenarios include increased residential and non-residential development in areas where development has not occurred. Therefore, impacts to cultural resources under this Alternative would be similar to those under the proposed General Plan. In this regard, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan.

AESTHETICS

It is anticipated that the same areas would be developed under either alternative. Thus, the vacant sites would be developed under both of these scenarios at similar levels because both development scenarios include increased residential and non-residential development in areas where development has not occurred. The goals and policies included in the proposed General Plan regarding the improvement of the visual character of the City would also be applicable to this Alternative. Therefore, aesthetic impacts under this Alternative would be similar to those under the proposed General Plan. In this regard, Modified Plan 2 - Alternative D is considered neither environmentally superior nor inferior to the proposed General Plan.

5.5.3 CONCLUSION

The Modified Plan 2 – Alternative D would result in similar environmental impacts to the proposed General Plan for all environmental issues. Implementation of this Alternative does not eliminate significant transportation/circulation, air quality, noise, hydrology and drainage, public services and utilities, or public health and safety impacts. Thus, Modified Plan 2 – Alternative D is not considered environmentally superior to the proposed General Plan.

5.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an Environmentally Superior Alternative be identified; that is, an alternative that would result in the fewest or least significant environmental impacts.

The No Project/No Development Alternative would result in no change to the existing conditions within the City of Carson. Therefore, no new or additional environmental impacts would result directly from this Alternative. The significant and unavoidable impacts for traffic/circulation, air quality, noise, hydrology and drainage, public services and utilities, and public health and safety identified for the proposed General Plan would be avoided with this Alternative and thus, the No Project/No Development Alternative is identified as the environmentally superior alternative.

However, the No Project/No Development Alternative is rejected as the environmentally superior alternative for the following reasons. First, this Alternative would prevent the City of Carson from making needed improvements to existing properties, infrastructure, and public services. Existing conditions, under this Alternative would be maintained, but not improved. Second, the No Project/No Development Alternative fails to accomplish the project objectives. Third, this Alternative is not feasible given that it is in conflict with State planning, zoning and environmental laws. And four, it is the intent and objective of the proposed General Plan to provide new information based on current conditions in the City. Thus, the No Project/No Development Alternative would not serve the City as adequately as the proposed General Plan.

The Existing General Plan Alternative would result in similar environmental impacts for all issues, except for land use. It is anticipated that the Existing General Plan would result in greater land use incompatibility impacts than the proposed General Plan. In conclusion, the Existing General Plan Alternative is not considered environmentally superior when compared to the proposed General Plan.

Both Modified Plan 1 – Alternative C and Modified Plan 2 – Alternative D represent slight variations in the distribution of commercial or industrial land uses on their Land Use Plan when compared to the proposed General Plan. As a result, both of these Alternatives produce similar environmental impacts when compared to the proposed General Plan for all environmental issues. Implementation of these Alternatives does not eliminate significant transportation/circulation, air quality, noise, hydrology and drainage, public services and utilities, or public health and safety impacts. Thus, Modified Plan 1 – Alternative C and Modified Plan 2 – Alternative D are not considered environmentally superior to the proposed General Plan.

Based on the analysis on each of the alternatives in this section, the proposed General Plan is the environmentally superior alternative.

6.0 GROWTH-INDUCING IMPACTS OF THE PROPOSED ACTION

Growth-inducing impacts fall into two general categories, direct and indirect. Direct growth-inducing impacts are generally associated with the provision of urban services to an undeveloped area. The provision of these services to a site, and the subsequent development, can serve to induce other landowners in the vicinity to convert their property to urban uses. Indirect, or secondary growth-inducing impacts consist of growth induced in the region by the additional demands for housing, goods, and services associated with the population increased caused by, or attracted to, a new project.

The purpose of a General Plan is to guide growth and development in a community. Accordingly, the General Plan is premised on a certain amount of growth taking place. Los Angeles County, as well as the entire Southern California region, has experienced dramatic growth over the past two decades and this trend is expected to continue. The focus of the General Plan, then, is to provide a framework in which growth can be managed and tailored to suit the needs of the community and surrounding area.

During the past four decades, the SCAG region, including Orange, Los Angeles, Riverside, Imperial, San Bernardino and Ventura Counties has been one of the fastest growing regions in the nation. Between 1950 and 1970, the population doubled in size, growing at a rate of five percent per year. Between 1970 and 1990, the population doubled in size again, growing at a rate of five percent per year. In 1990, SCAG indicated that 14,640,832 people resided in the region. Between 1990 and 2000, the region's population grew by almost 13 percent to 16,516,006 million in 2000. Recent SCAG projections indicate that the regional population will increase by another 29 percent to 21,305,000 by the year 2020.

During the ten-year period of 1990 to 2000, the population of Los Angeles County increased 7.4 percent from 8,863,164 to 9,519,338[1]. The population growth rate for Carson between 1990 and 2000 represents an increase of 3.6 percent, approximately one-half of the increase Los Angeles County experienced.

The City of Carson is approximately 83 percent built out, and has approximately 936.6 acres of vacant land and 233.9 acres of underutilized land for possible development. The projected SCAG population for the City is 98,602 in 2020. The buildout population represents an increase of 6,602 persons, which represents a seven percent increase over the 2001 DOF population of 92,000. Also, the proposed General Plan provides for 26,669 dwelling units in 2020, which represents an increase of 1,332, or 5.3 percent, over the 2000 total of 25,337. In addition, SCAG projects 67,900 job opportunities within the City by 2020, representing an increase of 27,310 jobs, or 67.2 percent, over year 2000 conditions.

[1] Data obtained from 1990 and 2000 Census.

New employment opportunities generated by implementation of the proposed General Plan would improve the economic base of the area. The increased availability of employment within the City of Carson is desirable economically and may serve to attract additional residents, which may result in the overall growth of the community. Such growth, however, is expected to be balanced by the proposed residential development in the General Plan and in the project vicinity.

In conclusion, the proposed General Plan is not growth inducing, but is a response to growth in Los Angeles County and in the region. As stated above, the proposed General Plan would not significantly induce growth, but the increase to the area's employment base would help accommodate any future growth in the City of Carson and neighboring communities.

7.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

The City of Carson determined that there was no substantial evidence that the proposed General Plan would cause or otherwise result in significant environmental effects in the resource areas discussed below. As indicated in the CEQA Guidelines, no further environmental review of these issues is necessary for reasons summarized in the following discussion.

LAND USE

Physically divide an established community: The General Plan proposes changes to some of the existing land use designations within Carson. However, the new land use designations would not result in the physical division of any established communities. The proposed land use designations would provide better consistency between existing and new uses, resulting in the protection established communities.

AESTHETICS

Have a substantial adverse effect on a scenic vista: There are no officially designated scenic vistas within the City of Carson. Therefore, the proposed General Plan would not result in the adverse effect of a scenic vista.

Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway: No state scenic highways run through the City of Carson. Therefore, the proposed General Plan would not result in the damage of scenic resources within a state scenic highway.

AGRICULTURAL RESOURCES

Convert Farmland to non-agricultural uses: Carson has approximately 62 acres of existing farmland located within the City. Although the land is currently being farmed, it is not specifically zoned for agricultural uses. Therefore, no conversion of farmland to non-agricultural uses would occur with implementation of the proposed General Plan.

Conflict with existing zoning for agricultural use, or a Williamson Act contract: The City does not contain any land under a Williamson Act contract. The proposed General Plan does not involve any changes to policies regarding agricultural resources within the City.

Involve other changes in the existing environment which could result in conversion of Farmland, to non-agricultural use: As previously stated, Carson has approximately 62 acres of farmland within the City. However, the land is not specifically zoned for agricultural uses. No conversion of farmland to non-agricultural uses would occur with implementation of the proposed General Plan.

BIOLOGICAL RESOURCES

Have a substantial adverse effect, either directly or indirectly through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service: The City of Carson does not have any sensitive or special status species. Therefore, implementation of the proposed General Plan would not adversely affect any candidate, sensitive, or special status species.

Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service: Riparian habitat currently exists at the Carson Harbor Village Mobile Home Park located within the northwest portion of the City. This area has been identified and currently has deed restrictions to protect the habitat. Implementation of the proposed General Plan would not adversely affect riparian habitat or other sensitive natural community.

Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act: Approximately 17 acres of wetlands currently exist at the Carson Harbor Village Mobile Home Park located within the northwest portion of the City. As previously stated, this area has been identified and has deed restrictions to protect the wetland habitat. Implementation of the proposed General Plan would not adversely affect any federally protected wetlands.

Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites: Implementation of the proposed General Plan would not adversely affect the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance: Carson does not have any local policies or ordinances protecting biological resources or tree preservation policy. As a result, implementation of the proposed General Plan would not conflict with any local policies or ordinances protecting biological resources.

Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan: No areas within the City of Carson are included within any natural community conservation plans or other habitat conservation plans. As such, implementation of the proposed General Plan would not conflict with the provisions of any such plans.

AIR QUALITY

Create objectionable odors affecting a substantial number of people: Implementation of the proposed General Plan would not create odors affecting a substantial number of people. Any new or additional policies, or modifications to existing General Plan

policies regarding air resources would be intended to strengthen the protection of such resources and further eliminate negative impacts on air quality, including objectionable odors.

GEOLOGY AND SOILS

Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water: Carson is a fully serviced, urban City. Any new development within the City would connect to the City's sewer and storm drain system. Septic tanks or alternative waste water disposal systems would not be used.

MINERAL RESOURCES

Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state: No known mineral resources are located within the City. Therefore, implementation of the proposed General Plan would not result in the loss of any known mineral resources.

Result in the loss of availability of a locally important mineral resource recovery site: No locally important mineral resource recovery sites are located within the City. Therefore, implementation of the proposed General Plan would not result in the loss of any such resources or resource recovery sites.

TRANSPORTATION

Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks: Any modifications to existing land use designations proposed in the General Plan are to provide consistency with surrounding land uses and their intensities. No significant modifications are proposed that would result in any changes to air traffic patterns.

Substantially increase hazards due to design features (i.e., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment): No specific developments are included in the proposed General Plan. This issue would be addressed at the project level. No impacts are anticipated at this time.

Result in inadequate emergency access: No specific developments are included in the proposed General Plan. This issue would be addressed at the project level. No impacts are anticipated at this time.

Result in inadequate parking capacity: No specific developments are included in the proposed General Plan. This issue would be addressed at the project level. No impacts are anticipated at this time.

PUBLIC HEALTH AND SAFETY

For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area: The City of Carson is not located within an airport land use plan area. The City is located within two miles of the Compton Airport. Implementation of the proposed General Plan would not result in any safety hazards in this regard.

Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands: The City of Carson and surrounding region are predominately developed. No wildlands exist within or around the City. Therefore implementation of the proposed General Plan would not expose people or structures to any impacts related to wildland fires.

8.0 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED ACTION IS IMPLEMENTED

Section 15126(b) of the CEQA Guidelines requires an EIR to "describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described."

Section 4.0 of this EIR provides a description of the potential environmental impacts of the proposed General Plan and recommends policies and mitigation measures to reduce impacts to a less than significant level, where possible. After implementation of the recommended policies and mitigation measures, most of the significant or potentially significant impacts associated with the proposed General Plan would be reduced to a less than significant level. However, the impacts listed below could not be feasibly mitigated and would result in a significant and unavoidable impact with implementation of the proposed General Plan.

TRANSPORTATION

New development within the City of Carson, along with regional traffic growth would create unavoidable significant impacts related to the increase in traffic volumes within the City for the planning horizon year of 2020. These impacts are primarily based on the premise that roadway impacts in the year 2020 show 17 roadway segments would operate at LOS E or F. Implementation of the proposed General Plan would result in an additional 14 roadway segments operating at unacceptable service levels over existing conditions.

In addition, development under the proposed General Plan would create unavoidable significant impacts relating to the exceedance of LOS standards established by the CMP at Carson freeway monitoring stations. These impacts are primarily based on the premise that LOS standards would be exceeded along the I-405 freeway at two monitoring locations, along the SR-91 at one monitoring location and along the I-710 freeway at one monitoring location. Although mitigation measures would be implemented on a project-by-project basis, it is anticipated that these impacts would remain significant and unavoidable.

AIR QUALITY

Development under the proposed General Plan would create unavoidable significant impacts related to construction, mobile sources and stationary sources. These impacts are primarily based on the premise that the City and pollutant sources within are widely dispersed and numerous. Although measures related to construction and stationary

sources would be implemented on a project-by-project basis, and vehicular emission-reducing programs would be implemented Citywide, it is anticipated that these impacts would remain significant and unavoidable.

NOISE

Development under the proposed General Plan would create unavoidable significant impacts related to Traffic Noise and Railroad Noise. These impacts are primarily based on the premise that these noise levels could not be feasibly reduced to a less than significant level through standard mitigation practices. Although measures related to mobile source noise sources would be implemented on a project-by-project basis, it is anticipated that these impacts would remain significant and unavoidable.

HYDROLOGY

Development under the proposed General Plan would create unavoidable significant impacts related to groundwater depletion. These impacts are primarily based on the premise that the water supply for the City of Carson and the Southern California region is constrained. Implementation of the proposed General Plan would result in increased water demand. Although measures related to water conservation would be implemented, it is anticipated that these impacts would remain significant and unavoidable.

SCHOOL FACILITIES

Development under the proposed General Plan would create unavoidable significant impacts related to school facilities in the City of Carson. These impacts are primarily based on the premise that the majority of schools servicing the City are currently nearing or exceeding their capacity. In addition, enrollment for the LAUSD currently exceeds capacity. Student enrollment generation factors project an increase of almost 700 students as a result of implementation of the proposed General Plan. Although both LAUSD and CUSD assess development fees against residential and commercial/industrial development to mitigate potential school related impacts, it is anticipated that these impacts would remain significant and unavoidable.

PUBLIC HEALTH AND SAFETY

Development under the proposed General Plan would create unavoidable significant impacts related to hazardous materials releases, air toxic emissions, oil contamination and landfills. These impacts are primarily based on the premise that the pollutant sources throughout the City are numerous. Although measures related to remediation would be implemented on a project-by-project basis, it is anticipated that these impacts would remain significant and unavoidable.

9.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IF THE PROPOSED PROJECT WERE IMPLEMENTED

The environmental effects of the proposed General Plan are discussed in Section 4.0 of this EIR, and are summarized in Section 2.0. The City of Carson has approximately 936.6 acres of vacant land and approximately 233.9 acres of underutilized land available for development.

The General Plan proposes the addition of Business Park (BP) as a new land use category intended to provide for the least intensive industrial uses. This would be in addition to the existing land use categories of Light Industrial (LI) and Heavy Industrial (HI). The General Plan also proposes that the City's open space uses receive land use designations separate and apart from "Public Facilities". The proposed open space designations are General Open Space (GOS) and Recreational Open Space (ROS). The GOS land use would be implemented by the OS - Open Space zone. It is recommended that the City develop a more specific zoning designation to implement the ROS land use. A Mixed Use (MU) category is proposed as a new land use designation under the proposed General Plan as well. This category provides opportunities for mixtures of commercial, office and/or residential uses in the same building, on the same parcel or within the same area.

Therefore, implementation of future projects under the proposed General Plan would require some long-term commitment of natural resources and land.

Actions related to future development under the proposed General Plan would result in an irretrievable commitment of nonrenewable resources such as energy supplies and other construction-related resources. These energy resource demands would be used for construction, heating and cooling of buildings, transportation of people and goods to and from future project sites, heating and refrigeration of food, water supplies, lighting and other associated energy needs.

The environmental changes produced by future development projects under implementation of the proposed General Plan would primarily occur as a result of the alteration of the physical environment from underdeveloped and vacant land uses, to urban uses. As future projects are developed, utilities would be expanded to serve the increase in demand for site infrastructure including parking, circulation and landscaping improvements.

Fossil fuels currently provide the principle source of energy. Future development under buildout of the proposed General Plan would directly reduce existing supplies of these energy sources such as fuel oil, natural gas and gasoline. This would result in a long-term commitment to the consumption of essentially nonrenewable resources.

Future projects that may occur as a result of implementation of the proposed General Plan would require the commitment or destruction of other nonrenewable and slowly renewable resources. These include, but are not limited to, lumber and other forest products, sand and gravel, asphalt, petrochemical construction materials, steel, copper, lead and water. A marginal increase in the commitment of social services and public maintenance services (i.e., waste disposal and treatment, etc.) would also be required.

Implementation of the proposed General Plan would result in some irreversible environmental changes.

10.0 REFERENCES

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