

# GENERAL PLAN

## CITY OF CARSON



ADOPTED OCTOBER 11, 2004



**CITY OF CARSON**

# **GENERAL PLAN**

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**CITY OF CARSON**

701 East Carson Street  
Carson, California 90749

**Adopted October 11, 2004**

**Resolution 04-089**



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# CHAPTER 1

## INTRODUCTION



# CHAPTER 1

## INTRODUCTION



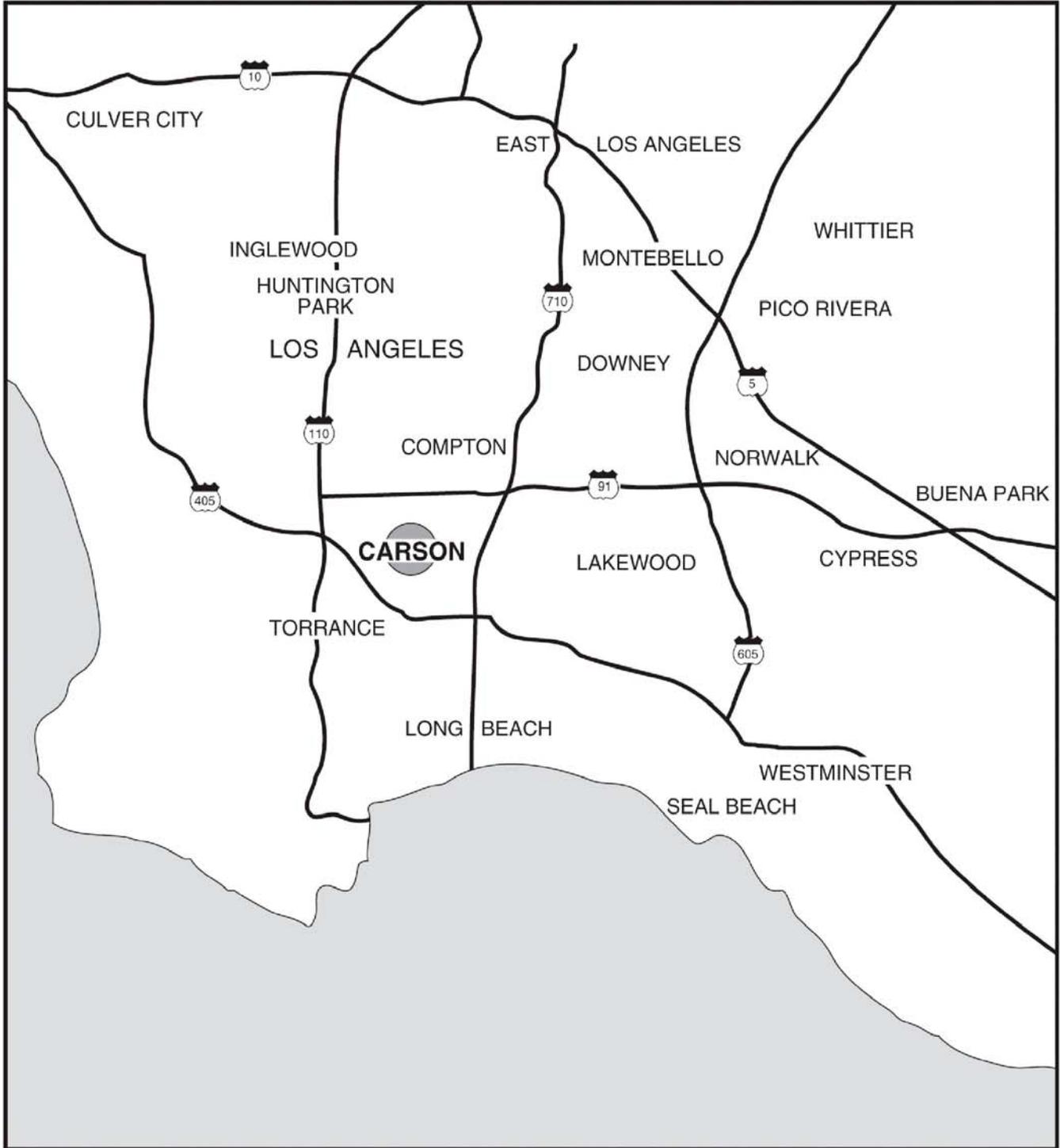
### 1.0 INTRODUCTION

### 1.1 LOCATION AND SETTING

#### REGIONAL 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 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 I-1, *Regional Location*, shows the City's location in a regional context.



NOT TO SCALE



Source: GIS Data, City of Carson  
NOVEMBER 25, 2002

**Regional Location**

**EXHIBIT I-1**



## **LOCAL VICINITY AND AREA DESCRIPTION**

The City of Carson is approximately 19.2 square miles, 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 under water in the Dominguez Channel with an elevation of almost 15 feet below sea level.

As shown on Exhibit I-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).

Carson's Sphere of Influence includes 710 acres of unincorporated Los Angeles County area between Wilmington Avenue and the Alameda Corridor, Del Amo north to the extension of Victoria Street.

## **1.2 HISTORICAL BACKGROUND**

The first private land grant in the area, Rancho San Pedro, was conveyed to Juan Jose Dominguez in 1784. This land grant covered some 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



# CARSON GENERAL PLAN



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

## Local Vicinity

EXHIBIT I-2



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.

Almost 200 years after the founding of Rancho San Pedro, 142 years after the Dominguez Adobe was built, and 58 years following the Great Air Meet of 1910, the citizens of the land “to the west of the Los Angeles River” finally took a step toward independence. The citizens went to the polls on February 6, 1968 to vote on whether to officially incorporate their community as an independent city, with 62 percent of those who voted, voting in favor of incorporation. Shortly after incorporation, the founding City fathers coined a motto for their new town: Future Unlimited.

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. The new industrial parks in Carson, such as the Watson Industrial Center, are models of cleanliness and attention to appearance. Other steps the City has taken to enhance the physical environment and quality of life since it incorporated include: adoption of the initial General Plan in 1971 (and update in the 1980s); initiation of two ambitious redevelopment projects to revitalize portions of the City in 1971 and 1972, leading to the development of the Carson Mall, Watson and Dunn industrial parks, construction of the City Hall and Community Center, support for the continued growth of California State University – Dominguez Hills, and involvement in neighborhood planning, revitalization and housing rehabilitation through the ongoing community development program. In addition, beautification efforts by the City have resulted in numerous landscaped center medians, lighting projects, street improvements and public parks.

Carson today is proof of “Future Unlimited” and has emerged as one of the prominent cities in the South Bay region of Southern California.

## **1.3 PLANNING HISTORY**

### **PLANNING AT THE TIME OF 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.

## **THE 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  
(1981) (1989) (2002)

Air Quality Element  
(1994)

## **1.4 OVERVIEW OF CURRENT GENERAL PLAN UPDATE**

### **BACKGROUND OF CURRENT GENERAL PLAN UPDATE**

The City of Carson chose a two-phase approach to updating the General Plan, as described below.

#### **Phase One**

The first phase consisted of an educational and community outreach program where input was received from residents, as well as business and property owners through a



number of means including: interviews, workshops, a survey, and an advisory committee. The Vision Plan Advisory Committee (VPAC) was composed of 20 members from the City Council, all the commissions and committees, and residents. The VPAC was formed to assimilate the information received during the outreach program and develop guiding principles. These Guiding Principles and the issues that they are to address are included in the Carson Vision. The Vision document was the final document of the first phase of the General Plan process, and served as the basis for this updated General Plan.

Additional detail regarding the visioning process is found below in Section 1.5, Carson Vision.

### **Phase Two**

The second phase of the General Plan Update was a more technical phase. The Existing Conditions Report was the first of four major documents to be prepared as part of the second phase of the General Plan Update. The second document is the General Plan itself, within which the Land Use Plan (another major component) will be incorporated. The third is the Environmental Impact Report (EIR) that will address the impacts of the General Plan. And the fourth component is the Implementation Plan, which is incorporated into the General Plan as a series of short-term actions recommended to support long-term General Plan goals and policies.

## **1.5 PHASE ONE COMMUNITY INVOLVEMENT**

### **WHAT IS A VISION?**

Carson Vision projects the community's desires with regard to long-range growth. It sets our sights on the horizon by saying this is what we have, this is what we want, and these are some of the actions we want to take to keep our dreams alive and well into the future. It is a flexible guide, which illustrates the interests, opportunities and concerns identified by the community; and is designed to be updated and adapted to changing times and needs. Carson Vision provides the framework from which this City of Carson General Plan has been drafted.

Carson Vision is based upon the views and input of the community collected during the course of a public outreach program conducted in late 1996 and early 1997. Property owners, residents and business owners were asked to provide their recommendations during the outreach program.

### **WHAT IS A GENERAL PLAN AND WHY IS IT IMPORTANT?**

Every city and county in California must have an adopted General Plan, according to State law. The California General Plan Guidelines explain that a General Plan acts as a "constitution" for city development; the foundation upon which all land use decisions will be based. As stipulated in the General Plan Guidelines, adopted general plans must be periodically reviewed and revised to ensure the legal



adequacy of the document. Most general plans have a horizon period of 10 to 20 years, at which time they are updated.

Most of Carson's General Plan was adopted in the 1980s. Many laws relating to local air quality, water quality, traffic congestion management, growth management, earthquake safety, energy conservation, solid waste reduction and a number of other matters have been passed by the State legislature and Governor in recent years. Almost all of these requirements need to be included in the City's General Plan. In order for Carson to obtain maximum benefit from these regulations, while minimizing the costs of compliance, these new laws must be comprehensively coordinated as part of a general plan update. Patching a wide variety of new laws into an existing general plan can cause illegal inconsistencies, conflicts and many expensive General Plan Amendments.

Aside from State requirements, there are other reasons that cities have learned to value a sound, current and comprehensive General Plan. Economic conditions play a role in how rapidly a General Plan is implemented and what techniques are utilized. A General Plan provides evidence of a City's expectations for its growth and development and the framework for the City's leadership to meet those expectations. With predictability of the City's future increased, business investment in the City is encouraged and housing prices are supported.

State law requires that seven elements be included in each general plan. These elements are termed mandatory elements and include: Land Use, Housing, Circulation and Infrastructure, Safety, Noise, Open Space and Conservation. Cities may also chose to create additional elements to address topics that are important to their citizens, which are termed optional elements. Examples of optional elements include: Economic Development, Air Quality, and Parks and Recreation.

## **COMMUNITY INPUT IS IMPORTANT IN THE GENERAL PLAN**

Not only does State law require citizen input in the General Plan, but it is crucial that a General Plan have the support of the community in order for it to be effectively implemented. It is also important that the General Plan address the issues that are of greatest concern to the community.

The City of Carson chose a two-phase approach to developing the General Plan. The first phase was an education and community outreach phase where input was received from residents, businesses and property owners through a number of means, including interviews, workshops, a survey and an advisory committee.

## **VISION PLAN ADVISORY COMMITTEE**

The Vision Plan Advisory Committee (VPAC) was composed of 20 members from the City Council, all the City commissions and boards and City residents. The VPAC was formed to assimilate the information received and to develop guiding principles that are included in this General Plan. The VPAC met on four occasions



and was primarily responsible for the drafting of the Guiding Principles contained in Carson Vision and this General Plan.

## **INTERVIEWS**

A series of group and confidential one-on-one interviews were conducted with key decision makers, residents, business and property owners and department heads at the start of the outreach effort. The purpose of the interviews was to learn of the key issues early, in order to more easily and accurately focus on certain issue areas.

## **COMMUNITY WORKSHOPS**

Two Community Workshops were held during the outreach effort. They were advertised in the Carson Report, flyers were distributed throughout the City and press releases were distributed to local newspapers.

On January 29, 1997, the first Community Workshop was held to receive input from the public relating to community issues. The Workshop was structured to allow attendees to voice their opinions and/or concerns about the City of Carson in the four following areas:

- Land Use and Aesthetics;
- Economic Development;
- Parks, Recreation and Community Services; and
- Transportation, Infrastructure and Public Safety.

The second Community Workshop was held on May 14, 1997, and focused on the review of the Guiding Principles that had been developed by the VPAC. The comments received at the Workshop were incorporated into the Guiding Principles contained in this General Plan.

## **COMMUNITY SURVEY**

A random sample, community-wide survey was conducted in January and February 1997. The purpose of the survey was to seek information about the citizens' perceptions of conditions in the City. Survey respondents' preferences for changing, preserving or improving characteristics, appearances or services in the City provide information about how the community feels in general about certain issues and what issues should be explored further in subsequent work efforts, such as the General Plan, or Strategic Plans or Special Studies.

## **CITY COUNCIL/PLANNING COMMISSION WORKSHOPS**

The purpose of these workshops was to inform the City's decision makers of the outreach efforts and the recommendations resulting from the outreach effort.



## **PRINT MEDIA**

Articles in the Carson Report and press releases in local newspapers have been instrumental in informing the public about the outreach program and the findings and recommendations resulting from the work efforts. In addition, flyers distributed throughout the community were helpful in announcing the Community Workshops.

## **1.6 PHASE TWO COMMUNITY INVOLVEMENT**

### **GENERAL PLAN ADVISORY COMMITTEE**

In July 1999, a General Plan Advisory Committee (GPAC) was formed and was comprised of 20 members from the City Council, all the City commissions and boards, and City residents and business owners. The purpose of the GPAC was to act as a source of ideas, and act as a “clearinghouse” for ideas generated for ultimate incorporation into the General Plan. More specifically, the GPAC met on nine occasions and was primarily responsible for the development of the land use alternatives and many of the goals and policies that are included in this General Plan.

The GPAC met on the following dates: July 28, 1999; September 11, 1999; November 15, 1999; December 8, 1999; January 12, 2000; February 2, 2000; March 29, 2000; June 28, 2000; and July 20, 2000.

### **COMMUNITY WORKSHOPS**

Four Community Workshops were held during the Phase Two outreach effort. They were advertised in the Carson Report, flyers were distributed throughout the City and press releases were distributed to local newspapers.

The four workshops were conducted in different areas of the City on the date and location specified below:

- May 18, 2000 – Veterans Park
- May 24, 2000 – Stevenson Park
- June 7, 2000 – Carson Community Center
- June 14, 2000 – Dominguez Community Center

The purposes of the workshops were threefold:

- First, to provide information to the community about the General Plan and the General Plan Update process.
- Second, to provide an opportunity for the community to ask questions and comment on the recommended General Plan Land Use Alternatives.
- Third, to provide an opportunity for the community to offer their suggestions on how to address key community issues.



The comments received from the workshops were forwarded to the GPAC for their consideration and incorporation into the final land use alternatives.

## **JOINT CITY COUNCIL/REDEVELOPMENT AGENCY/PLANNING COMMISSION/ ECONOMIC DEVELOPMENT COMMITTEE/GPAC WORKSHOP**

On February 2, 2000, a joint meeting with the City Council, Redevelopment Agency, Planning Commission, Economic Development Committee and GPAC was held to bring together the City Council and other community leaders to share information, experience and knowledge related to the City's growth and development. The workshop provided an opportunity to report on the progress of the General Plan Update program, market overview, and land use alternatives developed for the General Plan. With respect to the market overview, Robert Charles Lesser & Company provided an overview of their work effort for the Economic Development Element and Kosmont and Associates provided an overview of the Economic Development Strategy for the Carson Street Corridor. In addition, the workshop presented two new issues that had been raised by the GPAC and the community since the development of the Carson Vision: 1) the development of a signature project and 2) city image. These issues were added to the list of issues developed as part of the Carson Vision and are addressed in this General Plan.

## **1.7 USE AND PURPOSE OF THE GENERAL PLAN**

The role of each community's general plan is to act as a constitution for development and the foundation upon which all land use decisions are to be based. Land use decisions encompass not only zoning, but circulation, design, open space and other factors. The Plan is a policy document to assist and guide local decision makers. To be considered consistent with the General Plan, a project must not only be consistent with the Land Use Plan, but it must also further the goals of all elements of the General Plan and meet the intent of its policies.

The City of Carson is always evolving with new opportunities to mold the future character of the City, while preserving the best of it's past and present. The Carson General Plan addresses the issues that are important to consider in the ongoing development of the community. The Plan explains how the physical features and natural resources are to be maintained and enhanced, as directs how to incorporate them into new projects, infill development and community investments. The Plan also identifies land uses and their distribution throughout the City.

The General Plan is to be used by the City Council and Planning Commission to evaluate land use changes, make funding and budget recommendations and decisions, and to evaluate specific development proposals. City Staff will use the Plan to regulate building and development and to make recommendations on projects to the Planning Commission and City Council. The Plan will also be used by residents, neighborhood groups, City Commissions and Councils, and developers to understand the City's long-range plans and to evaluate specific development proposals.



A General Plan is a legal document that must meet specific State requirements for content. The Carson General Plan meets or exceeds the requirements set forth in the California Government Code (Sections 65300 et. seq.). The Plan is an integrated, internally consistent statement of the official land use policy for the City of Carson. The Plan addresses each issue prescribed by State law as it applies to Carson. The Plan contains land use and circulation maps. It also contains text that identifies goals, sets forth policies and identifies implementation strategies.

The California Environmental Quality Act (CEQA) requires all local and State governmental agencies to consider the environmental consequences of projects over which they have a discretionary authority. The State CEQA statutes, Section 21065, define a project as “an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.” Therefore, the City of Carson, as the lead agency, was required to prepare and certify an Environmental Impact Report (EIR) for the General Plan Update.

The General Plan Update EIR is a public document that assesses the overall environmental effects of the Plan update at a program level of detail and indicates way to reduce or avoid possible environmental damage. The Program EIR generally analyzes the broad environmental effects of the General Plan Update, and provides a baseline, or “first tier,” against which future projects implemented under the General Plan Update 2020 horizon are evaluated. Where subsequent CEQA documentation is required for a future project, the City must implement the applicable mitigation measures developed in the Program EIR, and focus its analysis on site-specific issues that cannot otherwise be addressed at a program or policy level of analysis.

The Program EIR is to be used as a companion document with the General Plan Update.

## **1.8 ORGANIZATION OF THE GENERAL PLAN**

The last comprehensive update of the General Plan was completed in the 1980s. A revised Housing Element was certified by the State of California in 2002. As part of this update, all elements have been reviewed, revised, reorganized and reformatted. This General Plan includes the seven mandated elements and three permissive elements listed below:

- **Land Use Element - Chapter 2.0**
- Economic Development Element – Chapter 3.0
- **Transportation and Infrastructure Element – Chapter 4.0**
- **Housing Element – Chapter 5.0**
- **Safety Element – Chapter 6.0**
- **Noise Element – Chapter 7.0**
- **Open Space and Conservation Element – Chapter 8.0**
- Parks, Recreation and Human Services Element – Chapter 9.0
- Air Quality Element – Chapter 10.0



The mandatory elements are shown in bold print. The Carson General Plan is organized in a traditional element oriented format. The elements, however, are organized into functional chapters. Each of the elements includes a statement of authority, a summary of existing conditions, and the goals and policies pertaining to a particular issue.

## **THE HIERARCHY OF THE GENERAL PLAN**

Developing a general plan is a significant undertaking. Beginning with a big picture perspective before delving into detail makes the effort much more understandable and comprehensive. With this in mind, the Carson General Plan was developed using the following hierarchical system.

Framework. A framework is the structure on which the rest of the General Plan is built.

Guiding Principle. A guiding principle is an assumption, fundamental rule, or doctrine that guides general plan goals, policies and implementation strategies.

Goal. A goal is a direction setter. It is an ideal future end, condition, or state related to public health, safety, or general welfare toward which planning efforts are directed. A goal is a general expression of community values and works to further the guiding principle under which it falls.

Policy. A policy is a specific statement that guides decision-making. It indicates a clear commitment of the local government. A policy is based on goals, as well as current and future trends.

Implementation Strategies. An implementation strategy is an action, procedure, project, program, or technique that carries out a policy.

## **1.9 FRAMEWORK—SUSTAINABLE DEVELOPMENT**

The framework on which this General Plan is built is sustainable development. Sustainable development means following principles that provide for today's needs while ensuring that future generations have the resources available to meet their needs. It means enhancing the quality of life today and tomorrow. It means to provide balance. Balance of economic growth and environmental preservation, balance of housing and jobs, balance of technology and reduction in pollution and waste, balance of economic development and environmental justice, balance of alternative transportation types. Sustainability involves conflicts—and balance--among the factors of environment, equity, and economy.

## **1.10 GUIDING PRINCIPLES**

The following guiding principles were developed as part of Carson Vision and set the tone for each of the General Plan elements and provide direction for the policy guidance related to realize the community's vision for Carson.



## **LAND USE**

*The City of Carson is committed to providing a sustainable 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.*

## **ECONOMIC DEVELOPMENT**

*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.*

## **TRANSPORTATION AND INFRASTRUCTURE**

*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 water, sewer and storm drainage facilities, as well as communication and other technological facilities to provide a sustainable system.*

## **HOUSING**

*The City of Carson is committed to providing and improving a broad range of quality housing opportunities, promoting home ownership, and enhancing residential neighborhoods.*

## **SAFETY**

*The City of Carson is committed to promoting community 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.*

## **NOISE**

*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.*

## **OPEN SPACE AND CONSERVATION**

*The City of Carson is committed to conserving and enhancing its key natural features and resources, 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.*

## **PARKS, RECREATION AND HUMAN SERVICES**

*The City of Carson is committed to expanding the recreational, cultural, and human services facilities and activities within the City by providing commercial recreational uses, affordable recreation opportunities, various services, 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.*

## **AIR QUALITY**

*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.*

### **1.11 ADMINISTERING THE GENERAL PLAN**

It is the intent of the City Council to implement this General Plan by establishing annual planning goals based on the Plan, developing implementing ordinances and regulations, and providing the requisite staff resources. The City Council is also mindful that its intention to implement this General Plan is based on the availability of funding and that some goals, policies, and programs might not be achieved if funds are unavailable.

Once adopted, the General Plan does not remain static. As time goes on, the City may determine that it is necessary to revise portions of the text or add policies or programs to reflect changing circumstances or philosophy.

State law provides direction on how cities can maintain the General Plan as a contemporary policy guide: it requires each planning department to report annually to the City Council on “the status of the plan and progress in its implementation” (Government Code Section 65400[b]). The City Council may respond to the planning department review by setting goals for the coming year. In addition, the City should review the Plan every five years to determine whether or not its content and policies are still appropriate and consistent with community values and conditions.



## **1.12 AMENDING THE GENERAL PLAN**

It is necessary to periodically review, update and revise the General Plan as the City and its resources are developed. State law permits General Plan amendments up to four times per year for each mandatory element (Government Code Section 65358[b]). Optional elements are permitted by State law (Government Code Section 65303), and once adopted, the optional elements carry the same legal weight as the seven mandated elements. However, State law does not specify any limitations regarding the number of times an optional element can be amended per year.

## CHAPTER 2

# LAND USE ELEMENT



# CHAPTER 2

## LAND USE ELEMENT



### **GUIDING PRINCIPLE**

*The City of Carson is committed to providing a sustainable balance of land uses, including residential, commercial, industrial, educational, recreational, and open space. The City is also committed to providing quality development that incorporates 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.*

### **1.0 INTRODUCTION**

To quote the State’s General Plan Guidelines, “The land use element functions as a guide to planners, the general public, and decision makers as to the ultimate pattern of development for the city or county at buildout.”<sup>1</sup>

The Land Use Element has perhaps the broadest scope of the mandatory elements. It plays a central role in correlating all land use issues into a set of coherent development policies. Its objectives, policies, and programs relate directly to the other elements. Although all general plan elements carry equal weight, the Land Use Element is often perceived as being most representative of “the General Plan.” The Land Use Element has

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<sup>1</sup> State of California, *General Plan Guidelines*, Governors Office of Planning and Research, 1998, p.38.



a pivotal role in zoning, subdivision, and public works decisions. The Element's objectives and policies provide a long-range context for those short-term actions.

## **2.0 STATE LAW REQUIREMENTS**

The State of California Government Code Section 65302(a) requires that a General Plan include:

*"... a land use element which designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan which are subject to flooding and shall be reviewed annually with respect to those areas."*

In addition to the State's requirements set forth in the Government Code, above, it has also been legally established that, while the location of a particular land use may be expressed in general terms, a property owner must be able to identify the General Plan designation for his/her parcel from the land use diagram contained in the Land Use Element.

Among the important implementation mechanisms for the Land Use Element are redevelopment, specific plans and the zoning ordinance. The California Government Code requires that a city's zoning ordinance and map be consistent with its general plan land use element and map, and that all provisions of specific plans and redevelopment projects adopted by a city must be consistent with the general plan they implement.

## **3.0 SUMMARY OF FINDINGS**

### **3.1 LAND USE ISSUES**

#### **CARSON VISION**

Prior to beginning work on the Carson General Plan Update, an extensive effort was made to identify citizens' concerns for the future of their City. The effort culminated in the development of the Carson Vision, adopted by the Carson City Council on September 2, 1997. A number of methods were used to identify citizens' concerns in the development of the Carson Vision. These methods included group and confidential interviews, community workshops, a random-sample community survey, meetings with a General Plan Advisory Committee, City Council/Planning Commission Workshops, articles in the Carson Report and press releases.

#### **GENERAL PLAN UPDATE OUTREACH EFFORTS**

Since the adoption of the Carson Vision, new information and concerns have been identified during the General Plan Update process via the preparation of an Existing Conditions Report, interviews and community workshops, meetings with the General



Plan Advisory Committee, City Council/Planning Commission workshops, newsletter articles, and press releases. Issues important to the City are addressed in Section 5.0, *Planning Factors, Goals, Policies, and Implementation*, of this Element.

## **3.2 EXISTING LAND USE DESIGNATIONS AND RELATED PLANS**

### **EXISTING GENERAL PLAN**

The Carson General Plan currently consists of the State-mandated elements, such as Land Use and Circulation, as well as what are termed “optional” elements, such as Historical Preservation and Scenic Highway. All of these elements were adopted in 1981 and 1982, with the exception of the Housing Element, which was last adopted in March 2002, and the Air Quality Element, adopted in 1994.

The Land Use Element identifies land use designations and locations and a general description of the uses permitted in each land use category. The location and extent of land uses for each designation are illustrated on the existing General Plan Map, shown as Exhibit LU-1, *Existing General Plan*. The current General Plan land use designations include:

- Low Density Residential (1-8 dus/ac.),
- Medium Density Residential (9-12 dus/ac.),
- High Density Residential (13-25 dus/ac.),
- General Commercial,
- Regional Commercial,
- Light Industry,
- Heavy Industry, and
- Public Facilities.

### **CITY OF CARSON ZONING ORDINANCE**

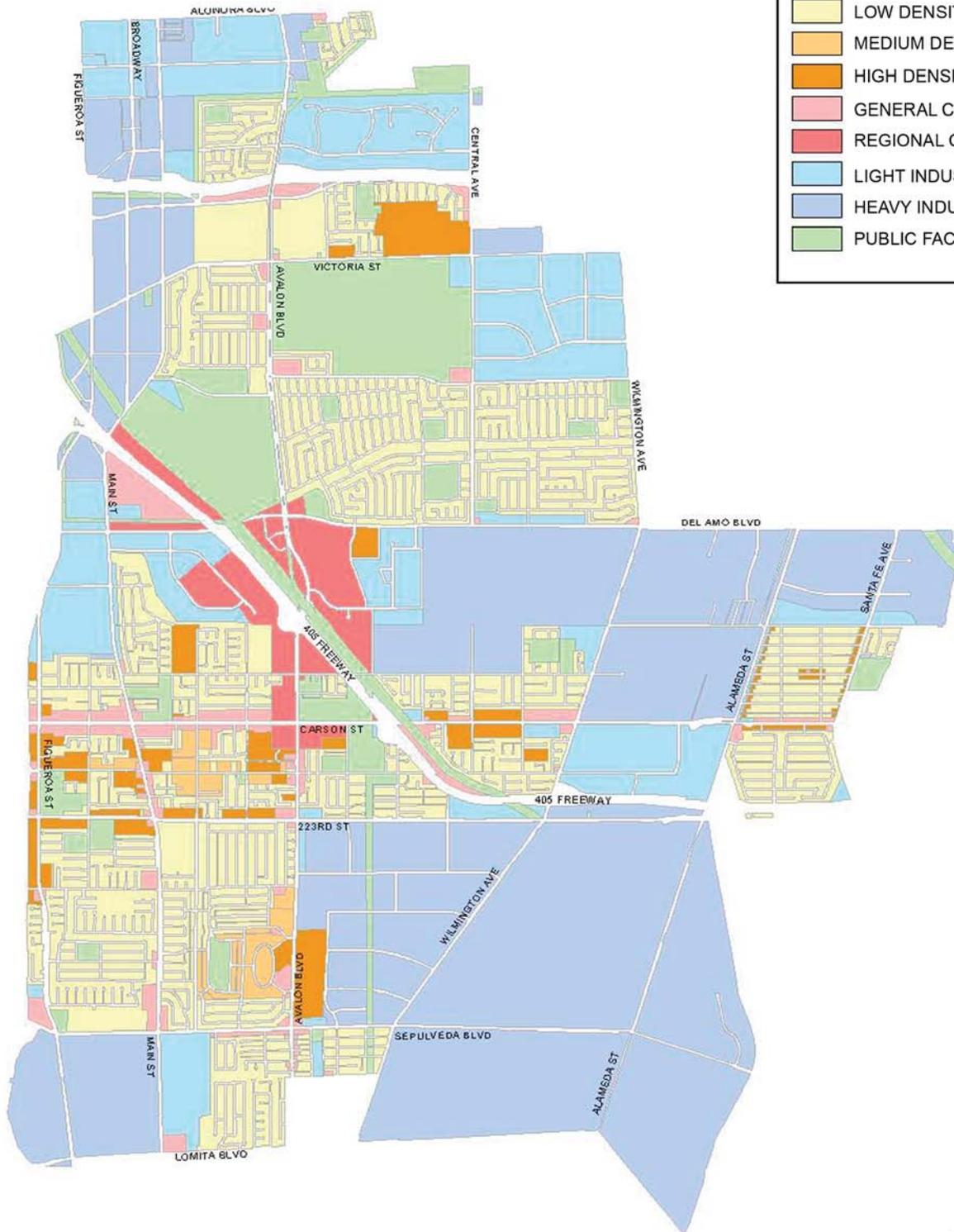
The Zoning Ordinance is the most important implementing tool for the General Plan. The Ordinance text and Zoning Map provide permitted land uses and development standards for each category of land use, consistent with the land use designations on the General Plan. The Ordinance includes the following zoning classifications:

#### Residential Zones

- RS - Residential, Single Family
- RM (8) - Residential, Multiple Dwelling (up to 8 dus/ac.)
- RM (12) - Residential, Multiple Dwelling (up to 12 dus/ac.)
- RM (25) - Residential, Multiple Dwelling (up to 25 dus/ac.)
- RA - Residential, Agriculture



# CARSON GENERAL PLAN



- LOW DENSITY
- MEDIUM DENSITY
- HIGH DENSITY
- GENERAL COMMERCIAL
- REGIONAL COMMERCIAL
- LIGHT INDUSTRIAL
- HEAVY INDUSTRIAL
- PUBLIC FACILITIES



Source: GIS Data, City of Carson, October 2002  
 NOVEMBER 20, 2002

## Existing General Plan

**EXHIBIT LU-1**



### Commercial Zones

- CN - Commercial, Neighborhood Center
- CR - Commercial, Regional Center
- CG - Commercial, General

### Industrial Zones

- ML - Manufacturing Light
- MH - Manufacturing, Heavy

### Open Space Zone and Special Uses

- OS - Open Space
- SU - Special Uses

### Overlay Districts

- Design Overlay
- Organic Refuse Landfill Overlay
- Mixed Use Residential Overlay
- Electronic Marquee Signage Overlay

More detailed descriptions of these designations are given in the *Existing Conditions Report* for the General Plan Update.

## **EXISTING LAND USE AND ZONING EQUIVALENCE**

Table LU-1, *Existing Development By General Plan Land Use Category With Zoning Equivalence*, provides a summary of existing General Plan land use categories and their respective implementing zoning designation(s). Also shown in Table LU-1 is the acreage, density/intensity, and total number of residential units or non-residential square footage associated with each land use category.

## **SPECIFIC PLANS**

In addition to the Zoning designations summarized above, there are five Specific Plan areas in the City of Carson: Dominguez Technology Centre, Dominguez Hills Village, Villages of Brighton and Strathmore (formerly Cambria Pines), Monterey Pines, and Carson Town Center. These areas are governed by detailed land use regulations, unique to each Specific Plan area. A full description of these Plans is given in the *Existing Conditions Report*.



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

Existing General Plan Land Use Category	Existing Zoning	Acreage	Density/Intensity	No. of Units/Sq. Footage
<b>Residential</b>				
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
<b>Commercial</b>				
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
<b>Industrial</b>				
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
<b>Other</b>				
Public Facilities	OS, SU	1,177.3		N/A
<b>Total</b>		<b>10,176.4</b>		<b>24,830 dus*/44,504,470</b>

\* 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.



## **REDEVELOPMENT PLANS**

The City's Redevelopment Agency has adopted three redevelopment project areas: Redevelopment Project Area No. 1, Merged and Amended Redevelopment Project Area (formerly Redevelopment Project Area No. 2 and 3), and Redevelopment Project Area No. 4. Project Area No. 1 consists of approximately 2,044 acres, the Merged and Amended Project Area consists of approximately 1,634 acres, and Project Area No. 4 consists of approximately 1035 acres. The Redevelopment Plans for all Project Areas are available for review at the City of Carson, Economic Development Group.

## **LIVABLE COMMUNITIES PROGRAM**

Through grant funding, the South Bay Cities Council of Governments (SBCCOG) has created a guidebook entitled *Creating Livable Places*. The guidebook, containing background information, a model resolution and reference materials, describes the concepts which create livable communities. It also identifies some of the barriers which impede the creation of such communities and strategies to overcome those barriers. The concepts which are addressed in the guidebook include, among others, integrated communities, design, center focus, public spaces, balanced transportation, diversity, environmental sustainability, public safety, and full community participation.

## **ECONOMIC DEVELOPMENT STRATEGY**

The City Council approved the City of Carson Economic Development Strategy in 1998. This Strategy contains a Mission Statement, goals, objectives and action steps (specifying the time frame within which the action should occur). The primary focus of the Economic Development Strategy, as described in the Strategy's Mission Statement, 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." The Economic Development Strategy is on file at the City of Carson Economic Development Group.

# **4.0 PLANNED LAND USE FOR THE GENERAL PLAN**

## **4.1 DEVELOPMENT OF ALTERNATIVES**

### **AREAS STUDIED FOR PURPOSES OF THE GENERAL PLAN UPDATE**

Because the City of Carson is mature and generally built-out (approximately 9 percent of the City is currently vacant and 8.5 percent is considered underutilized), the focus in developing the Land Use Alternatives was on certain "Study Areas". These areas were identified through the work efforts and public outreach conducted during the development of the Carson Vision and throughout the General Plan Update process.

The alternatives which were developed for purposes of the General Plan Update were prepared with the advice of the General Plan Advisory Committee (GPAC). Land use tours were conducted and significant research and discussion occurred in evaluating appropriate alternatives for each of the targeted Study Areas. The results of these efforts were the development of a Proposed Plan and two variations of that plan. Appendix G,



*Study Area Recommendations*, contains a written summary of the land use and policy recommendations by Study Area and Alternative. The Study Area Location Map, shows the locations of the Study Areas evaluated in terms of land use for the General Plan Update. Appendix H, *General Plan Land Use Alternatives*, contains the alternatives discussion.

After the completion of the GPAC recommendations, additional revisions to the existing land use were suggested and added to the Land Use Plan. Additional study areas were also developed. The Land Use Plan described in this Land Use Element is the plan adopted by the City.

## **4.2 SPHERE OF INFLUENCE**

California Law provides for county agencies called Local Agency Formation Commissions which are charged with determining a sphere of influence for each city in the State. The purpose of these determinations is to provide for the orderly growth and development of urbanizing areas. Once a sphere of influence is designated, the cities can plan and zone the areas and logical annexations to the cities can take place.

Carson's Sphere of Influence is approximately 700 acres of an unincorporated section of Los Angeles County located generally to the northeast of the current City boundaries. It was designated by the Los Angeles County Local Agency Formation Commission in 1973. The unincorporated section is divided into three city spheres of influence—Carson; Compton, to the north; and Long Beach, to the east.

Carson's Sphere is 95 percent developed with industrial uses. There is one mobile home park in the center of the area. The land has no known history of landfill or hazardous waste contaminations.

Annexation proceedings have been initiated by the City in the past but none was completed. The latest effort terminated in 1986 when Carson dropped an attempt to annex 788 acres, including the Rancho Dominguez Seminary and Del Amo Estates Mobile Home Park which are in the Compton Sphere of Influence. Two mobile home park homeowners' associations had requested the annexation.

The Sphere of Influence is included on the Land Use Plan with appropriate land uses designated. These designations reflect the land uses existing.



## 4.3 LAND USE DESIGNATIONS

### RESIDENTIAL LAND USES

This Land Use Element classifies the residential areas of the City into Low, Medium and High Density residential land use designations. A description of each residential land use designation and its equivalent zoning follows.

#### Low Density Residential (LDR)

“Low Density Residential” includes all residential areas composed of single-family detached dwellings and other development considered harmonious with such low density residential development. The maximum density allowed is 8 dwelling units per acre (du/ac). This land use category will be implemented by the RS - Residential, Single-Family; RA - Residential Agriculture; and RM(8) - Residential Multiple Family zones.

#### Medium Density Residential (MD)

“Medium Density Residential” is intended to provide for multiple dwelling units, single-family attached and detached dwellings, and other development considered harmonious with such medium density residential development. Residential densities of up to 12 du/ac are allowed. This land use category will be implemented by the RM(12) - Residential Multiple Family zone.

#### High Density Residential (HD)

“High Density Residential” areas are intended to provide for multiple dwelling units, combinations of multiple- and single-family residential units, and other development considered harmonious with such high density residential development. Residential densities of up to 25 du/ac are allowed. This land use category will be implemented by the RM(25) - Residential Multiple Family zone.

#### Urban Residential (UR)

“Urban Residential” is intended to provide for multiple dwelling units and a range of commercial uses, including retail, offices, hospitals, and private community gathering facilities. Residential densities up to 65 du/ac are allowed. The allowable density/intensity for mixed-use development will be determined using an allowable range of FAR (1.0 to 4.0). This land use category will be implemented with a Specific Plan zone.

### COMMERCIAL LAND USES

Commercial land uses encompass those retail and service establishments which are planned to serve neighborhood, city-wide or regional clientele. Below is a description of each commercial land use designation, a discussion of floor-to-area ratios (FARs), and the equivalent zoning for each designation.



### **General Commercial (GC)**

This “General Commercial” designation includes both general and neighborhood commercial land uses, which 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.

This land use designation is implemented by the CN - Commercial, Neighborhood and CG - Commercial, General zones.

### **Regional Commercial (RC)**

The “Regional Commercial” category includes uses intended to serve a broad population base and offer a wide range of services to both the community and the region. Businesses in this designation include major department stores, specialty shops, other retail and service uses, automobile and other vehicle dealerships, and hotels and motels. Regional Commercial is intended to provide for the City’s primary regional shopping center and its peripheral areas. Although 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.

This land use designation is implemented by the CR - Commercial, Regional zone.

### **Office Park (OP)**

The Office Park designation is intended to provide for the development of professional/administrative offices and personal services rather than commodities. Site development regulations and performance standards are designed to make such uses relatively compatible with residential uses. The Office Park is intended to provide a harmonious transition to residential development and neighborhoods by: 1) providing high quality and attractive buildings that are compatible with existing and anticipated development in the area, 2) providing open space, quality landscaping, and berms which achieve a park-like setting, and 3) including buffering of parking, loading docks, and other similar functions.

A new zoning designation will be developed to implement this new General Plan land use category.

### **INDUSTRIAL LAND USES**

Industrial areas are intended to accommodate the manufacturing, processing, warehousing and distribution functions of the community. Below is a description of each of the three industrial designations and the equivalent zoning for each designation.



## **Business Park (BP)**

The Business Park designation is intended to provide an attractive, high quality industrial/business park primarily for offices, light manufacturing and assembly, and research and development. Warehousing of a small scale (for example, no more than one ground level loading door per x square feet of building) in conjunction with a permitted primary use will be allowed. It may contain a very limited amount of supportive retail and service uses, when those uses are of a scale and design providing support only to the needs of businesses and their employees in the immediate industrial area. These are two scales of Business Park designated in the General Plan: one for large properties that can be planned and constructed as planned industrial/business parks, and two, for small properties that can have adequate landscaping and small scale uses. The small scale BP could allow churches and other institutional uses with a conditional use permit.

Both scales of Business Park are intended to provide harmonious transition to residential development and neighborhoods by: 1) conducting all business activities and essentially all storage inside buildings, 2) consisting of low profile, high quality, and attractive buildings that are compatible with existing and anticipated development in the area, 3) providing open space, quality landscaping, and berms that achieve a park-like setting, and 4) including buffering of parking, loading doors, and other similar functions. The maximum allowable FAR is 0.5, and the average FAR which will ultimately be built out for this land use is expected to be approximately 0.42.

Two zoning designations will be developed to implement this new General Plan land use category. The Zoning Ordinance should provide parameters for the size and intensity of buildings and uses.

## **Light Industrial (LI)**

The Light Industrial designation is intended to provide for a wide variety of industrial uses and to limit those involving hazardous or nuisance effects. Typical uses are manufacturing, research and development, wholesaling, and warehousing. It may contain a very limited amount of supportive retail and services uses, when those uses are of a scale and design providing support only to the needs of businesses and their employees in the immediate industrial area. Uses identified as not exceeding Group 3, businesses handling acutely or highly hazardous materials, in the Hazardous Materials Disclosure Program pursuant to the Los Angeles County Fire Code would be permitted with proper safeguards. Performance and development standards are intended to allow a wide range of uses as long as those uses will not adversely impact adjacent uses. Any exterior storage and limited operations must be fully screened from any public view, and residential and commercial uses. The maximum allowable FAR is 0.5, and the average FAR which will ultimately be built out for this land use is expected to be approximately 0.42.

This land use designation is implemented by the ML – Manufacturing, Light zone.

## **Heavy Industrial (HI)**

The Heavy Industrial designation is intended to provide for the full range of industrial uses that are acceptable within the community, but whose operations are more intensive and may have nuisance or hazardous characteristics, which for reasons of health, safety,



environmental effects, or general welfare, are best segregated from other uses. Extractive, primary processing, construction yards, rail operations, truck yards and terminals, and food processing industries are typical of this designation. Uses identified as Group 4 or 5, businesses handling acutely or highly hazardous materials in the Hazardous Materials Disclosure Program pursuant to the Los Angeles County Fire Code would be permitted with proper safeguards. Outdoor storage operations may be permitted, but extensive outdoor uses may require a conditional use permit. Performance standards still must be met, but the development standards are the minimum necessary to assure safe, functional, and environmentally sound activities. Any expansion of existing heavy industrial uses adjacent to residential must include buffered setback areas to the extent feasible. The designation may contain a very limited amount of supportive retail and service uses, when those uses are of a scale and design providing support only to the needs of businesses and their employees in the immediate industrial area. The maximum allowable FAR is 1.0, and the average FAR upon ultimate buildout is expected to range between 0.5 and 0.7.

This land use designation is implemented by the MH – Manufacturing, Heavy zone.

### **OPEN SPACE USES**

The two open space designations under the Plan include “General Open Space” and “Recreational Open Space”.

#### **General Open Space (GOS)**

“General Open Space” 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, the Blimp Port, utility easements, and like uses are found within this land use category.

This land use designation will be implemented by the OS - Open Space zone.

#### **Recreational Open Space (ROS)**

The “Recreational Open Space” 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 other similar uses are allowed in this category.

A more specific zoning designation, than the present OS - Open Space, will be developed to implement this new land use category.

### **OTHER LAND USES**

#### **Mixed Use (MU)**

The “Mixed Use” designation provides opportunities for mixtures of commercial, office, business park/limited industrial and/or residential uses in the same building, on the same parcel, or within the same area. There would be two MU categories—MU-R would allow for commercial and residential uses but not business park/limited industrial and MU-BP would allow for commercial and business park/limited industrial uses but not residential.



## OTHER LAND USES

### Mixed Use (MU)

The “Mixed Use” designation provides opportunities for mixtures of commercial, office, business park/limited industrial and/or residential uses in the same building, on the same parcel, or within the same area. There would be two MU categories—MU-R would allow for commercial and residential uses but not business park/limited industrial and MU-BP would allow for commercial and business park/limited industrial uses but not residential.

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 project. The residential densities will also vary, but are expected to be in the Medium to High Density ranges, but may not exceed 33 du/ac. Below is a description of expected square footage and number of dwelling units for each of the Mixed Use areas:

- The Carson Street Mixed Use Corridor, is designated to be MU-R, with a combination of residential and general 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. No business park/limited industrial uses would be allowed.
- All areas southwest of I-405 and north of Torrance Boulevard, and the Torrance Lateral Channel are designated MU-BP, with a combination of regional commercial and business park/limited 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. No residential uses would be allowed.
- South Bay Pavilion site is designated MU-R, with a combination of regional commercial and residential uses. It is anticipated that it would be compatible with the existing commercial uses to add some high density residential to the eastern and southern portions of the site in place of some of the commercial floor area. No business park/limited industrial uses would be allowed.
- The area located south of Sepulveda Boulevard, generally between Marbella Avenue and Avalon Boulevard, is designated MU-R with a combination of residential and general commercial uses.
- The area at the northeast corner of Central Avenue and Victoria Street, part of the Dominguez Hills Village Specific Plan, is designated MU-R for a combination of residential and general commercial uses.



### **Industrial/Commercial Uses Buffer (\*)**

The Industrial/Commercial Uses Buffer symbol has been added to the Land Use Plan to indicate those areas of industrial or commercial property, generally a 100-foot strip abutting the property line, which requires structures and uses to be set back and/or walls and landscaping to be provided in order to buffer or protect the residential uses from the impacts of the industrial or commercial uses.

### **Public Facilities (PF)**

This land use designation includes a broad range of civic, governmental, institutional, and utility related uses in Carson. Within this category are schools, public buildings and associated grounds, and California State University at Dominguez Hills.

It is intended that a new zoning category be created to implement the Public Facilities land use designation.

## **4.4 LAND USE PLAN**

The land use plan adopted in this Land Use Element, shown in Exhibit LU-2, *Land Use Plan (As Adopted October 11, 2004)*, and as amended in Exhibit LU-3, *Land Use Plan (As Amended December 2006)*, is the product of a study of the alternatives prepared. This land use plan, derived from that study, as revised, is that which the City has determined best reflects the goals and Guiding Principles of the Carson Vision.

### **LAND USE SUMMARY**

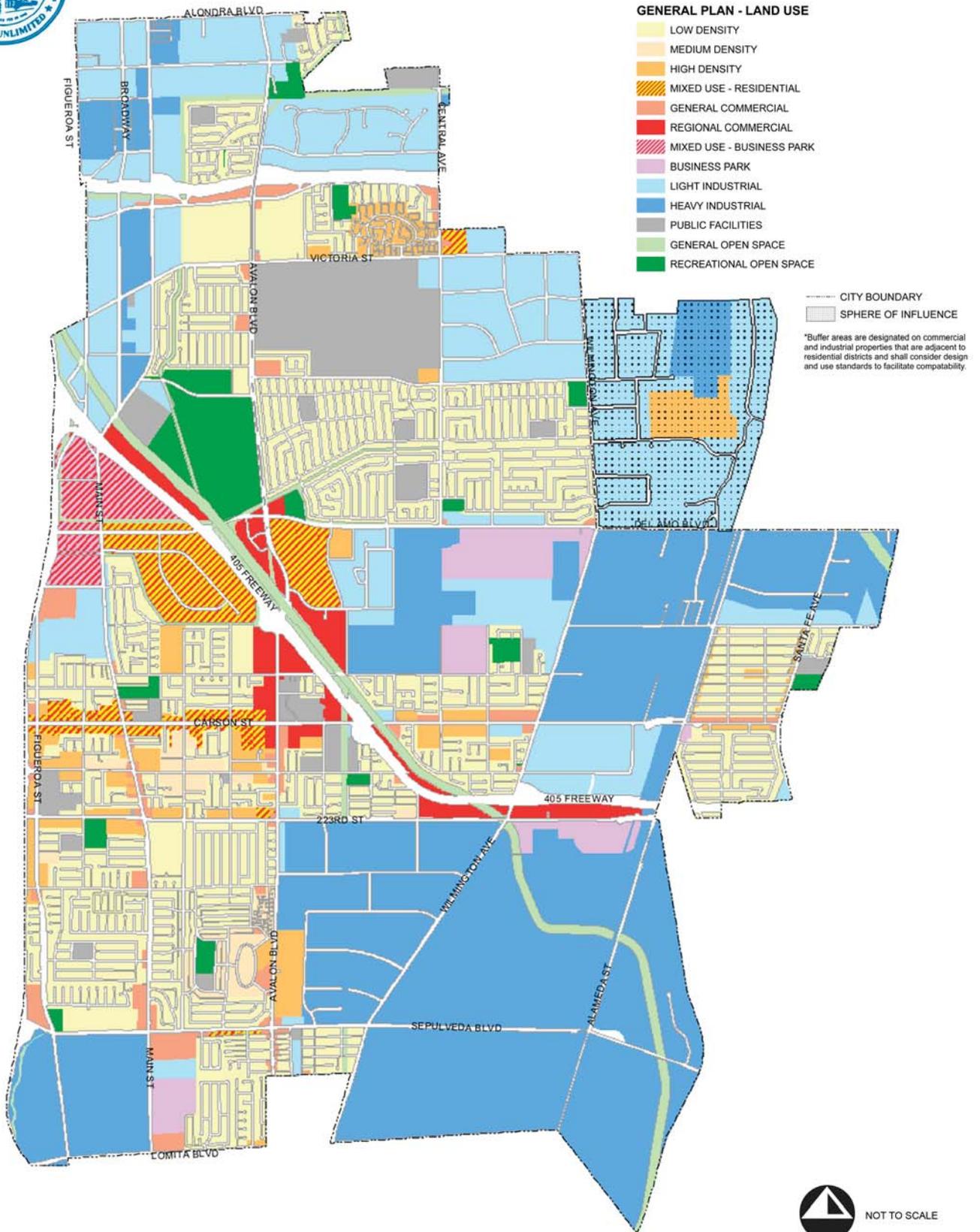
Table LU-2, *Land Use Summary*, shows the amount of acreage in each land use category under the Land Use Plan. Because the City is largely built out, the Plan reflects the fact that most of the land in the City is already devoted to industrial and low density residential uses. However, two new categories of Mixed Use have been added to provide for the new mixed use projects described earlier in this Element.

The square footage associated with all commercial uses is expected to increase by almost 3.7 million square feet over the next 20 years. It should be noted that the General and Regional Commercial land use categories are projected to decrease in square footage and commercial in Mixed Use is anticipated to increase. Sites such as the Dominguez Golf Course and the Cal Compact site are located in prime areas for commercial development.

Under the Land Use Plan there will be a net increase of almost 11.25 million square feet of industrial land uses in the City over the next 20 years.



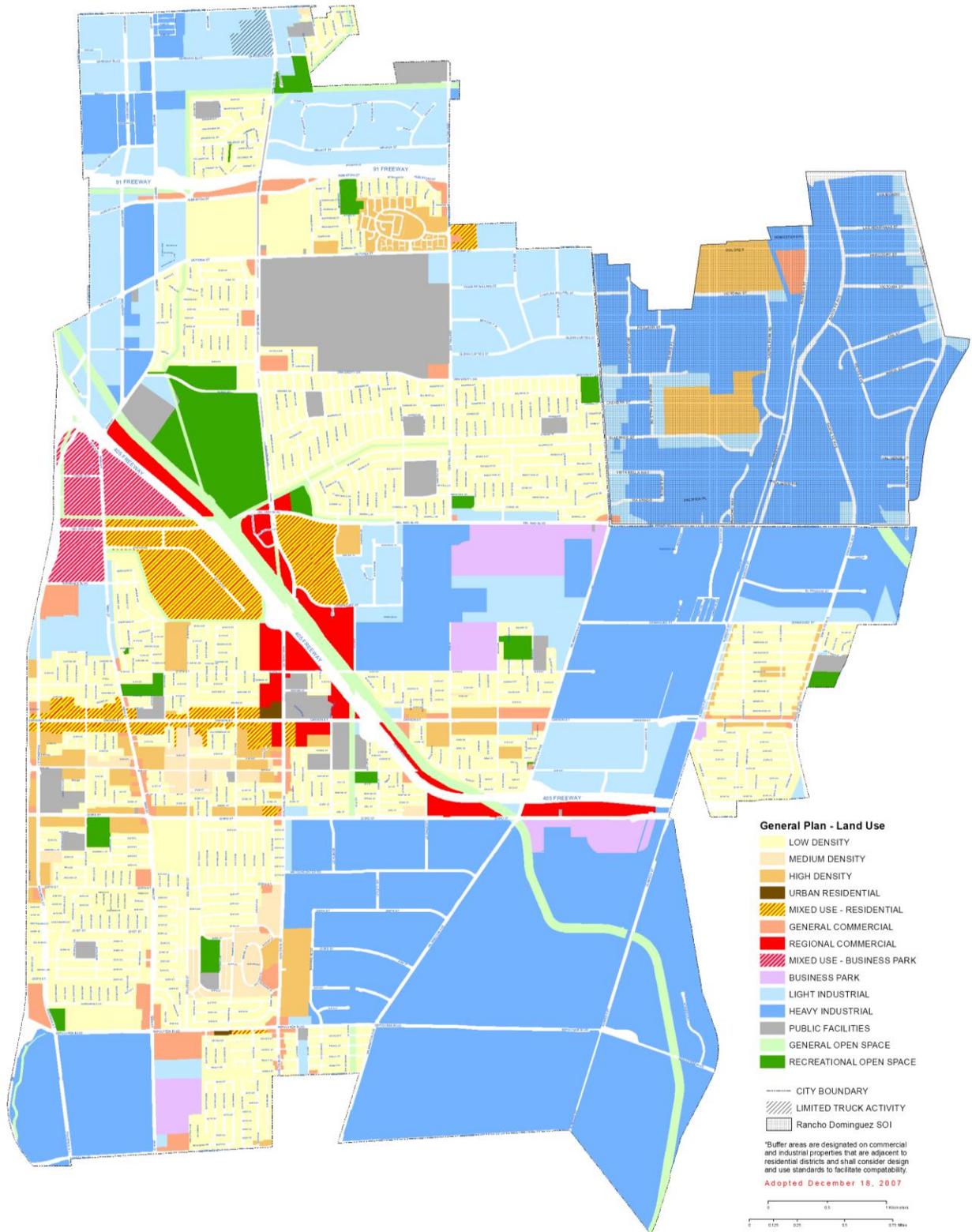
# CARSON GENERAL PLAN



Source: GIS Data, City of Carson  
 OCTOBER 11, 2004

## Land Use Plan (As Adopted October 11, 2004)

**EXHIBIT LU-2**



**LAND USE PLAN (AS AMENDED JUNE 2015)**



Table LU-2

Land Use Summary

Land Use	Acreages
<b>Residential</b>	
Low Density	2,463.2 AC.
Medium Density	129.6 AC.
High Density	347.1 AC.
Urban Residential	6.7 AC.
<b>Commercial</b>	
General Commercial	220.1 AC.
Regional Commercial	223.3 AC.
<b>Industrial</b>	
Business Park	290.7 AC.
Light Industrial	2,108.6 AC.
Heavy Industrial	2,648.0 AC.
<b>Other</b>	
Mixed Use – Residential	155 AC
Mixed Use – Business Park	302.3 AC
Recreational Open Space	314.7 AC.
General Open Space	225.6 AC.
Public Facilities	698.1 AC.
<b>Total</b>	<b>10,133.0 AC.</b>

More detailed information is contained in Appendix G, *Study Area Recommendations*, and Appendix A, *Existing and Buildout Land Use Projections*.

## 5.0 PLANNING FACTORS, GOALS, POLICIES AND IMPLEMENTATION

The acronyms listed below are used for the implementation measures:

- RA/D: Responsible Agency/Division
- FS: Funding Source
- TF: Time Frame

### ISSUE: ADAPTIVE REUSE OF “BROWNFIELDS”

*There are a number of sites in Carson with contaminated soils and groundwater, including not only the 14 former landfills but other properties; such uses should be remediated.*

**Goal:** LU-1: Productive reuse of “brownfield” sites.

**Policies:** LU-1.1 Continue to explore the opportunities associated with the establishment of 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 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, the prospective 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.*

**Implementation Measures:**

- LU-IM-1.1: Systematically identify contaminated sites and prioritize those sites with the most redevelopment potential. Develop remediation alternatives for those sites with the most redevelopment potential. Find resources to prepare each site for productive and desirable reuse. *(Implements LU-1.1)*
  - RA/D:** Planning, Economic Development, City Manager’s Office
  - FS:** General Fund, State and Federal Funds/Grants
  - TF:** Ongoing, until all contaminated sites are redeveloped
- LU-IM-1.2: Consider lobbying for legislation which will allow the City to issue bonds to finance the development of brownfields. Said bonds to be paid off through tenant fees within the landfill improvement district(s). *(Implements LU-1.2)*
  - RA/D:** Planning, Economic Development, City Manager’s Office
  - FS:** General Fund, State and Federal Funds/Grants
  - TF:** Ongoing, until all contaminated sites are redeveloped
- LU-IM-1.3: Continue to monitor federal, state and regional programs and funding sources to include: HUD’s and EPA’s Brownfields Economic Development Initiative, the Department of Transportation’s Brownfields Revitalization Initiative, the IRS’ and Department of Treasury’s Environmental Cleanup Cost Brownfields Tax Deduction, and similar programs. *(Implements LU-1.3)*



**RA/D:** Planning, Economic Development, City Manager’s Office  
**FS:** General Fund, State and Federal Funds/Grants  
**TF:** Ongoing, until all contaminated sites are redeveloped

LU-IM-1.4: City Staff shall establish a task force as projects are proposed at brownfield sites, to include representatives from the City and State, developer, consultant team, and if necessary, county and/or federal representatives. Each task force will ensure that permits are secured in a timely manner, financing is in place and new sources of funding are identified, environmental compliance/remediation of the site is achieved, and that state and local approval processes are coordinated. *(Implements LU-1.4)*

**RA/D:** Planning, Economic Development, City Manager’s Office  
**FS:** General Fund, State and Federal Funds/Grants  
**TF:** Ongoing, until all contaminated sites are redeveloped

LU-IM-1.5: Encourage the Federal government to enact the following measures:

- Liability protection provided to innocent parties involved in brownfield redevelopment,
- Tax incentives provided to attract potential investors to brownfield sites,
- Increased federal program resources to assist cities with site assessment, cleanup, redevelopment, infrastructure improvements, and related needs,
- Increased regulatory flexibility and latitude in the use of federal resources to address brownfields needs of cities, and
- Other similar measures. *(Implements LU-1.5)*

**RA/D:** Planning, Economic Development, City Manager’s Office  
**FS:** General Fund, State and Federal Funds/Grants  
**TF:** Ongoing, until all contaminated sites are redeveloped



**ISSUE: EFFECTIVE DEVELOPMENT OF UNDERUTILIZED PROPERTIES AND REDEVELOPMENT OF THOSE PROPERTIES WHICH DETRACT FROM THE COMMUNITY**



*Abandoned buildings should be rehabilitated or removed. It is important that incompatible and non-conforming uses, such as scrap yards, which detract from the community be removed or relocated.*

**Goal:** LU-2: Rehabilitation and/or removal of abandoned buildings and facilities.

**Policies:** LU-2.1 Aggressively enforce the Property Maintenance Ordinance in order to maintain properties in transition, abandoned residential, commercial and industrial buildings and properties.

LU-2.2 Develop an incentive rehabilitation program to complement mandatory code enforcement and property maintenance programs.

**Implementation Measures:**

LU-IM-2.1: Use code enforcement to require owners of all abandoned buildings and/or structures that pose safety hazards to adhere to applicable zoning and building code standards. *(Implements LU-2.1)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-2.2: Examine the potential to allow the City to fine those parties not in compliance with the City’s Ordinance. *(Implements LU-2.1 and 2.2)*

**RA/D:** Planning  
**FS:** General Fund and property owner fines  
**TF:** Ongoing

LU-IM-2.3: In the incentive rehabilitation program, explore opportunities to provide low-interest loans and other incentives to assist property owners in the redevelopment and/or rehabilitation of their properties. *(Implements LU-2.2)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing



**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.

**Implementation Measures:**

LU-IM-3.1: Use code enforcement to require owners of non-conforming uses to adhere to the Non-Conforming Use Ordinance. *(Implements LU-3.1)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

**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 on the revitalization of the Carson Street Corridor and the Northwest Industrial Corridor, and to other appropriate areas.

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

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



**Implementation Measure:**

LU-IM-4.1: Require a fiscal impact analysis for all new commercial and industrial projects in excess of ten acres to ensure that governmental service costs are covered by anticipated project revenues or that a finding of special circumstance is applied. *(Implements LU-4.1 through 4.5)*

**RA/D:** Planning  
**FS:** Developer  
**TF:** Ongoing



**ISSUE: EXPANSION OF THE COMMERCIAL BASE**

*Commercial opportunities lacking in the City should be sought, including quality restaurants and retail and commercial recreation choices.*

**Goal:** LU-5: Maximize the City’s market potential in order to enhance and retain shopping and entertainment opportunities to serve the population, increase revenues to the City, and provide new employment opportunities.

- Policies:**
- LU-5.1 Coordinate Redevelopment and Planning activities and resources to maximize commercial opportunities.
  - LU-5.2 Implement and expand strategies to market, attract, and/or retain retail commercial areas and encourage businesses to participate.
  - LU-5.3 Identify unique economic opportunities, such as niche markets, that will allow the City to capitalize on its location, its cultural diversity, and the tourism industry in the region.
  - LU-5.5 Utilize redevelopment planning and the City’s Capital Improvement Program to improve infrastructure and streetscapes 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.*



**Implementation Measures:**

LU-IM-5.1: Develop strategies to focus development in targeted areas, i.e., Carson Street, 223<sup>rd</sup> Street Corridor, Cal Compact Site (157-acre landfill), and other important areas within the City. These strategies should, at a minimum address: the amount and location of land designated for such uses, target areas, and tools necessary to implement such strategies. *(Implements LU-5.1 and 5.2)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund, Development Fees  
**TF:** Ongoing

LU-IM-5.2: Periodically evaluate which retail categories are experiencing leakage. And approach existing retailers within these categories (specifically the higher-scale restaurants and retailer) and encourage their relocation to, or expansion in, Carson. *(Implements LU-5.1 through 5.4)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund, Development Fees  
**TF:** Ongoing

LU-IM-5.3: Encourage higher-scale restaurants to locate in clusters in areas targeted for specialty retail. *(Implements LU-5.1 through 5.4)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-5.4: Monitor development of “catalyst” land uses (e.g., hotels, regional office space, etc.) to identify “follow-on” development opportunities for related land uses (e.g., entertainment and recreation facilities to serve hotel guests and business hotels to serve office users). *(Implements LU-5.1 through 5.4)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund, Development Fees  
**TF:** Ongoing

LU-IM-5.5: Continue to coordinate with the Chambers of Commerce, Los Angeles County economic development groups, and other business associations to retain and attract businesses. *(Implements LU- 5.1 through 5.4)*

**RA/D:** Economic Development  
**FS:** General Fund, Development Fees  
**TF:** Ongoing



LU-IM-5.6: Encourage support services as part of industrial/ commercial development (i.e., child care, convenience shopping, personal services, restaurants, etc.). *(Implements LU-5.1, 5.2 and 5.4)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund, Development Fees  
**TF:** Ongoing

LU-IM-5.7: Use redevelopment tools to assemble land, assist development and provide for on-going area improvement. *(Implements LU-5.1 through 5.6)*

**RA/D:** Economic Development  
**FS:** Redevelopment Fees  
**TF:** Ongoing

LU-IM-5.8: Encourage specialty retail development to concentrate in targeted areas of the City to enable “critical mass” thresholds of such uses to be established. *(Implements LU-5.2 through 5.4)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-5.9: Target, through the Capital Improvement Program, those areas and/or structures in most need of improvement, focusing on targeted redevelopment project areas. *(Implements LU-5.5 and 5.6)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund, Redevelopment funds  
**TF:** Ongoing

LU-IM-5.10: Provide informational material to the owners of properties in targeted commercial areas identifying the types of assistance available and work with them in the upgrading of their properties. *(Implements LU- 5.6)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund, Redevelopment funds  
**TF:** Ongoing

**ISSUE: A BALANCE OF USES**

*A land use plan which provides a balance of residential, commercial, industrial, educational, recreational and civic facilities which meet the needs of the citizens of Carson.*



**Goal:** LU-6: A sustainable balance of residential and non-residential development and a balance of traffic circulation 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 sustainable land use balance through 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.

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 Manage truck-intensive uses.



**Implementation Measures:**

LU-IM-6.1: Review the General Plan and Land Use Map to identify the effect of land development and uses in the community on City revenue and costs of providing public facilities and services. *(Implements LU-6.1, 6.4, 6.6, 6.7, and 6.8)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Annually

LU-IM-6.2: Provide incentives for desired commercial and industrial uses. *(Implements LU-6.1, 6.2 and 6.6)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-6.3: Coordinate land use and circulation patterns to ensure proper circulation capacity and infrastructure. *(Implements LU-6.1, 6.2, and 6.8)*

**RA/D:** Planning, Public Works  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-6.4: Promote a variety of housing types and affordability to meets the development goals of the Housing Element, and provide needed housing opportunities to support employment growth. *(Implements LU-6.1, 6.2, and 6.5)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-6.5: Periodically review the General Plan intensities and densities of development. This review should examine market demand and other conditions to confirm the appropriateness of these densities and intensities. When necessary, establish minimum land use density requirements. *(Implements LU-6.1, 6.3, and 6.6 through 6.8)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund  
**TF:** Annually, or as necessary on a project-by-project basis

LU-IM-6.6: Conduct systematic monitoring of the impact and intensity of development in Carson and areas around the City to ensure that affected public agencies can provide necessary



facilities and services in support of that development. *(Implements LU-6.1, 6.4, 6.6, and 6.8)*

**RA/D:** Planning, Public Works  
**FS:** General Fund, Development fees

LU-IM-6.7: Review carefully any zone change and/or General Plan Amendment to permit development or modify intensity. Factors to be considered include, but are not limited to: the maximum intensity allowed pursuant to the General Plan; circulation patterns; environmental constraints; and compatibility with surrounding land uses. *(Implements LU-6.7 and 6.8)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing on a project-by-project basis

LU-IM-6.8: Analyze the Zoning Ordinance for truck-intensive uses, determine how such uses may impact other land uses, traffic, and truck routes, and make changes as necessary to the uses permitted and the review processes required. Such changes shall include a jobs and fiscal impact report to determine affects of the proposed changes to uses permitted and review process required. *(Implements LU-6.8)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2003-05



**ISSUE: INCOMPATIBLE LAND USES**

*Incompatible land uses immediately adjacent to one another, such as residential and industrial uses, may significantly hinder the health of a community. Uses should be appropriately buffered or incompatibilities addressed through redesignation of uses in the area.*

**Goal:** LU-7: Adjacent land uses that are compatible with one another.

**Policies:** LU-7.1 Periodically review, and amend if necessary, the City’s Zoning Ordinance to ensure the compatibility of uses allowed within each zoning district.

LU-7.2 Locate truck intensive uses in areas where the location and circulation pattern will provide minimal impacts on residential and commercial uses.

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



- LU-7.4 Through the discretionary review process, ensure that the siting of any land use which handles, generates, and/or transports hazardous substances will not negatively impact existing sensitive receptor land uses.
- LU-7.5 Monitor existing uses, and carefully review all new proposals to expand intensive commercial and industrial uses.
- LU-7.6 Coordinate with adjacent landowners, cities and the County in developing compatible land uses for areas adjacent to the City's boundaries.
- LU-7.7 Coordinate with California State University at Dominguez Hills in the planning of its property to ensure compatible land uses.

**Implementation Measures:**

- LU-IM-7.1: Amend the Zoning Ordinance to accommodate the Office Park, Business Park, Mixed Use, General Open Space, and Recreational Open Space land use designations. And amend the Zoning Map to be consistent with the adopted General Plan Map. In addition, review and amend the Zoning Ordinance to: clarify permitted and conditionally permitted uses in all districts (i.e., churches and other uses); and to address non-conforming uses. *(Implements LU-7.1)*
  - RA/D:** Planning
  - FS:** General Fund
  - TF:** Within one year
- LU-IM-7.2: Establish zoning standards that properly designate uses appropriate for Office Park, Business Park, Light Industrial and Heavy Industrial areas. *(Implements LU-7.1)*
  - RA/D:** Planning
  - FS:** General Fund
  - TF:** Within one year, and periodically updated
- LU-IM-7.3: Where a discretionary review may be required, address compatibility issues (e.g., maneuverability of trucks on site, scheduling and hours of operation, visual screening, noise, etc.). *(Implements LU-7.2)*
  - RA/D:** Planning
  - FS:** Development
  - TF:** Ongoing
- LU-IM-7.4: Review and amend, as necessary, the Zoning Ordinance to provide consistency with new State legislation and court decisions. *(Implements LU-7.1 and 7.2)*



**RA/D:** Planning  
**FS:** General Fund  
**TF:** Annually

LU-IM-7.5: Review and amend, as necessary, the City’s Subdivision Ordinance to provide consistency with new State legislation and court decisions, and to make other desired changes to provisions of the ordinance. *(Implements LU-7.1 and 7.2)*

**RA/D:** Planning, Public Works  
**FS:** General Fund  
**TF:** Annually

LU-IM-7.6: Use buffers such as the Business Park land use designation and the Commercial Uses/Industrial Buffer symbol between more intensive industrial uses and residential uses. Require that commercial and industrial development which adjoins residential uses be adequately screened and buffered from the residential neighborhood(s). *(Implements LU-7.4 and 7.6)*

**RA/D:** Planning  
**FS:** General Fund and Development Fees  
**TF:** Annually

LU-IM-7.7: Utilize the site development permit process and the California Environmental Quality act in the review of proposed development projects to promote compatibility and minimize environmental impacts. Where uses are marginally compatible, require a Conditional Use Permit and consider special mitigation measures. *(Implements LU-7.3 through 7.8)*



**RA/D:** Planning  
**FS:** Development Fees  
**TF:** Ongoing

LU-IM-7.8: Continue to enforce the Zoning and other ordinances to achieve the desired level of regulation. *(Implements LU- 7.3 through 7.8)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-7.9: Develop landscape requirements for public and private development projects to promote greater visual and functional compatibility with residential development. *(Implements LU-7.4 and 7.6)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Within two years



**ISSUE: MIXED USE DEVELOPMENTS**

*There is a need for mixed use developments which provide a variety of uses, including residential, retail, office, limited industrial, and recreational. Such projects should provide an integrated development theme, quality design, easy access to public transportation, and a safe environment.*

**Goal:** LU-8: Promote mixed use development where appropriate.

**Policies:** LU-8.1 Amend the Zoning Ordinance to provide for 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 promote mixed use projects at appropriate sites within this area.

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

**Implementation Measures:**

LU-IM-8.1: Amend the Zoning ordinance to include those Mixed Use areas identified on the General Plan Land Use plan, specifically:

- The area formerly occupied by Cal Compact (157-acre landfill), along the 405 Freeway; uses to be permitted



include a mix of Regional Commercial, Light Industrial and Business Park.

- The Carson Street Corridor between Avalon Boulevard and the western City Limits; uses to be permitted include a mix of General Commercial, and Medium and High Density Residential.
- The area formerly occupied by the Samerika Hall northwest of the intersection of Avalon Boulevard and 223<sup>rd</sup> Street; uses to be permitted include a mix of General Commercial, and Low, Medium and/or High Density Residential.
- The South Bay Pavilion site; uses to be permitted include Regional Commercial and Medium and High Density Residential.

*(Implements LU-8.1 through 8.3)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Within one year



**ISSUE: PROPERTY ENHANCEMENT**

*Property maintenance is important in Carson. In both residential neighborhoods and non-residential areas, focus should be placed on property maintenance and improvement.*

**Goal:** LU-9: Eliminate all evidence of property deterioration throughout Carson.

- Policies:**
- LU-9.1 Aggressively enforce the City’s codes.
  - 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 evidence of vandalism, wear and deterioration.
- LU-9.8 Maintain City properties in compliance with applicable regulations and adhere to design and maintenance standards as a model for private development.

**Implementation Measures:**

LU-IM-9.1: Strengthen the City’s code enforcement program. To this end, conduct windshield surveys in order to identify zoning and code enforcement infractions on all times of day and days of the week. Also, consider the development of a program by which fines are imposed if properties are repeatedly not maintained. *(Implements LU-9.1)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-9.2: Develop firm and fair code enforcement policies understood and supported by residents and business owners. *(Implements LU-9.1)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-9.3: Adopt a property maintenance ordinance. *(Implements LU-9.1)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Within two years

LU-IM-9.4: Implement the housing rehabilitation policies adopted in the Carson Housing Element. *(Implements LU-9.1 through 9.4)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-9.5: In areas where deferred maintenance is visible, assist with:

- Maintenance loans or grants,
- Rehabilitation loans or grants,
- Tool banks, and/or
- Instructional programs in property maintenance skills and techniques. *(Implements LU-9.2 and 9.4)*



**RA/D:** Planning  
**FS:** General Fund, State and Federal monies  
**TF:** Ongoing

LU-IM-9.6: Support and expand public programs, such as Neighborhood Pride and the Homes and Gardens Improvement Programs. To this end, publicize the loans and grants available, as well as the achievements of neighborhoods and non-residential areas which have improved maintenance and appearance. *(Implements LU-9.2 through 9.4)*

**RA/D:** Planning, Public Information, Public Services  
**FS:** General Fund, State and Federal monies  
**TF:** Ongoing

LU-IM-9.7: Develop a design and improvement plan based on the City Capital Improvement Plan including strengthened landscaping, identification graphics, and other physical improvements to enhance major public thoroughfares and activity areas. *(Implements LU-9.3)*

**RA/D:** Planning, Public Works  
**FS:** General Fund  
**TF:** Within two years, and annually updated with budget process

LU-IM-9.8: Review and amend the City’s Zoning Ordinance to include the screening and landscaping of commercial and/or industrial properties which have been abandoned. *(Implements LU-9.5)*

**RA/D:** Planning  
**FS:** General Fund and Development Fees  
**TF:** Within two years

LU-IM-9.9: Review and amend the City’s Zoning Ordinance to address the permanent and effective screening of heavy industrial uses such as outdoor storage yards, pallet yards, salvage yards, auto dismantling yards, and similar uses. *(Implements LU-9.5)*

**RA/D:** Planning  
**FS:** General Fund and Development Fees  
**TF:** Within two years



**ISSUE: ALAMEDA CORRIDOR**

*While there are distinct advantages to the Alameda Corridor, there are also disadvantages. Traffic, noise and economic impacts to businesses and residential neighborhoods immediately adjacent are among the primary issues.*



**Goal:** LU-10: Development along the Alameda Corridor which is beneficial to residents, property owners, businesses, and 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.

**Implementation Measures:**

LU-IM-10.1: Prepare a special study for those area(s) adversely impacted by the development of the Corridor, specifically that area east of the Alameda Corridor, between Dominguez Street and the southern boundary of the City. Provide appropriate mitigation for the impacts associated with the Corridor on the neighborhood. *(Implements LU-10.2)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Within two years

*See also LU-IM-85.*

LU-IM-10.2: Develop a program which specifically identifies and markets the benefits of the Alameda Corridor within the City of Carson. *(Implements LU-10.3)*

**RA/D:** Economic Development, Development Services  
**FS:** General Fund  
**TF:** Within two years



**ISSUE: DEVELOPMENT OF A “SIGNATURE PROJECT”**

*It is important to develop a focal point within the community, such as a “Main Street” along the Carson Street Corridor or a “Signature Project” along the I-405 Freeway. Quality retail and restaurant uses, as well as entertainment uses such as movie theaters, performing arts center, or other commercial recreational uses would locate in such an area. It would be an area serving the entire region, for which the City would become known.*

**Goal:** LU-11: Development of one or more “Signature Project” to create a focal point or points for the City.



- Policies:** LU-11.1 Target potential sites or areas for the development of signature projects.
- 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.*

**Implementation Measures:**

LU-IM-11.1: Determine which sites or areas would be most appropriate for a “Signature Project” in Carson. Pursue development at these site(s) or area(s) which would support the purpose of creating such a project. Sites for consideration include, but are not limited to: Carson Street and the site formerly occupied by Cal Compact (157-acre landfill). *(Implements LU-11.1)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund  
**TF:** Within two years

LU-IM-11.2: Determine what type of facilities/uses would be desirable in a “Signature Project.” This determination should be based on market considerations as well as community support. *(Implements LU-11.2)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund  
**TF:** Within two years

LU-IM-11.3: Consider offering public incentives, such as assistance in the assembly of land, to promote the development of a project. *(Implements LU-11.1)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund, Redevelopment Funds  
**TF:** As needed



**ISSUE: CITY IMAGE**

*There are a number of unattractive and/or nonconforming land uses located along highly visible freeway corridors which impact the public’s perception of the community. Many of these properties are located in areas which can be considered “gateways” into the City. Appropriate screening, landscaping and buffering should be encouraged in order to improve the City’s image. In addition, entries into the City and key streets should be enhanced with landscaping and entry statements as appropriate.*

**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 proposed land use, the scale of structures, and the surrounding area.
  - LU-12.4 Amend 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. Mandate continued upkeep of landscaped areas.

**Implementation Measures:**

LU-IM-12.1: Develop a Citywide Urban Design Plan which addresses:

- Site planning and design,
- Architectural design guidelines,
- Landscape programs,
- Entries into the city,
- View corridors such as the I-405 and I-110 Corridors,
- Streetscape programs (to include street furnishings, lighting, walls and fencing, monumentation),
- Design guidelines appropriate for each area of the City,
- Financing, and
- Priorities. (*Implements LU-12.1*)

**RA/D:** Planning

**FS:** General Fund, Development Fees

**TF:** Within three years

LU-IM-12.2: Provide economically feasible Urban Design Plan implementation strategies by:

- Establishing public/private partnerships,
- Researching funding sources, and
- Prioritizing design projects to be scheduled within the City’s Capital Improvement Program. (*Implements LU-12.1*)

**RA/D:** Planning

**FS:** General Fund, Development Fees

**TF:** Ongoing



- LU-IM-12.3: Foster neighborhood participation in the program. *(Implements LU-12.2)*
- RA/D:** Planning, Public Information, Public Services  
**FS:** General Fund  
**TF:** Ongoing
- LU-IM-12.4: Encourage business organizations to support and participate in the program. *(Implements LU-12.2)*
- RA/D:** Planning, Public Information, Public Services  
**FS:** General Fund  
**TF:** Ongoing
- LU-IM-12.5: Collaborate with the School District and local civic organizations to celebrate Arbor Day by planting trees on public lands. *(Implements LU-12.2)*
- RA/D:** Planning, Public Information, Public Services  
**FS:** General Fund  
**TF:** Ongoing
- LU-IM-12.6: Require new development to incorporate street tree planting mature enough to shade and beautify the area. *(Implements LU-12.3)*
- RA/D:** Planning  
**FS:** Development  
**TF:** Ongoing
- LU-IM-12.7: Require new development processed as a Planned Unit Development to ensure permanent maintenance of landscaped areas through maintenance agreements, “Conditions, Covenants and Restrictions”, or similar contracts guaranteeing perennial maintenance. *(Implements LU-12.3 and 12.5)*
- RA/D:** Planning  
**FS:** Development  
**TF:** Ongoing
- LU-IM-12.8: Address tree preservation and the removal and replacement of mature trees in the landscape section(s) of the City’s Ordinance. *(Implements LU-12.4)*
- RA/D:** Planning  
**FS:** General Fund  
**TF:** Within three years
- LU-IM-12.9: Enhance landscaping requirements and maintenance standards in the landscape section(s) of the City’s Ordinance. *(Implements LU-12.4)*



**RA/D:** Planning  
**FS:** General Fund  
**TF:** Within three years

LU-IM-12.10: Encourage drought tolerant plant species, water conservation and related features in the landscape section(s) of the City’s Ordinance. *(Implements LU-12.4)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Within three years

LU-IM-12.11: Require exposed structural sidewalls to be screened with landscaping. *(Implements LU-12.5)*

**RA/D:** Planning  
**FS:** Development  
**TF:** Ongoing

LU-IM-12.12: Require landscaping to provide visual continuity along a street, even where the buildings are in different zones or land use districts. *(Implements LU-12.5)*

**RA/D:** Planning  
**FS:** Development  
**TF:** Ongoing

LU-IM-12.13: When conflicting land uses adjoin, require a dense landscape screen to mitigate the friction between land uses. *(Implements LU-12.5)*

**RA/D:** Planning  
**FS:** Development  
**TF:** Ongoing

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

**Implementation Measures:**

LU-IM-13.1: Examine the potential of extending special median treatments along the entire lengths of important arterials and prioritize these treatments. *(Implements LU-13.1)*

**RA/D:** Planning, Public Works  
**FS:** General Fund, Development Fees  
**TF:** Ongoing

LU-IM-13.2: Encourage new developments along arterials scheduled for median extension to provide landscaped medians adjacent to the development. *(Implements LU-13.1)*

**RA/D:** Planning, Public Works  
**FS:** General Fund, Development Fees  
**TF:** Ongoing

LU-IM-13.3: Require a comprehensive landscape and streetscape program to be developed for critical corridors such as Carson Street, Main Street, Avalon Boulevard, and Wilmington Avenue (with these corridors given priority). The program should include guidelines for banners, signage, landscaping, lighting, and street furniture. In addition, consideration should be given to: the incorporation of gardens and landscape areas in both public and private developments; pedestrian orientation; and public transit opportunities. *(Implements LU-13.2)*

**RA/D:** Planning, Public Works  
**FS:** General Fund, Development Fees  
**TF:** Within three years

LU-IM-13.4: Examine the potential to develop the following in an effort to facilitate the beautification of important corridors:

- Benefit Assessment District,
- Lighting and Maintenance Assessment District,
- Parking District,



- Business Association,
- Street Overlay District, and
- Merchant’s Association. *(Implements LU-13.2)*

**RA/D:** Planning, Public Works  
**FS:** General Fund, Fees  
**TF:** Within three years

LU-IM-13.5: Continue to require the undergrounding of utilities through the City’s standard list of conditions. *(Implements LU-13.3)*

**RA/D:** Planning  
**FS:** General Fund, Development Fees  
**TF:** Ongoing

LU-IM-13.6: Continue to pursue funding sources for the undergrounding of utilities throughout the City. *(Implements LU-13.3)*

**RA/D:** Planning  
**FS:** General Fund, other funding sources  
**TF:** Ongoing

LU-IM-13.7: Require electrical vaults which are placed above ground to be aesthetically screened. *(Implements LU-13.3)*

**RA/D:** Planning  
**FS:** General Fund, Development Fees  
**TF:** Ongoing

LU-IM-13.8: Require that all sides of a building visible from City streets display fully finished architectural detail, including: finished doors, and windows and exterior surfaces identical to, or which complement, the front of the building. *(Implements LU-13.4)*

**RA/D:** Planning  
**FS:** Development  
**TF:** Ongoing

**Goal:** LU-14: Enhance freeway corridors and major arterials 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 freeways and freeway 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 into the City.



LU-14.4 Provide entry markers with landscaping on the major arterials.

**Implementation Measures:**

LU-IM-14.1: Provide and properly maintain appropriate freeway landscaping. *(Implements LU-14.1)*

**RA/D:** Caltrans with cooperation of Planning, Public Works

**FS:** State and Federal monies, General Fund

**TF:** 2003-05

LU-IM-14.2: Enhance the landscaping near freeway on- and off-ramps to announce the driver’s entry into Carson. *(Implements LU-14.1)*

**RA/D:** Planning, Public Works

**FS:** General Fund, state and federal monies

**TF:** Ongoing

LU-IM-14.3: Improve the surfaces of freeway structures visible to travelers with scoring, tile, landscaping, or other treatments to improve the raw, unfinished appearance of these structures. *(Implements LU-14.1)*

**RA/D:** Caltrans with cooperation of Planning, Public Works

**FS:** State and Federal monies, General Fund

**TF:** Ongoing

LU-IM-14.4: Require the design of new buildings visible from the freeway and its ramps to include:

- Variation in plane and texture sufficient to prevent monotonous or massive appearance from the freeway,
- Adequate landscaping on all parts of the site visible from the freeway,
- Architectural accent through use of trim materials, accent color, pop-out and recessed relief features,
- Fully finished window details, and
- Concealment of mechanical equipment on the roof. *(Implements LU-14.2)*

**RA/D:** Planning

**FS:** Development

**TF:** Ongoing

LU-IM-14.5: Design and fund attractive entry markers and areas for the major arterials.



RA/D: Planning, Engineering  
FS: General Fund, Gas Tax, grant funds  
TF: 2003-05

**ISSUE: LIVABLE COMMUNITIES**

*As part of a nationwide effort to address urban sprawl, neighborhood safety, pedestrian access and environmental protection, the South Bay Cities Council of Governments, which the City of Carson is a part, has developed a program which identifies planning concepts to be used creating Livable Communities.*

**Goal:** LU-15: Promote development in Carson which reflects the “Livable Communities” concepts.

- Policies:**
- LU-15.1 Encourage the location of housing, jobs, shopping, services and other activities within easy walking distance of each other.
  - LU-15.2 Maintain a diversity of housing types to enable citizens from a wide range of economic levels and age groups to live in Carson.
  - LU-15.3 Ensure that community transportation facilities are connected to a larger transit network.
  - LU-15.4 Develop a center focus within the community that combines commercial, civic, cultural and recreational uses.
  - LU-15.5 Ensure that the design of public spaces encourages the attention and presence of people at all hours of the day and night.
  - LU-15.6 Ensure development of pedestrian-oriented improvements which provide better connections between and within all developments while reducing dependence on vehicle travel.
  - LU-15.7 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-15.8 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.

**Implementation Measures:**

- LU-IM-15.1: Locate as many activities as possible within easy walking distance of transit stops. *(Implements LU-15.1)*



**RA/D:** Planning, Public Works  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-15.2: Promote a variety of housing types and affordability to meets the development goals of the Housing Element, and provide needed housing opportunities to support employment growth. *(Implements LU-15.2)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

LU-IM-15.3: Continue to work with the appropriate regional agencies to develop the regional transportation network, careful to retain the character of the City. *(Implements LU-15.3)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

*Please refer to LU-IM-15.1 through LU-IM-15.3 for implementation relating to Policy LU-15.6.*

LU-IM-15.4: Review projects to ensure an ample supply of specialized open space in the form of squares, greens and parks whose frequent use is encouraged through placement and design. *(Implements LU-15.7)*

**RA/D:** Planning, Parks and Recreation  
**FS:** Development  
**TF:** Ongoing

LU-IM-15.5: Require streets design to include: promotion of pedestrian and bicycle use, creation of attractive and pedestrian friendly areas through the implementation of traffic calming techniques, human scale design of buildings, use of trees, landscaping and lighting, reduction of road widths, the use of diagonal parking, and similar measures. *(Implements LU-15.8)*

**RA/D:** Planning, Public Works  
**FS:** Redevelopment funds, Development Fees  
**TF:** Ongoing

LU-IM-15.6: Encourage materials and methods of construction which are specific to the region and show compatibility with the climate. *(Implements LU-15.8)*

**RA/D:** Planning  
**FS:** Development  
**TF:** Ongoing



**ISSUE: SPECIAL STUDY AREAS**

*There are a number of areas in the City which offer special opportunities for development and redevelopment based on their size, location, access, or freeway visibility. These areas require more detailed study than that provided in the General Plan.*

**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.

LU-16.2 Based on City priorities, determine whether a specific plan, redevelopment plan, urban design plan, streetscape improvement program, or other plan or program is appropriate for the identified area. The City should then embark upon such a study.

**Implementation Measures:**

LU-IM-16.1: Special Study Areas to be evaluated include, but are not limited to those described below:

- Carson Street (I-110 Freeway to Avalon Blvd.),
- Carson Street (north side of the street between the Alameda Corridor and Santa Fe Ave.),
- Eastern side of the Alameda Corridor between Dominguez Street and the southern boundary of the City,
- Cal Compact site (157-acre landfill),
- Scottsdale Townhomes,
- Main Street Industrial Corridor,
- Shell/Ashland site, and the
- South Bay Pavilion area.

*(Implements LU-16.1)*

**RA/D:** Planning  
**FS:** General Fund, Development  
**TF:** Ongoing

LU-IM-16.2: Studies of these areas should address the following, as appropriate: signage, infrastructure, financing, special curb treatment (e.g., pinched curbs, enhanced paving at crossings, etc.), banners, enhanced landscaping, hardscape features, etc. In addition, the following should be addressed in the referenced areas:



- On Carson Street, east of the Alameda Corridor, the enhancement of the commercial uses and the use of redevelopment funds to rehabilitate the storefronts should also be considered.
- Along the eastern side of the Alameda Corridor between Dominguez Street and the southern boundary of the City, land uses should provide as much flexibility as possible to more easily facilitate development/redevelopment. Previous studies of this area should be reviewed and, as appropriate, incorporated into any special study.
- At the Scottsdale Townhomes, review and, as appropriate incorporate the recommendations contained in Appendix G relating to this area. Recommendations include: use of open fencing; renovation of common areas; addition of access; development of socially-minded programs; and fostering of partnerships between Fannie Mae, lenders, and the Redevelopment Agency.
- Along the east side of the Main Street Industrial Corridor, resubdivide portions of the residential/non-residential edge to protect the residential neighborhood.

*(Implements LU-16.2)*

**RA/D:** Planning  
**FS:** General Fund, Development, Redevelopment Funds  
**TF:** Ongoing



# CHAPTER 3

## ECONOMIC DEVELOPMENT ELEMENT



# CHAPTER 3

## ECONOMIC DEVELOPMENT ELEMENT



### **GUIDING PRINCIPLE**

*The City of Carson is committed to pursuing, retaining, and promoting quality and sustainable economic development and jobs, at both the local and regional level, through the utilization of the City's natural advantages which include the City's strategic location in the South Bay to the ports; access to freeways and airports, and the Alameda Corridor; its multi-cultural neighborhoods; its potential for international trade; and the California State University, Dominguez Hills campus; and a diverse and skilled labor force.*

### **1.0 INTRODUCTION**

The purpose of the Economic Development Element is to provide guidance for economic development with the City of Carson in order to attain an economically viable and self-sustaining community. In this sense, economically viable means providing a range of housing and employment opportunities that meet the needs of residents and workers alike, attracting families and businesses to create demand for planned land uses, and establishing and funding public service levels that preserve or enhance Carson's quality of life.

The Economic Development Element is linked primarily to the Land Use and Housing Elements. Land use policy, in which the City takes an active role in defining development intensity, balance and mix of land uses, is fundamental to economic growth and economic well being. Land use policy enables the City to plan in advance for secondary effects of development, including employment growth and infrastructure requirements. Carson's housing policy is linked to economic



development planning in that economic relationships exist between housing types and employment opportunities, as well as between housing densities and the cost to maintain City service levels. With regard to attracting commerce and industry, as well as maintaining mobility for corporate activities, the Transportation and Infrastructure Element is also important to the economic development strategy.

## **2.0 STATE LAW REQUIREMENTS**

Authority for the Economic Development Element is found in State Government Code Section 65303, which allows cities and counties to add optional elements beyond the State-mandated elements. Once adopted, an optional element carries the same legal weight as any other of the elements as required by State Government Code Section 65300.5. Although the Economic Development Element is not a required element in the General Plan, the City has prepared one in order to consolidate and codify a growing body of policy concerning the economic and fiscal viability of Carson.

## **3.0 SUMMARY OF FINDINGS**

This section of the Economic Development Element is based upon *Market Analysis, General Plan Update, City of Carson*, prepared by Robert Charles Lesser & Co. (RCL), dated April 3, 2000. This report in its entirety is included as Appendix I. The objective of the market analysis was to: 1) evaluate the local and regional real estate markets as they relate to specific economic development issues and goals important to the City, and 2) identify market-driven opportunities for real estate development that the City may wish to encourage. Data have been updated with the 2000 Census data where possible and some other data have also been updated. The remainder of the findings and projections come from the Lesser *Market Analysis* prepared with earlier data.

### **3.1 POPULATION AND INCOME TRENDS**

Carson's socioeconomic trends are generally favorable. The City's total 2000 population of 89,730 has increased by more than five percent since 1990. While this is less than Los Angeles County's growth rate of 5.8 percent, it is slightly greater than that of the South Bay. The City also has a greater percentage of school age children under 18 compared to the South Bay; however, its distribution is similar to that of Los Angeles County.

Carson's 2000 median household income of \$52,284 exceeds the County's average of \$40,949, however Carson's per capita income of \$17,107 is significantly lower than the County's average of \$21,000. This lower per capita income may be attributed to the larger average household size of 3.59 (and average family size of 3.92) compared to 2.87 in Los Angeles County.

Carson's households are distributed across the various income ranges, with 31 percent of households making in excess of \$35,000/year. The South Bay has a much



higher percentage of households earning more than \$100,000 per year than does Carson.

### **3.2 BUSINESS CLIMATE**

Carson has a favorable business climate as evidenced by its existing policies. The cost of doing business in Carson is much lower than that in other South Bay cities. Carson has one of the lowest business license fees in the South Bay and imposes no utility-user, gross receipts or parking taxes. Carson is the only city in the South Bay with no utility-user tax. The City also has one of the lowest development and planning fee structures in the area.

### **3.3 LAND AVAILABILITY**

While Carson is an urban community and almost fully developed, approximately 10 percent of its land is still available for development. The City has 937 acres of vacant land and 234 acres of underutilized land, which is discussed in more detail in Section 3.1, Land Use, in the *Existing Conditions Report*.

The largest areas of vacant land, defined as land that is clear of all buildings, structures, and appurtenant facilities, are located to the east and north of Cal State Dominguez Hills and a 157-acre site of contaminated land adjacent to the I-405 freeway. The largest underutilized parcels are located at the southwest corner of Wilmington Avenue and Del Amo Boulevard. Underutilized properties are defined by the Existing Conditions Report as:

- Large parcels occupied by a business or residential dwellings that utilize 50 percent or less of the site.
- Large parcels utilized for storage of junk and salvage materials, small vacant buildings, scattered oil wells, storage of trucks and similar vehicles, or agricultural farming operations.

However, many of these underutilized and vacant parcels are brownfields and will require environmental remediation before development can occur. The City has an abundance of brownfields largely because Los Angeles County permitted landfills in the area, prior to the City's incorporation in 1968. While remediation can be costly, the South Bay's lack of developable space provides an opportunity for Carson's remediation of these sites.

### **3.4 REDEVELOPMENT PLANS**

The City's Redevelopment Agency has adopted three redevelopment project areas: Redevelopment Project Area No. 1, Merged and Amended Redevelopment Project Area (formerly Redevelopment Project Area No. 2 and 3), and Redevelopment Project Area No. 4. Project Area No. 1 consists of approximately 2,044 acres, the Merged and Amended Project Area consists of approximately 1,634 acres, and Project Area No. 4 consists of approximately 1035 acres. The Redevelopment Plans



for all Project Areas are available for review at the City of Carson, Economic Development Group.

### **3.5 REGIONAL TRENDS**

The Southern California economy remained exceptionally strong through the second quarter of 1999. Job creation totaled 81,400 in Los Angeles County in 1998, or 2.1 percent, following employment increases of 42,000 and 76,600 in 1996 and 1997, respectively.

Employment gains in software development and services, construction, and business services as a whole have offset job losses in the manufacturing sector, particularly in the aerospace industry. Although entertainment industry job growth was lackluster in the first half of 1998, with some film production moving to lower cost areas, such as Canada, the second half of 1998 and early 1999 showed signs of revitalization in the entertainment sector.

The Los Angeles County employment outlook is positive, with the County expected to add an average of 62,000 jobs annually through 2005. Although interest rate and fuel increases may have a negative affect on the economy in the near future, the economy has seen the longest economic growth period in history.

### **3.6 LOCAL TRENDS**

The South Bay has similarly enjoyed robust economic activity. Although the region was greatly impacted by a significant loss of aerospace jobs, the area has largely recovered through the addition of advanced technology and international trade employment. In 1999, employment was expected to have increased by 3.8 percent, bringing total employment in the South Bay to 453,500.

### **3.7 MARKET ANALYSIS**

This section contains a detailed overview of the following land uses:

- Industrial;
- Retail; and
- Office.

Each land use section includes a basic market summary of the South Bay and Carson sub-market, and analyzes demand and development potential. All support data is summarized in a series of exhibits contained in Appendix I.

#### **3.7.1 INDUSTRIAL**

##### **SUPPLY TRENDS AND CONDITIONS, 2000-2002**

Los Angeles County's industrial market remains vigorous. As of the third quarter 1999, vacancies were down to 3 percent. The market has tightened significantly over



the past several years. Just a year ago, vacancies were 6 percent in Los Angeles and in 1992 were as high as 12 percent. The lack of prime industrial space has put a stain on the market, as demand for space has been greater than available supply. Driven by rapid employment growth, resurgence in international trade activity, and an improving public infrastructure system, Los Angeles County is well positioned for continued industrial activity.

The South Bay is holding steady in the industrial market with second quarter 2002 vacancies of 4.7 percent. Similar to Los Angeles County, the South Bay also had vacancies of 13 percent in the early 1990s. Much of the South Bay's recovery has been due to existing firm expansions and in-migration of domestic and foreign companies involved in international trade. Although there have been new buildings constructed primarily at Watson and Carson Companies' Dominguez Technology Center, the Harbor Gateway Commerce Center in Torrance, and the Harbor City Business Park in Harbor City, this space will expand the total supply by only 0.5 percent. As a result, the South Bay's vacancy rate should continue to remain low.

The City of Carson's industrial space lies within the Carson sub-market, which has been defined by the major brokerage firms as encompassing Carson, Compton, and Rancho Dominguez. This sub-market has 83 million square feet of industrial space and comprises 45 percent of the South Bay market and 10 percent of Los Angeles County. Carson is approximately 43 percent of the Carson, Compton, Rancho Dominguez sub-market.

Industrial uses have provided jobs to residents and aided in the economic well being of the City. They have also contributed tax revenues to provide health, safety, and social services to residents. Carson's industrial market has been predominately comprised of manufacturing, warehousing, and distribution uses. According to a study by the Los Angeles Regional Technology Alliance, only 48 out of 1,000 technology related businesses in the South Bay are located within Carson.

Land scarcity and rising lease rates are forcing some companies from the South Bay to areas where land prices are more affordable. The South Bay should however continue to have a strong demand for industrial space given the region's strategic location. Expansion plans at Los Angeles International Airport, and the Los Angeles and Long Beach seaports should also increase the potential to attract companies to the area, especially in the distribution and warehousing operations.

### **DEVELOPMENT POTENTIAL**

The demand for industrial space is holding steady. The industrial demand methodology used by Robert Charles Lesser & Co. focuses on employment growth projections by sector. The net absorption of new industrial space in Los Angeles County in 1998 was 11.8 million square feet. In 1997, Los Angeles County net absorption was 25 million square feet, and 11.8 million in 1996. Given employment growth projections by industry, RCL projected the 1999 net absorption of industrial space to total approximately 13.8 million square feet. For the 1999-2005 period, RCL projected that the annual average industrial absorption is 9.9 million square



feet. During the past five quarters, industrial activity has fluctuated between 10 million and 13 million square feet.

Of the total Los Angeles demand, the South Bay is anticipated to capture approximately 23 percent or 1.8 million square feet of industrial space per year. Of this, Carson is expected to capture 317,000 square feet or 20 to 25 acres of industrial space per year.

There should be continued demand for new modernized facilities in Carson. Some of the City's newer industrial developments have combined office space with light industrial, warehouse facilities and manufacturing. Watson Land Company and Carson Companies have been at the forefront at developing these new "flex" spaces. These flex spaces will be an asset in keeping the City's industrial space competitive, since a large portion of the existing industrial inventory is outdated and unable to accommodate many of the emerging industries.

Manufacturing and warehousing space will continue to be in great demand in Carson; however, whether the City has the ability to attract higher quality research and development as well as high technology uses remains unknown. High technology companies generally tend to cluster around research institutions and other like industries, seek highly amenitized areas with executive housing and a highly educated labor pool. Carson does not possess these characteristics. The City will need to be proactive in order to attract these industries. While several technology related companies have recently moved to the area, the firm's appear to be using space in Carson primarily for distribution or warehousing purposes.

In the South Bay, current long-range land developments include 300 acres at Watson and Carson Companies' Dominguez Technology Center in Carson and unincorporated Los Angeles County; the Harbor Gateway project in Torrance; and the 105-acre Northrop Grumman mixed use development in Hawthorne, which includes 30 acres of retail as well as office and light industrial uses. The Dominguez Technology Center will be adding over 3 million square feet of new industrial space to the area within the five year period 2000-2005.

## **3.7.2 OFFICE**

### **SUPPLY TRENDS AND CONDITIONS, 2000**

The South Bay office market, defined as the area encompassing Long Beach on the south to El Segundo on the north, is comprised of nearly 30 million square feet of office space, and represents 19 percent of the total space in Los Angeles County. In the last three years, this market's absorption amounted to 19 percent of Los Angeles County, which is equivalent to its share of the County's inventory.

Carson has a small office market that consists of approximately five percent of the total South Bay market. The City has only 1.6 million square feet of office space and has averaged 10,000 square feet of net absorption per year from 1990 to 1998. Most of the space is also relatively old.



Demand for office space in the South Bay continues to be strong, with the largest gains in net absorption occurring in El Segundo. The South Bay however has not fully recovered as overall vacancies are at 15 percent. Although vacancies have decreased since the mid-20 percent levels of the early 1990s, this is still relatively high. Certain sub-markets are strong and there has been some new construction in El Segundo and Long Beach. However, demand for space in Carson has not been high. Vacancies have remained at the 20 percent level as of third quarter 1999 and have fluctuated between 16 and 25 percent since 1990.

South Bay office rents have been on the rise. El Segundo and Long Beach have typically obtained the highest rents in the South Bay. Per the First Quarter 1999 Grubb and Ellis report, rents averaged \$1.85 in the South Bay, while Carson rents averaged only \$1.40 per square foot per month, full service gross.

### **DEVELOPMENT POTENTIAL**

The net absorption of new office space in Los Angeles County in 1998 was 4.2 million square feet, 3.2 million square feet in 1997, and 2.6 million square feet in 1996. Given employment growth projects by industry, RCL projected the 1999 net absorption of office space to total approximately 5.3 million square feet. For the 1999-2005 period, RCL projected the annual average industrial absorption to be 3.6 million square feet.

Of the Los Angeles County total demand, the South Bay is anticipated to capture approximately 12 percent or 430,000 per year. Of this, Carson is only expected to capture 16,500 square feet of office space per year.

In short, office development opportunities are limited in Carson. Carson comprises a small market and does not have adequate support services, amenities, or commercial appeal to attract a substantial number of tenants to the area.

### **3.7.3 RETAIL**

The South Bay offers numerous shopping alternatives to residents and workers, with the major retail centers concentrated in Torrance and Long Beach. Six super regional centers are present in the South Bay, as well as major power centers.

While Carson appears to be importing much of its retail sales from visitors and non-locals, there seems to be unmet resident and worker retail needs. As a predominately industrial community, many of the basic retail needs of residents, such as apparel, food and restaurants may have been neglected and overlooked by the market in the past. Expanding the retail market by targeting these areas may be important in reaching the retail development goals of the City.

### **RETAIL SALES OVERVIEW, 2000**

In 1997, Carson had approximately \$748 million in retail sales, representing 3.4 percent of Los Angeles County's total sales of \$217 billion. Taxable retail sales in



Carson grew an average of 2.0 percent annually in current dollars between 1990 and 1997, lower than Los Angeles County's growth rate of 2.6 percent. In constant dollars (1997), there has been a slight decrease in taxable sales for this period in Carson (average annual change of -0.4 percent), compared to a 1.1 percent decrease in Los Angeles County's sales overall.

Retail categories that have shown the strongest gains in Carson since 1990 are:

- General Merchandise (6.4 percent average annual change),
- Home Furnishing and Appliances (27.0 percent), and
- Building Material and Farming Implements (5.3 percent).

Leaders for California overall since 1990 are:

- General Merchandise Stores (2.9 percent),
- Eating and Drinking Places (2.8 percent),
- Service Station (2.9 percent), and
- Specialty Retail Stores (5.2 percent).

The City of Carson "imports" retail sales from visitors and non-locals. Of the \$748,295,000 in taxable sales, RCL estimates that visitors and non-locals contribute \$270,785,000, or 36 percent of the total. Only the Eating and Drinking Places, Drug Store, Packaged Liquor, Apparel, and Food categories show leakage of sales outside City limits. Carson residents most likely travel to surrounding cities including Torrance and Long Beach to dine and shop for these basic goods.

The categories with the highest volume of sales from visitors are:

- General Merchandise with \$46,174,000,
- Auto Dealers and Auto Supplies with \$101,911,000, and
- Other Retail with \$69,171,000.

### **3.7.4 POWER CENTERS AND CHAIN RETAILERS**

#### **SUPPLY CONDITIONS, 2000**

For the purpose of this Element, a power center is defined as a grouping of retail stores. Power centers typically range from 250,000 and 500,000 square feet gross leaseable area, with several category-specific, narrowly focused, but deeply merchandised anchors with 25,000 square feet or more. The emergence of power centers is a response to the evolution and repositioning of older regional centers and the consumers' changing shopping patterns, as they become more value and travel conscious.

Carson has two new power centers, Carson Town Center, which includes Super Kmart and Burger King, and Carson Depot Center, which includes Home Depot, Albertsons, Staples, McDonald's and Starbucks. Other uses are anticipated at the Carson Town Center, however, they are in the early development stages. There are



two other power centers within a five-mile trade area, including the Long Beach Town Center and the Crossroads Shopping Center in Torrance.

The inventory of major chain retailers in the South Bay includes a wide variety of stores, however the majority are located outside of Carson, primarily within regional shopping centers, including the Del Amo Fashion Center, The Galleria at South Bay, and the Long Beach Plaza as well as at the major power centers described above. Although Carson has a regional shopping center, the South Bay Pavilion, many of the in-line stores within the center are local and representative of the major chains. This center has recently sold and many physical and use changes are proposed.

Several large commercial or mixed use developments are on the drawing board, including the 157-acre site at the I-405, the Gateway to Carson, and a project which includes a BENI grant for site remediation.

### **DEVELOPMENT POTENTIAL**

Strictly analyzing the volume of sales and inventory of power centers quantitatively, the trade area within the City would appear to be oversupplied, with \$219 million in estimated sales compared to a demand potential of \$92 million. The larger five-mile Carson trade area, however, would appear to be undersupplied, with \$219 million in estimated sales compared to a demand potential of \$574 million.

Projections indicate the population of this trade area will increase from 488,000 to 509,000 by the year 2004, which will further increase this demand.

Complementing the quantitative demand approach, the local and subregional inventory list includes many categories completely underrepresented by brand-name retailers. Local residents have expressed a lack of satisfaction with the selection and quality of merchandise offered in Carson, and have stated that they would welcome new retail to the area.

The successful introduction of power center-type tenants would favorably augment the City's retail sales base. Residents would benefit, as they would not be forced to shop in Torrance or Long Beach as often. However, with the introduction of the chain store tenants, this positive overall impact would be mitigated by the loss of sales at smaller local businesses.

## **3.7.5 NEIGHBORHOOD SHOPPING AND GROCERY STORES**

### **SUPPLY CONDITIONS, 2000**

Carson's major neighborhood shopping centers are centralized on Carson Street, west from the I-405 freeway and Sepulveda Boulevard. There are four stores representing two major grocery chains within the City, one of which is considerably smaller than the industry average. Grocery stores are location sensitive and most consumers shop at stores closest to their residence. As a result, the clustering that is



currently prevalent in Carson may pose inconveniences to most residents. Two other grocery stores included in this analysis are not major chains. They were included since they appear to fill a need for residents living along the periphery of the City and they are fairly large in size.

### **DEVELOPMENT POTENTIAL**

The City of Carson is currently undersupplied by approximately three grocery stores given the size of its population and per capita income level.

The resident retail demand versus reported sales analysis in 1997 reinforces the need for additional neighborhood shopping centers. Approximately \$7.1 million in taxable retail sales for food was leaking outside City limits.

## **3.7.6 RESTAURANTS**

### **SUPPLY CONDITIONS, 2000**

Carson has a handful of major chain restaurants and limited “sit-down” dining locations. The majority of dining opportunities are fast food and limited numbers of mid-range, family-style restaurants, such as Tony Romas, International House of Pancakes, and Sizzler. Residents and businesses agree that Carson has few restaurants that could be considered fine dining. In terms of taxable sales, restaurants and bars in Carson make up 7.4 percent of total retail stores compared to 13 percent within the State of California. This indicates a disproportionate lack of potential dining opportunities within the City.

### **DEVELOPMENT POTENTIAL**

Demand for restaurants was conducted by analyzing both resident and employee spending patterns. It is important to include employee figures in the analysis, since Carson has such a large daytime population. Although there are no published reports indicating industrial worker spending patterns at restaurants, the International Council of Shopping Center estimates for office worker was used as a proxy. Accordingly, Carson may support an additional 315,000 square feet of additional eating and drinking establishments including, 171,000 square feet of fast food dining, 74,000 square feet of restaurants that serve beer and wine, and 69,000 square feet of fine dining.

Examining restaurant taxable sales by category (with or without alcohol sales on premises), Carson’s inventory is heavily weighted toward restaurants that do not serve alcohol compared to the County and State ratios. Taxable sales at restaurants without alcoholic beverages make up 75 percent of Carson’s total, compared to 55 percent for Los Angeles County and 44 percent for California. Taxable sales at restaurants that serve all types of liquor comprise only 7 percent of Carson’s total, compared to 22 percent for Los Angeles County and 31 percent for California. These figures substantiate the opinions described above regarding the lack of fine or family dining opportunities.



### **3.7.7 MOVIE THEATERS**

#### **SUPPLY CONDITIONS, 2000**

Carson does not have any movie theaters within the City's limit. A drive-in theater existed previously, but it has been closed for many years. The closest theater is 4 miles from City Hall and located in the City of Torrance. Within the primary 5-mile trade area, there are six theaters with 18 traditional style screens and 36 stadium seats. In the secondary trade area, which includes theaters within a 7-mile trade area, there are an additional four theaters or 37 traditional style screens.

#### **DEVELOPMENT POTENTIAL**

An unmet demand for new movie theaters exists in the five-mile trade area. The unmet demand is estimated at 20 screens. Current development trends are to build movie theaters in complexes of eight screens or more, although in larger markets, theater complexes of 24 screens and greater are common. This translates into one or two new movie theater complexes in the area.

Movie theaters function as excellent anchors for a retail shopping/entertainment center that also includes family and better-quality restaurants and specialty retail. A movie theater has synergy with restaurants.

Movie theater developers, in general, want to build at least eight screens to achieve efficiencies in development costs. A new eight-screen movie theater with the latest sound equipment and possible stadium-style seating represents an opportunity that would serve the City and surrounding communities. Any new theater built in Carson should strive to feature the most up-to-date systems in order to compete effectively with theaters in neighboring cities.

### **3.8 MARKET CONCLUSIONS**

Based upon the Market Analysis prepared by Robert Charles Lesser & Co., the economic development outlook for the City of Carson is generally favorable from an overall market perspective. The strongest development potential lies in the industrial market, although there may be opportunities in retail. The regional and local economy appears to be favorable in the short-term. Combined with the shortage of developable land in the South Bay and Carson's locational advantages, the City has an opportunity to promote economic development activities.

Market conclusions for industrial, office and retail sectors are provided in the following paragraphs.

#### **3.8.1 INDUSTRIAL**

Industrial potential should increase in the long term by 300,000 square feet of space per year (20 to 25 years at a 0.32 floor area ratio), with further stimulus provided by the expansion of the nearby Los Angeles and Long Beach Ports and the Los Angeles International Airport, improvements planned for truck and rail traffic due to the Alameda Corridor, and the lack of developable land in the South Bay.



Industrial land supply in Los Angeles County is near exhaustion. This provides Carson with an opportunity to capitalize on its land holdings and redevelop underutilized and vacant properties to meet demands for new industrial space.

Warehousing and distribution uses should continue to hold the strongest demand due to Carson's locational advantage to major transportation systems. Attraction of higher-end technology and research and development companies will continue to be challenging due to the lack of amenities, such as restaurants, shopping areas and entertainment, executive housing, and a highly educated work force as compared to other subregions in Southern California.

### **3.8.2 OFFICE**

Office opportunities in Carson are limited. The South Bay office market is largely concentrated in El Segundo, Long Beach and Torrance. Carson comprises a small market and does not have enough support services, amenities or appeal to attract a substantial number of tenants to the area. Vacancy rates remain high, and rental rates have not appreciated greatly.

The precluding conclusions should be understood as representing a continuation of general market trends. Impacting major market directions is difficult, but aggressive cities can affect the share of the market that they can attract. This is possible by working with local landowners.

### **3.8.3 RETAIL**

New retail development opportunities are possible. The key is to provide large sized sites (minimum 20 to 30 acres), which have regional visibility and accessibility, preferably from a freeway. In this manner, the City will be able to respond to developers and chain stores pursuing a market penetration strategy. Additional retail opportunities can also be further encouraged by working with large tenant holders.

Carson has the opportunity to generate sales tax revenues and capture additional sales of apparel, restaurants, movie theaters and grocery food stores. Local demand for these goods is leaking to surrounding cities, especially Torrance and Long Beach. Carson should consider proactively encouraging the development of retail projects, especially at new locations and existing centers that appear to be underutilized to meet the needs of current residents and workers.

## **4.0 PLANNING ISSUES, GOALS, POLICIES AND IMPLEMENTATION**

The acronyms listed below are used for the implementation measures:

RA/D: Responsible Agency/Division  
FS: Funding Source  
TF: Time Frame



**ISSUE: CARSON IS NOT CAPTURING THE POTENTIAL RESIDENT DEMAND WITHIN THE CITY**

*Citizens have expressed a desire to have a greater variety of commercial uses in Carson, including quality retail, restaurants and commercial recreation uses. Enhancing the physical image and services offered within the City, as well as encouraging job and housing opportunities, can lead to an improvement in the quality of life.*

**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 good 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.

**Implementation Measures:**

ED-IM-1.1 Require each City division to review its programs for conformity with the goals and policies of the General Plan. *(Implements Policies ED-1.1, ED-1.2, ED-1.3, ED-1.6)*

**RA/D:** All Agencies and Divisions

**FS:** General Fund

**TF:** Annually

ED-IM-1.2 Require each City division to prioritize and schedule the appropriate implementation measures included in the General Plan. *(Implements Policies ED-1.1, ED-1.2, ED-1.3, ED-1.6)*



**RA/D:** All Agencies and Divisions  
**FS:** General Fund  
**TF:** Annually

ED-IM-1.3 Develop design standards and guidelines and special plans for targeted areas, such as Carson Street, Automobile Row, and others. *(Implements Policy ED-1.4)*

**RA/D:** Planning, Economic Development  
**FS:** General Fund  
**TF:** 2002-2003

ED-IM-1.4 Develop economic development materials to be included on the City's website. *(Implements Policy ED-1.5)*

**RA/D:** Economic Development  
**FS:** Redevelopment  
**TF:** 2003-2004

**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 upgrade of commercial properties.

**Implementation Measures:**

ED-IM-2.1 Annually monitor, in the Annual Report on the General Plan, the extent and location of development and changes occurring within the City, in order to measure the degree to which needed balance between land uses allocated in the General Plan is maintained. *(Implements Policy ED-2.1)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Annually



ED-IM-2.2 Annually evaluate and target underutilized and/or older centers and develop strategies with the owners and tenants to revitalize these areas. *(Implements Policy ED-2.3)*

**RA/D:** Redevelopment, Housing and Neighborhoods  
**FS:** Redevelopment, Community Development Block Grant  
**TF:** 2004-2005 and Annually

ED-IM-2.3 Focus on upgrading older centers in order to encourage new or expanding businesses to relocate to these areas. *(Implements Policy ED-2.3)*

**RA/D:** Redevelopment, Business Development  
**FS:** Redevelopment, Community Development Block Grant  
**TF:** 2004-2005

ED-IM-2.4 Encourage the concentration of commercial clusters which can create “agglomeration economies” and encourage new and/or expanding businesses into existing vacant space. *(Implements Policy ED-2.1)*

**RA/D:** Redevelopment, Business Development  
**FS:** Redevelopment  
**TF:** 2004-2006

**Goal:** ED-3: Maximize the City’s market potential, in order to enhance and retain retail opportunities to serve the population, increase City revenues, 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 upgrade of commercial properties.

**Implementation Measures:**

- ED-IM-3.1 Examine the potential to rezone land to accommodate projected market demand for all types of economic activity. *(Implements Policy ED-3.1)*
  - RA/D:** Planning
  - FS:** General Fund
  - TF:** Ongoing
- ED-IM-3.2 Develop strategies to focus development in targeted areas. *(Implements Policy ED-3.1)*
  - RA/D:** Redevelopment
  - FS:** Redevelopment
  - TF:** 2005-2006
- ED-IM-3.3 Actively market large vacant parcels. *(Implements Policy ED-3.1)*
  - RA/D:** Redevelopment
  - FS:** Redevelopment
  - TF:** Ongoing



- ED-IM-3.4 Use redevelopment tools to assemble land, assist development and provide for on-going area improvement. *(Implements Policy ED-3.3)*
- RA/D:** Redevelopment  
**FS:** Redevelopment  
**TF:** Ongoing
- ED-IM-3.5 Encourage specialty retail development to concentrate in targeted areas of the City to enable “critical mass” thresholds of such uses to be established. *(Implements Policies ED-3.2, ED-3.3)*
- RA/D:** Redevelopment, Business Development  
**FS:** Redevelopment  
**TF:** Ongoing
- ED-IM-3.6 Periodically evaluate which retail categories are experiencing leakage and approach existing retailers within these categories and encourage their relocation to Carson, especially sit-down restaurants. *(Implements Policy ED-3.2)*
- RA/D:** Business Development, Redevelopment  
**FS:** Redevelopment  
**TF:** 2003-2004 and Ongoing
- ED-IM-3.7 Enhance the streamlined permit process. *(Implements Policy ED-3.3)*
- RA/D:** Planning, Engineering, Building and Safety  
**FS:** General Fund  
**TF:** 2002-2003 and Ongoing
- ED-IM-3.8 Encourage support services as part of industrial/commercial development, e.g., child care, convenience shopping, personal services, and restaurants. *(Implements Policy ED-3.8)*
- RA/D:** Planning, Business Development  
**FS:** Application Fees  
**TF:** Ongoing
- ED-IM-3.9 Continue to cooperate with the Chamber of Commerce, economic development groups, and other business associations to retain and attract businesses. *(Implements Policies ED-3.4, ED-3.5, ED-3.7)*
- RA/D:** Business Development  
**FS:** General Fund, Redevelopment  
**TF:** Ongoing



ED-IM-3.10 Monitor market information in nearby communities where businesses have relocated, in order to more effectively compete with these communities and retain the current retail, office and industrial firms located in the City. *(Implements Policy ED-3.4)*

**RA/D:** Business Development  
**FS:** General Fund, Redevelopment  
**TF:** Ongoing

ED-IM-3.11 Monitor and respond to inquiries received by the Chamber of Commerce, other business associations and various City departments. *(Implements Policies ED-3.4, ED-3.7)*

**RA/D:** Business Development  
**FS:** Redevelopment  
**TF:** 2003-2004 and Ongoing

ED-IM-3.12 Continue to provide informational material to the owners of potential rehabilitation properties identifying the types of assistance available and work with them in the upgrading of their properties. *(Implements Policy ED-3.10)*

**RA/D:** Housing and Neighborhood  
**FS:** CDBG, Other Grants  
**TF:** Ongoing



**ISSUE: POTENTIALLY MISSED REVENUES**

*Carson may not be generating revenues to its full potential. The City should explore options to increase resources.*

**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.

**Implementation Measures:**

- ED-IM-4.1 Require, when appropriate, fiscal impact analyses from new development. *(Implements Policy ED-4.3)*

**RA/D:** Planning  
**FS:** Environmental Application Fees  
**TF:** Ongoing

- ED-IM-4.2 Monitor the fiscal impact of development activity on an annual basis to determine the optimal phasing of new development, or redevelopment, based on its net positive or negative fiscal impact, where possible. *(Implements Policy ED-4.4)*

**RA/D:** Planning, Redevelopment, City Manager  
**FS:** Application Fees  
**TF:** 2004-2005 and Annually

- ED-IM-4.3 Evaluate alternative revenue sources for the City. *(Implements Policy ED-4.4)*

**RA/D:** City Manager  
**FS:** General Fund  
**TF:** 2004-2005

- ED-IM-4.4 Develop an Economic Five Year Plan, including a variety of economic incentives to generate a balance of projects that will contribute to the local economy. *(Implements Policies ED-4.1, ED-4.4, ED-4.5, ED-4.6)*

**RA/D:** City Manager, Redevelopment  
**FS:** General Fund, Redevelopment  
**TF:** 2004-2005





**ISSUE: EMPLOYMENT OPPORTUNITIES AND DEVELOPMENT OF THE LABOR FORCE**

*There is a need to create more skilled jobs for the citizens of Carson and abate the impact of lost jobs related to the amortization of non-conforming uses. In addition, the labor force in Carson should be appropriately developed through job training programs and business schools.*

**Goal:** ED-5: Creation of employment opportunities and career advancement.

**Policies:** ED-5.1 Understand employment trends and needs of local businesses by linking 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.

**Implementation Measures:**

ED-IM-5.1 Create an Employment Resources Program. *(Implements Policies ED-5.1 and ED-5.2)*

**RA/D:** Employment Development  
**FS:** General Fund, Grants  
**TF:** 2004-2005

ED-IM-5.2 Work with owners of property which would lend itself to development of or conversion to research and development incubator use. *(Implements Policy ED-5.3)*

**RA/D:** Redevelopment, Business Development  
**FS:** Redevelopment  
**TF:** 2004-2005

ED-IM-5.3 Request industries and businesses to contact the City’s Job Clearinghouse when recruiting for employees. *(Implements Policy ED-5.4)*

**RA/D:** Planning, Job Clearinghouse  
**FS:** Application Fees  
**TF:** Ongoing





**ISSUE: BUSINESS INCENTIVES**

*The City should not only continue to promote the advantages for businesses in Carson, but also examine the potential to provide financial assistance, expedited permit processing, as well as incentives for new businesses to move into Carson.*

**Goal:** ED-6: Promote and assist and provide incentives for 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 the 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.

**Implementation Measures:**

ED-IM-6.1 Develop a program to increase competitiveness which includes:

- “Buy in Carson” business-to-business directory;
- Links from the City’s website to Carson business web sites;
- Business Visitation Program;
- Annual Business Awards Program;
- Technical Assistance Program; and
- Building Rehabilitation Program.  
*(Implements Policies ED-6.1)*



**RA/D:** Business Development  
**FS:** Redevelopment, General Fund  
**TF:** 2004-2006

ED-IM-6.2 Continue to promote and enhance the “Buy in Carson” program. *(Implements Policy ED-6.2)*

**RA/D:** Business Development  
**FS:** General Fund  
**TF:** Ongoing

ED-IM-6.3 Address the concerns of existing businesses by:

- Providing a welcome packet to new businesses;
- Promoting marketing workshops;
- Developing marketing letters;
- Promoting small business assistance programs; and
- Improving communications lines between business and City officials on issues of concern.

*(Implements Policies ED-6.3, ED-6.4, ED-6.5, ED-6.6)*

**RA/D:** Business Development  
**FS:** General Fund  
**TF:** 2003-2005

**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.

**Implementation Measures:**

ED-IM-7.1 Develop improved amenities and standards, including:

- Provide parking improvements in strip retail centers;
- Encourage the development of services to support the industrial and commercial office base; and
- Create specialized districts and nodes.

*(Implements Policy ED-7.2)*

**RA/D:** Planning, Business Development  
**FS:** General Fund, Redevelopment  
**TF:** 2005-2006





**ISSUE: COORDINATION OF ECONOMIC DEVELOPMENT WITHIN THE REGION**

*To provide economies of scale and enhance economic development opportunities, the City should coordinate economic development activities with State and regional agency efforts.*

**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.

**Implementation Measures:**

ED-IM-8.1 Develop a program to link the City with the appropriate State and regional activities. *(Implements Policies ED-8.1, ED-8.2)*

**RA/D:** Redevelopment, Business Development

**FS:** Redevelopment

**TF:** 2004-2005



**ISSUE: ATTRACTION OF NICHE INDUSTRIES AND/OR BUSINESSES**

*The City should focus on the attraction of specialized businesses and industries to Carson. Such industries and businesses may include the motion picture industry, banking, regional tourism, as well as other unique or niche industries and businesses. To this end, the City should promote available land and facilities within Carson to demonstrate the City's desirability.*

**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.

ED-9.2 Understand the needs, limitations, and concerns of targeted industries and companies. Develop programs to attract them to Carson in order to effectively compete with neighboring cities. To this end, develop and maintain a comprehensive database program and marketing program for the City.



**Implementation Measures:**

ED-IM-9.1 Use broker contacts, relationships in the business community and regional organizations, as well as a community survey to help identify target industries. Evaluate the business and other license requirements for the identified target businesses and revise, if appropriate. *(Implements Policies ED-9.1, ED-9.2, ED-9.3)*

**RA/D:** Business Development, Redevelopment  
**FS:** Redevelopment  
**TF:** 2002-2004



**ISSUE: DEVELOPMENT OF A “SIGNATURE PROJECT”**

*It is important to develop a focal point within the community. This may include a “Main Street” along the Carson Street Corridor or a “Signature Project” along the I-405 Freeway. Quality retail and restaurant uses, as well as entertainment uses such as movie theaters, performing arts center, or other commercial recreational uses would locate in such an area.*

**Goal:** ED-10: Develop one or more “Signature Projects” to create focal points and identity 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.

**Implementation Measures:**

ED-IM-10.1 Evaluate all potential “Signature Projects” and assess the feasibility and timing of each. Prioritize potential projects and determine which ranks first for implementation. *(Implements Policy ED-10.1)*

**RA/D:** Redevelopment, Planning  
**FS:** Redevelopment  
**TF:** 2002-2004

ED-IM-10.2 Develop plans for one or more “Signature Projects,” including land uses, public and private improvements,



incentives, and funding. *(Implements Policies ED-10.2 and ED-10.3)*

**RA/D:** Redevelopment, Planning  
**FS:** Redevelopment  
**TF:** 2002-2004



**ISSUE: REUSE OF “BROWNFIELDS”**

*The City has large expanses of underutilized and vacant lands. However, most of these lands consist of brownfields and require remediation before development can occur. The City has great potential for increased revenues to the City by actively encouraging cleanup and making land available for redevelopment.*

**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.

**Implementation Measures:**

- ED-IM-11.1 Identify all current State and Federal funding programs for remediation, to perform studies and remediate contaminated sites. *(Implements Policy ED-11.1)*

**RA/D:** Redevelopment  
**FS:** Redevelopment, Federal Grants  
**TF:** 2002-2003

- ED-IM-11.2 Contact remediation experts and developers to assist in these redevelopment efforts. *(Implements Policy ED-11.1)*



**RA/D:** Redevelopment  
**FS:** Redevelopment, Federal Grants  
**TF:** 2002-2003

ED-IM-11.2 Develop a Land/Building Inventory Program as well as a Brownfields Redevelopment Program. (*Implements Policy ED-11.3*)

**RA/D:** Redevelopment  
**FS:** Redevelopment, Federal Grants  
**TF:** 2002-2004

ED-IM-11.3 Expand the Problem Areas Study of the General Plan effort to assist with the phasing out of nonconforming uses. (*Implements Policy ED-11.4*)

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2003-2005

ED-IM-11.4 Research the feasibility of forming a brownfields assessment district. (*Implements Policy ED-11.5*)

**RA/D:** Redevelopment, Engineering  
**FS:** Redevelopment, General Fund  
**TF:** 2004-2005



## CHAPTER 4

# TRANSPORTATION AND INFRASTRUCTURE ELEMENT



# CHAPTER 4

## TRANSPORTATION AND INFRASTRUCTURE



### **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 water, sewer and storm drainage facilities, as well as communication and other technological facilities to provide a sustainable system.*

### **1.0 INTRODUCTION**

The purpose of this Element is to document the methods and results of the analysis of the existing and projected future circulation conditions in the City of Carson. As part of the General Plan, this document outlines Transportation and Infrastructure System policies and describes the future circulation system needed to support the Land Use Element. In addition, the Element addresses public utilities and infrastructure.

### **2.0 STATE LAW REQUIREMENTS**

The pertinent Government Code sections relating to the Transportation and Infrastructure Element are as follows:

*“Government Code Section 65302(b): (The general plan shall include) a circulation element consisting of the general location and extent of existing and*



*proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan.*

*Government Code Section 95303: The general plan may . . . address any other subjects which, in the judgment of the legislative body, relate to the physical development of the county or city.”*

## **3.0 SUMMARY OF FINDINGS**

### **3.1 EXISTING CIRCULATION SYSTEM**

The City of Carson is served by the existing network of roadways shown in Exhibit TI-1, *Existing Road 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 Street, Victoria Street, University Drive, Del Amo Boulevard, Carson Street, 223rd Street, Sepulveda Boulevard and Lomita Boulevard. The characteristics (Master Plan street classification, number of lanes, roadway widths and right-of-way dimensions) of each of these roadways, as well as some additional collector streets, are described in Table TI-1, *Street Classifications and Characteristics*.

#### **RELATION TO THE REGIONAL ROADWAY SYSTEM**

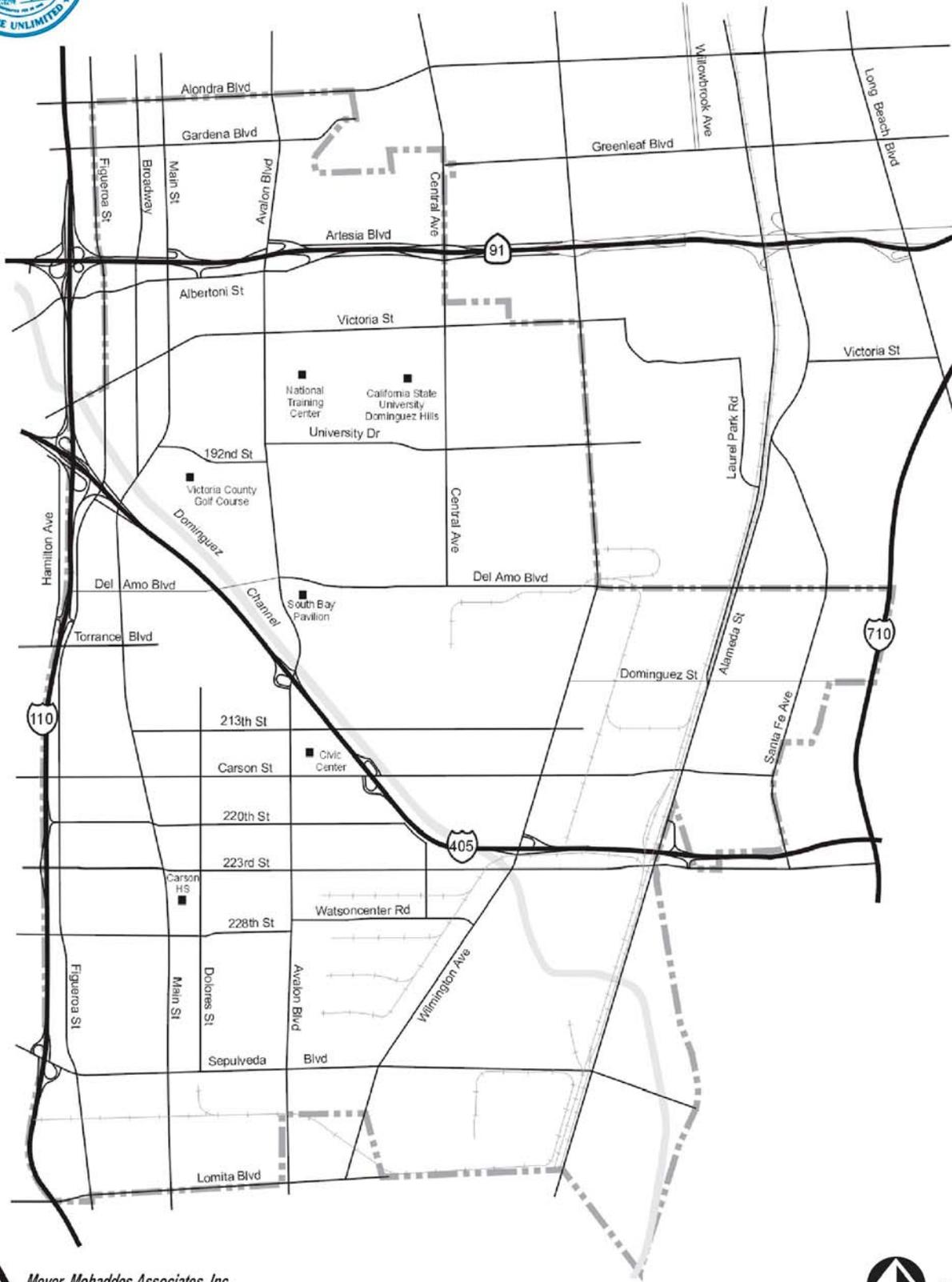
The Artesia Freeway (SR-91) to the north, the Long Beach Freeway (I-710) to the east, the Harbor Freeway (I-110) to the west and the San Diego Freeway (I-405) provide regional access to the City of Carson. Access to the freeways is provided via an extensive freeway ramp system connecting the City’s major 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 TI-1 and daily roadway traffic volume flow is shown in Exhibit TI-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. Traffic counts were collected in 2001.



# CARSON GENERAL PLAN



 Meyer, Mohaddes Associates, Inc.

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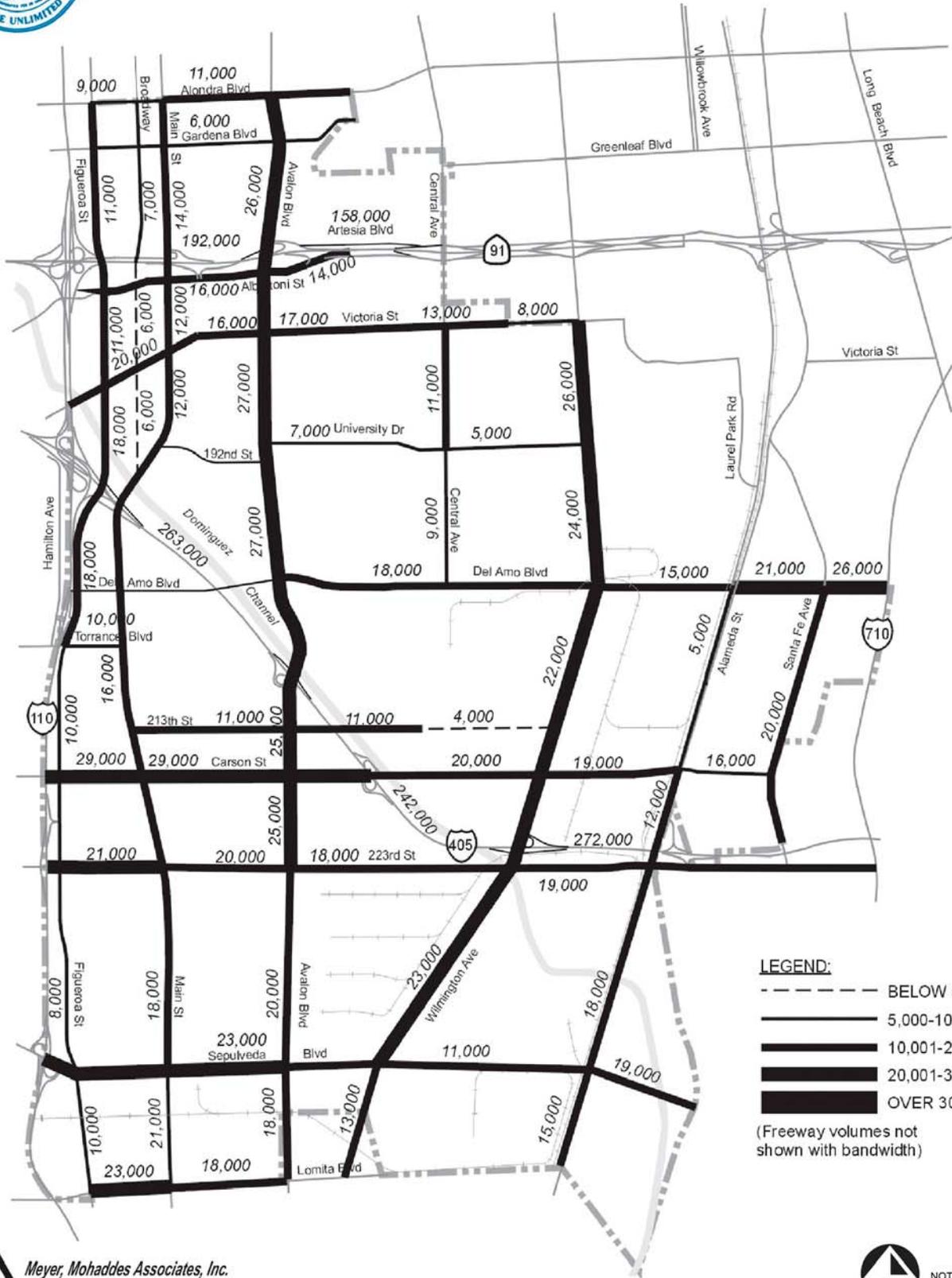
Source: GIS Data, City of Carson  
NOVEMBER 25, 2002

## Existing Road Network

EXHIBIT TI-1



# CARSON GENERAL PLAN



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Source: GIS Data, City of Carson  
NOVEMBER 25, 2002

## Traffic Flow Map

EXHIBIT TI-2



**Table TI-1  
Street Classifications and Characteristics**

Street Name	Segment	Classification <sup>1</sup>	No. of Lanes Each Direction <sup>2</sup>	Right-of-way (feet) <sup>3</sup>	Roadway Width (feet) <sup>3</sup>
192 <sup>nd</sup> Street	Main Street to Avalon Boulevard	Collector	1	80	64
213 <sup>th</sup> Street	Main Street to Avalon Boulevard	Collector	1	50 - 60	24-40
213 <sup>th</sup> Street	405 Freeway to Wilmington Avenue	Collector	1	50 - 60	40
213 <sup>th</sup> Street	Avalon Boulevard to 405 Freeway	Collector	1	50 - 70	24 -30
214 <sup>th</sup> Street	Figueroa Street to Main Street	Collector	1	60	30 -36
220 <sup>th</sup> Street	Vera Street to Wilmington Avenue	Collector	1	50 - 60	24 - 40
220 <sup>th</sup> Street	Figueroa Street to Lucerne Street	Collector	1	46 - 60	32 - 40
223 <sup>rd</sup> Street	West City Limit to East City Limit	Major Highway	2	42 - 116	28 - 84
228 <sup>th</sup> Street	West City Limit to Avalon Boulevard	Collector	1	33 - 60	28 - 40
234 <sup>th</sup> 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 <sup>5</sup>	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 <sup>5</sup>	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 <sup>5</sup>	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 220 <sup>th</sup> 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 TI-1 [continued]  
Street Classifications and Characteristics**

Street Name	Segment	Classification <sup>1</sup>	No. of Lanes Each Direction <sup>2</sup>	Right-of-way (feet) <sup>3</sup>	Roadway Width (feet) <sup>3</sup>
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 <sup>5</sup>	50 -100	36 - 88
University Drive	Avalon Boulevard to Wilmington Avenue	Secondary Highway	1, 2 <sup>5</sup>	100	80
Vera Street	Carson Street to 213th Street	Collector	1	60	21
Victoria Street	West City Limit to Wilmington Avenue	Major Highway	1, 2 <sup>5</sup>	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



## 3.2 CURRENT MASTER PLAN OF STREETS

The current Carson Master Plan of Streets was adopted in 1981 as part of the City's General Plan and is shown on Exhibit TI-3, 1981 Master Plan of Highways. The Master Plan of Streets 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 and Freeways.

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.

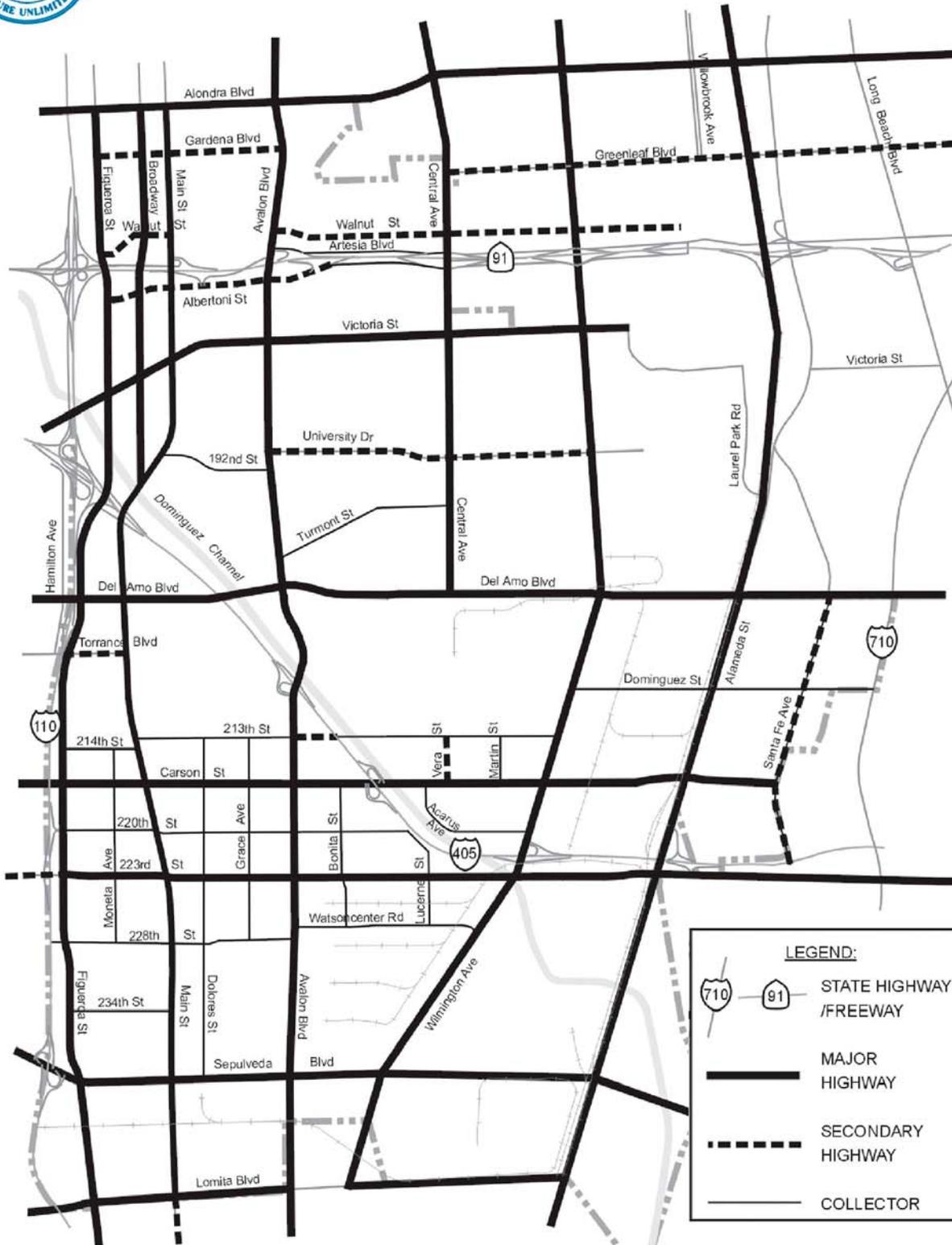
In multi-family areas, where there is significant parking demand throughout the day, a minimum of 40 feet of pavement may be required, to provide two moving lanes of traffic in addition to street parking on both sides. In commercial and industrial areas, a minimum pavement width of 40 feet is necessary. 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 as many as 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 street 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.



# CARSON GENERAL PLAN



**LEGEND:**

- STATE HIGHWAY /FREEWAY
- MAJOR HIGHWAY
- SECONDARY HIGHWAY
- COLLECTOR

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NOT TO SCALE



## **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 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. 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 systems as well as to provide access to adjacent land uses. They move large volumes of automobiles, trucks and buses, and link 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. 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 AND FREEWAYS**

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 the Department of Transportation (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 that 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 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.



### 3.3 BICYCLE ROUTES

On August 6, 2013, the City Council adopted the Master Plan of Bikeways, which replaces Section 3.3, Bicycle Routes.

#### DEFINITIONS

~~The following bicycle route definitions were identified in the 1981 Circulation Element, Master Plan of Bikeways, and are still applicable. 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 that is completely separated from the motor vehicle traffic by space or a physical barrier. Bicycle paths are often provided in recreational areas such as parks and on beaches.~~

~~**Bicycle Lane (Class II).** A bicycle facility where a portion of the paved roadway area is marked as a lane for use by bicycles only. 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 facility 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 Bicycle Plan, shown on Exhibit TI-4, *Bicycle Plan*, includes the facilities listed in the 1981 Plan. Several segments have been added to and a few deleted from the 1981 Plan.~~

~~The following roadway and other segments are designated Bike Path (Class I) facilities:~~

- ~~• Bonita Street between Sepulveda Boulevard and Carson Street (existing in Calas Park);~~
- ~~• 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~~

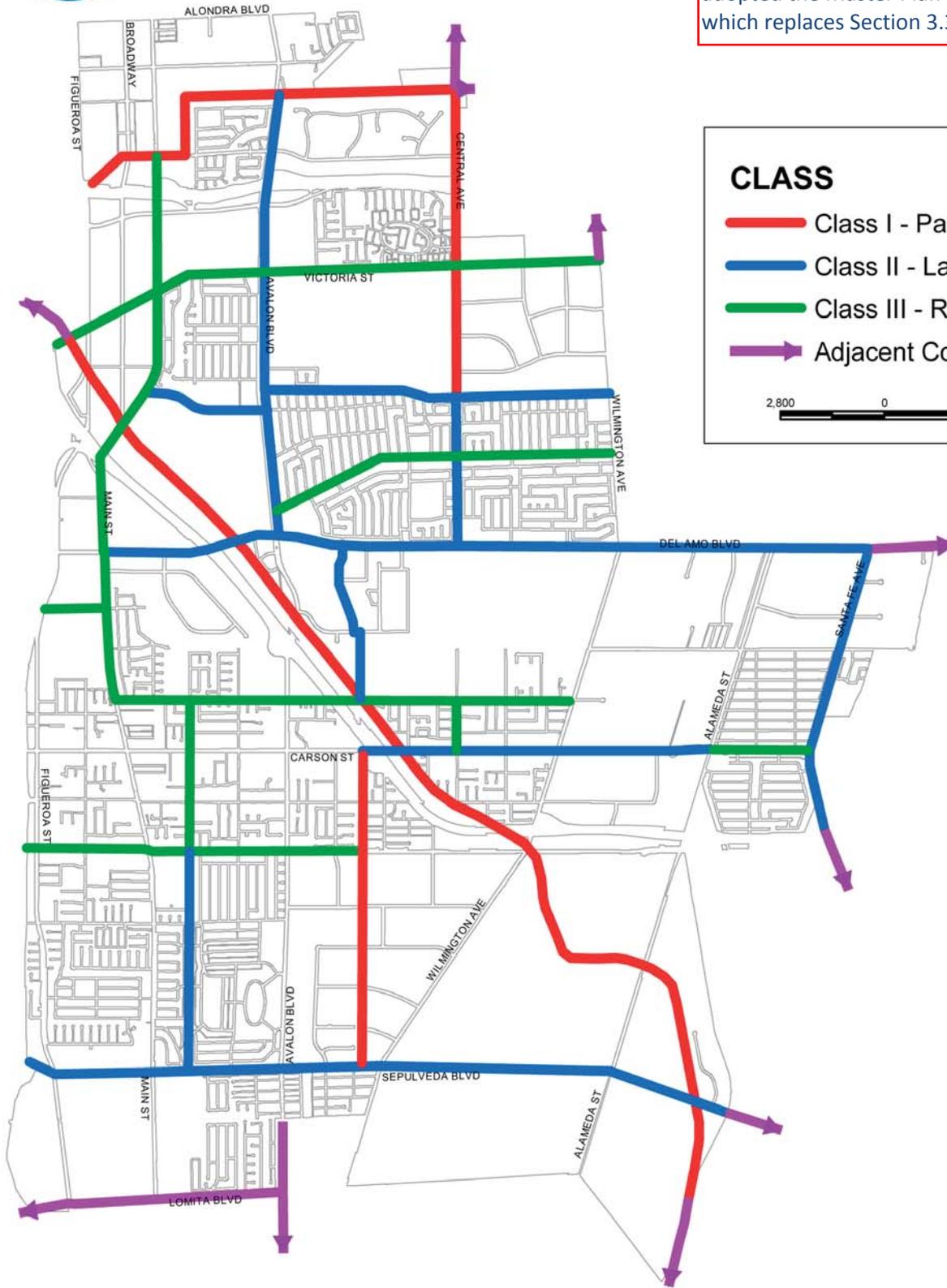
~~The following roadway segments are designated Bike Lane (Class II) facilities:~~

- ~~• 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 GENERAL PLAN

On August 6, 2013, the City Council adopted the Master Plan of Bikeways, which replaces Section 3.3, Bicycle Routes.



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

This plan superseded by Chapter 6 and Figure 6.1 of the Master Plan of Bikeways.

## Bicycle Plan

EXHIBIT TI-4



On August 6, 2013, the City Council adopted the Master Plan of Bikeways, which replaces Section 3.3, Bicycle Routes.

- ~~• Carson Street between Bonita Street and Alameda Street; and~~
- ~~• Chico Street between 213<sup>th</sup> 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~~
- ~~• 192<sup>nd</sup> Street between Avalon Boulevard and Main Street.~~

~~The following roadway segments are designated Bike Route (Class III) facilities:~~

- ~~• Main Street between 213<sup>th</sup> Street and Walnut Street;~~
- ~~• Dolores Street between Sepulveda Boulevard and 213<sup>th</sup> 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);~~
- ~~• 213<sup>th</sup> Street between Main Street and Wilmington Avenue;~~
- ~~• Carson Street between Alameda Street and Santa Fe Avenue;~~
- ~~• 223<sup>rd</sup> Street between Figueroa Street and Bonita Street;~~
- ~~• Torrance Boulevard between Main Street and the west City boundary; and~~
- ~~• Vera Street between Carson Boulevard and 213<sup>th</sup> Street.~~

### 3.4 TRANSIT FACILITIES

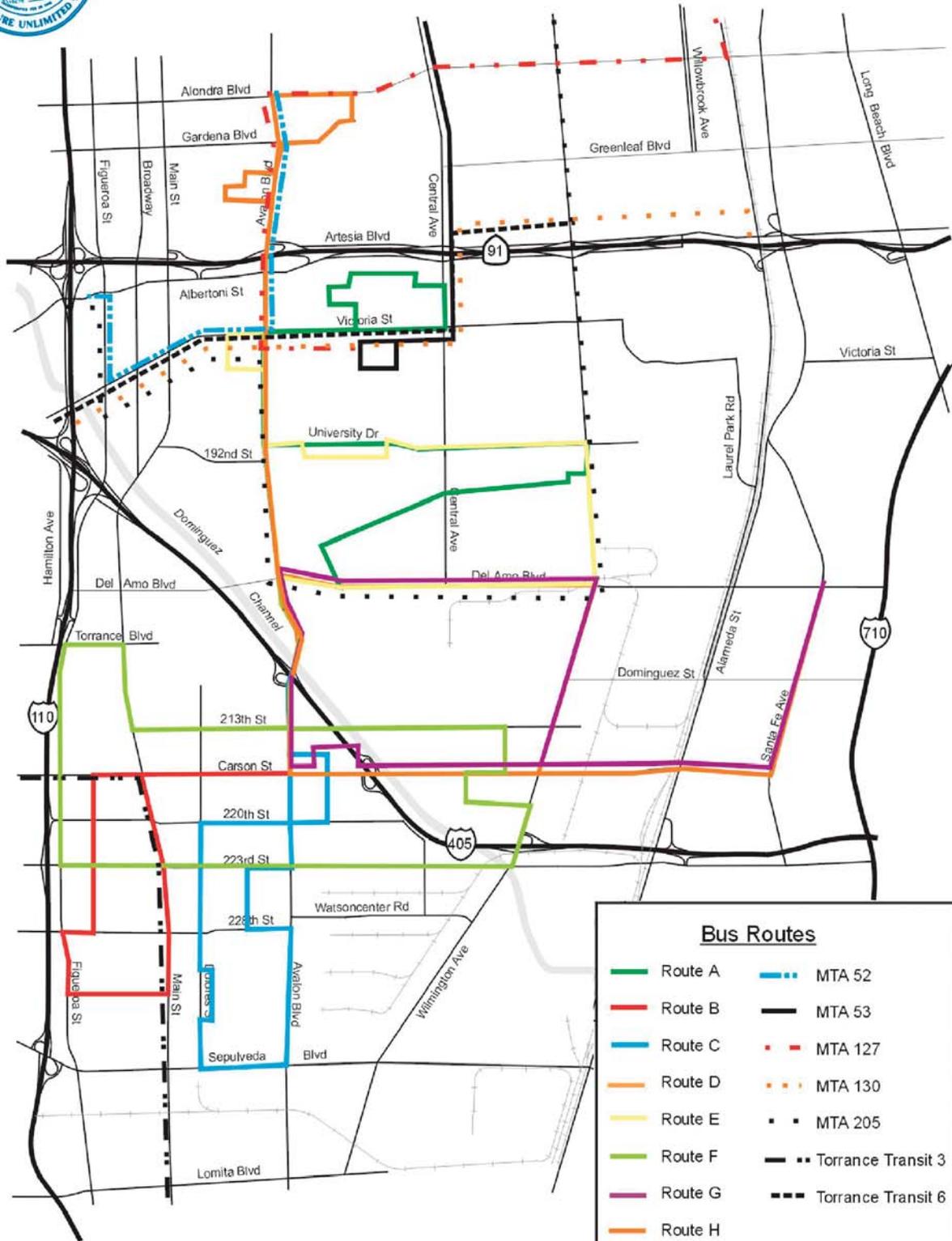
Public transportation in the City of Carson is provided primarily by the Carson Circuit, Torrance Transit, and the Los Angeles County Metropolitan Transportation Authority (MTA) bus lines. There is also limited service from Long Beach Transit and Gardena Municipal Bus Lines. Following are brief descriptions of the major lines and routes in the project area, which are illustrated on Exhibit TI-5, 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 234<sup>th</sup> Street, Moneta Street between Carson Street and 228<sup>th</sup> Street, and Carson Street between Moneta Avenue and Avalon Boulevard.



# CARSON GENERAL PLAN



**Meyer, Mohaddes Associates, Inc.**

NOT TO SCALE

Source: GIS Data, City of Carson  
NOVEMBER 25, 2002

**Bus Routes**  
**EXHIBIT TI-5**



- *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.
- *Route F* (Business Center South) serves the south central Carson area. Primary routes served by Route F include Bonita Street between 213<sup>th</sup> Street and Watson Center Road, 213<sup>th</sup> Street between Avalon Boulevard and Martin Street, and Wilmington Avenue between Watson Center Road and 233<sup>rd</sup> 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.

### **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 223<sup>rd</sup> Street, 223<sup>rd</sup> Street between Avalon Boulevard and Dolores Street, Dolores Street between 223<sup>rd</sup> 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' fares are discounted.



**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 192<sup>nd</sup> Street between Main Street and Avalon Boulevard, Avalon Boulevard between 192<sup>nd</sup> 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' fares are discounted.

**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' fares are discounted.

### **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' fares are discounted.

## **3.5 SPECIALIZED SHUTTLE SERVICES**

### **CARSON NORTH/SOUTH SHUTTLE**

The City of Carson North/South Shuttle runs in one direction every forty 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 \$.50.

### **DIAL-A-RIDE SERVICE**

Economical taxi service is available to Carson seniors and/or disabled citizens twenty-four 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.

### **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.



### 3.6 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 10-25% of the 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 and truck parking zones where vehicles in excess of three tons may travel and park. These routes and parking zones are shown in Exhibit TI-6, Truck Routes. The purpose of regulating truck routes and truck parking zones is to provide access for large trucks on streets designed to accommodate them and to protect residential streets from unwanted truck traffic.

### 3.7 EXISTING TRAFFIC OPERATIONS ANALYSIS

The ground traffic counts provide the roadway segment volumes used in the existing conditions analysis of 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 that 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 TI-2, Roadway Capacities.

**Table TI-2  
Roadway Capacities**

Facility Type	Hourly Capacity (veh. /lane/hour)
Two way major arterial	750
Two way secondary arterial	750
Collector and local streets	750

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 average daily traffic volume on a particular roadway link is divided by the link capacity. There are



# CARSON GENERAL PLAN



 Meyer, Mohaddes Associates, Inc.

 NOT TO SCALE

Source: GIS Data, City of Carson  
NOVEMBER 25, 2002

## Truck Routes

EXHIBIT TI-6



six defined Levels of Service, A through F, which describe conditions ranging from “ideal” to “worst” as defined in Table TI-3, *Level of Service Descriptions*.

**Table TI-3  
Level of Service Descriptions**

Level of Service	Description	Volume to Capacity Ratio
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0 - 0.60
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	0.61 - 0.70
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.71 – 0.80
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues. <u>This level is typically associated with design practice for peak periods.</u>	0.81 - 0.90
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	0.91 - 1.00
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	Over 1.01

Source: *Highway Capacity Manual*, Special Report 209, Transportation Research Board, Washington, D.C., 1985 and *Interim Materials on Highway Capacity*, NCHRP Circular 212, 1982.

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 TI-4, *Existing AM Peak Hour Level of Service*, and TI-5, *Existing PM Peak Hour Level of Service* and presented graphically on Exhibit TI-7, *Existing Level of Service*. Tables TI-4 and TI-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 TI-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
213 <sup>th</sup> St	Main St	Avalon Blvd	Collector	450	1	1	350	286	0.78	0.64	C	B
213 <sup>th</sup> St	Avalon St	Chico St	Collector	450	2	2	283	281	0.31	0.31	A	A
213 <sup>th</sup> St	Chico St	Wilmington Ave	Collector	450	1	1	117	90	0.26	0.20	A	A
220 <sup>th</sup> St	Main St	Avalon Blvd	Collector	450	1	1	135	242	0.30	0.54	A	A
223 <sup>rd</sup> St	Figueroa St	Main St	Major	750	2	2	646	857	0.43	0.57	A	A
223 <sup>rd</sup> St	Main St	Avalon Blvd	Major	750	2	2	762	795	0.51	0.53	A	A
223 <sup>rd</sup> St	Avalon St	Wilmington Ave	Major	750	2	2	594	669	0.40	0.45	A	A
223 <sup>rd</sup> St	Wilmington Ave	Alameda St	Major	750	2	2	688	745	0.46	0.50	A	A
228 <sup>th</sup> St	Main St	Avalon Blvd	Collector	450	1	1	127	149	0.28	0.33	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	600	2	2	390	451	0.33	0.38	A	A
Albertoni St	Main St	Avalon Blvd	Secondary	600	2	2	506	654	0.42	0.55	A	A
Albertoni St	Avalon St	SR-91 Fwy	Secondary	600	2	2	530	319	0.44	0.27	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	223 <sup>rd</sup> 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	213 <sup>th</sup> 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 TI-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	Major	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	450	1	1	64	143	0.14	0.32	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	600	2	2	176	297	0.15	0.25	A	A
Gardena Blvd	Main St	Avalon Blvd	Secondary	600	2	2	213	151	0.18	0.13	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	450	1	1	146	112	0.32	0.25	A	A
Santa Fe Ave	Carson St	Dominguez St	Secondary	600	2	2	718	793	0.60	0.66	A	B
Santa Fe Ave	Dominguez St	Del Amo Blvd	Secondary	600	2	2	688	833	0.57	0.69	A	B
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 TI-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	Figuroa St	Main St	Secondary	600	2	2	297	427	0.25	0.36	A	A
University Dr	Avalon St	Central Ave	Secondary	600	2	2	277	303	0.23	0.25	A	A
University Dr	Central Ave	Wilmington Ave	Secondary	600	2	2	301	166	0.25	0.14	A	A
Victoria St	Figuroa 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 TI-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	450	1	1	364	398	0.81	0.88	D	D
213th St	Avalon St	Chico St	Collector	450	2	2	418	337	0.46	0.37	A	A
213th St	Chico St	Wilmington Ave	Collector	450	1	1	124	217	0.28	0.48	A	A
220th St	Main St	Avalon Blvd	Collector	450	1	1	271	224	0.60	0.50	B	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	450	1	1	127	117	0.28	0.26	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	600	2	2	541	325	0.45	0.27	A	A
Albertoni St	Main St	Avalon Blvd	Secondary	600	2	2	1004	303	0.84	0.25	D	A
Albertoni St	Avalon St	SR-91 Fwy	Secondary	600	2	2	883	258	0.74	0.22	C	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	Major	750	2	2	395	399	0.26	0.27	A	A



**Table TI-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	450	1	1	128	99	0.28	0.22	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	600	2	2	269	302	0.22	0.25	A	A
Gardena Blvd	Main St	Avalon Blvd	Secondary	600	2	2	250	250	0.21	0.21	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	450	1	1	105	138	0.23	0.31	A	A
Santa Fe Ave	Carson St	Dominguez St	Secondary	600	2	2	933	911	0.78	0.76	C	C
Santa Fe Ave	Dominguez St	Del Amo Blvd	Secondary	600	2	2	1042	832	0.87	0.69	D	B
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

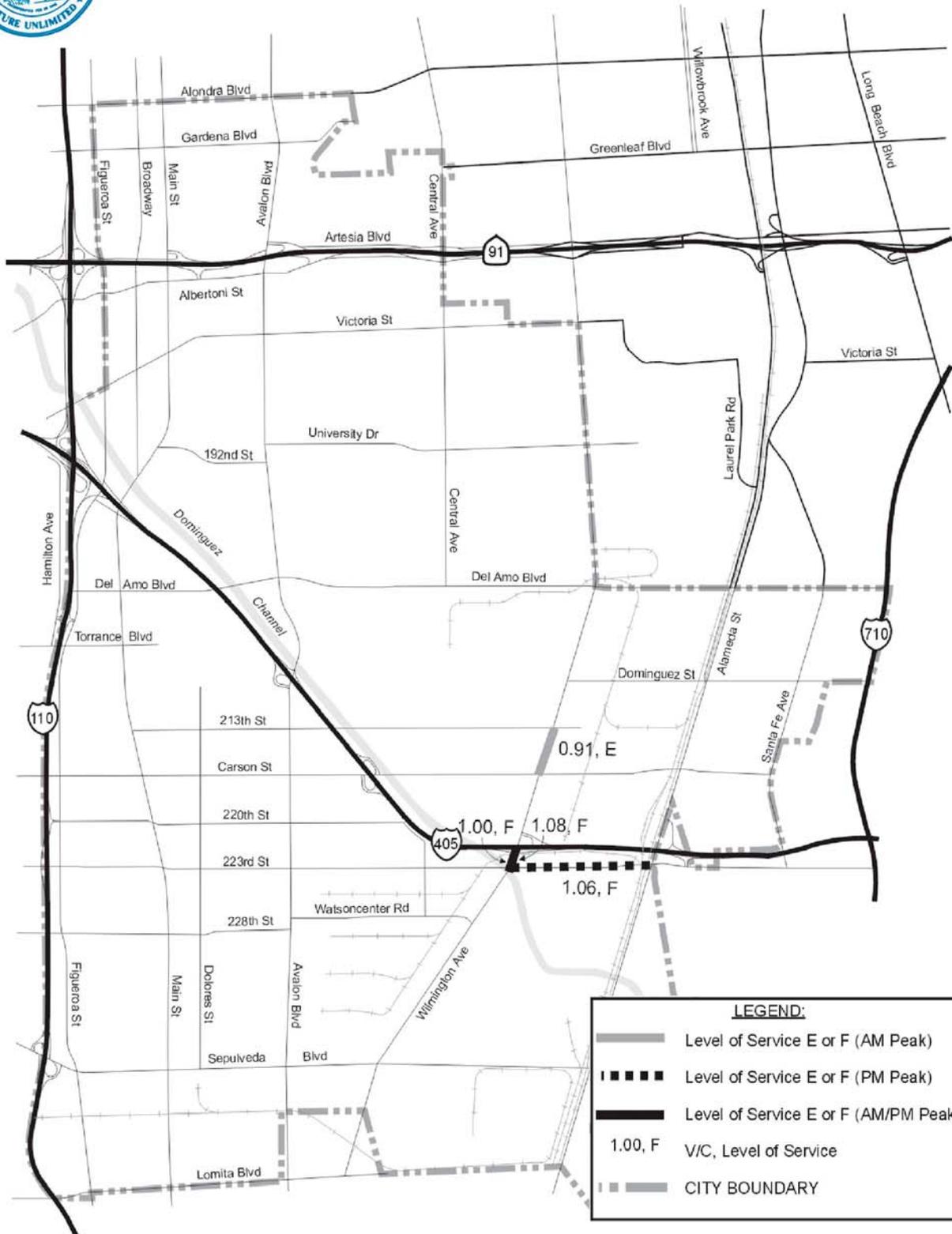


**Table TI-5 [continued]  
Existing PM Peak Hour Level of Service**

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	600	2	2	532	353	0.44	0.29	A	A
University Dr	Avalon St	Central Ave	Secondary	600	2	2	326	275	0.27	0.23	A	A
University Dr	Central Ave	Wilmington Ave	Secondary	600	2	2	172	319	0.14	0.27	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



# CARSON GENERAL PLAN



**Meyer, Mohaddes Associates, Inc.**

NOT TO SCALE

Source: GIS Data, City of Carson  
NOVEMBER 25, 2002

## Existing Level of Service

**EXHIBIT TI-7**



## 3.8 INFRASTRUCTURE/UTILITIES

### SEWER

The Los Angeles County Public Works Department (LACPWD) maintains the local sewer lines that run in the street to the trunk sewer lines. The homeowner is responsible for maintenance of the lateral connection lines from the structure to the street. Most local sewer lines are eight inches in diameter. No new upgrades are currently planned. The LACPWD also maintains two small lift stations that are located within the Carson boundaries:

- Scottsdale Pump Station  
23426 Avalon Boulevard  
Capacity: 100 gallons per minute
- Belshaw Pump Station  
22650 Belshaw Avenue  
Capacity: 1,125 gallons per minute

The Los Angeles County Sanitation District (Sanitation District) maintains the trunk sewer lines within the City of Carson. There are approximately one dozen trunk sewer lines, ranging in size from 50 inches to 8 feet in diameter, which are generally located as follows:

- Del Amo Boulevard – running east to west
- Main Street – running north to south
- Wilmington Avenue – 3 lines running north to south, 2 lines running east to west along railroad tracks
- Alameda Street – 2 lines running north to south
- Broadway – 2 lines running north to south

The Joint Water Pollution Control Plant, located at 24501 South Figueroa Street in Carson, is part of the Joint Outfall System that provides sewage treatment and disposal for residential, commercial and industrial users within the 17 sanitation districts in Los Angeles County that are participants in the Joint Outfall Agreement. The Joint Water Pollution Control Plant (JWPCP) is one of the largest wastewater treatment plants in the world. It serves a population of about 3.5 million people and many industries in southern and eastern Los Angeles County. It provides advanced primary and partial secondary treatment for 350 million gallons of wastewater per day.

### WATER

Water service in the City of Carson is provided by the California Water Service Company (formerly Dominguez Water Corporation) and the Southern California Water Company (SCWC).



The California Water Service Company (California Water) is an investor-owned public water utility. Its rates and operations are regulated by the California Public Utilities Commission. Its service area, located in the South Bay, covers a 35 square mile area, including most of the City of Carson.

California Water supply has two principal sources: local groundwater and purchased imported water. Imported water is purchased from the Metropolitan Water District of Southern California (MWD) through a member agency, the West Basin Municipal Water District (WBMWD). California Water has eight direct MWD service connections and one indirect MWD service connection. California Water also 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 stays in the basins for use in the future when imported water may not be as plentiful. Table TI-6, Sources of California Water Company Production, illustrates the amount of groundwater, imported water and desalinated water production for 1990 through 1995. The company treats all of its water supply to meet drinking water standards, regardless of source.

**Table TI-6  
Sources of California Water Company Production**

	1990	1991	1992	1993	1994	1995	Average
Groundwater (acre feet) % of Total	7,873 20%	8,594 27%	6,612 20%	1 0%	4,006 12%	10,654 30%	6,290 18%
Imported Water (acre feet) % of Total	30,988 80%	23,603 73%	26,963 80%	32,647 97%	29,150 84%	24,324 67%	27,946 80%
Desalinated Water (acre feet) % of Total				905 3%	1,563 4%	1,181 3%	608 2%
Total Water Production (acre feet)	38,861	32,196	33,575	33,553	34,719	36,159	34,844

Source: Sources of Water Production 1990-1995 (Acre Feet).

The total number of California Water customers is projected to grow approximately 6.2 percent from 1995 to 2015. Future shifts in water demand most likely would result from either the expansion/downsizing of major industrial customers, new industrial customer growth and the introduction of recycled water. To meet water demands for the next decade, the company will rely on a mix of ground, imported, desalinated and recycled water sources. California 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.



The SCWC, Southwest District, serves a small portion of north Carson. It is an investor-owned private utility company that supplies water service to approximately 2,030 customers within the City of Carson. Carson lies within the Lawndale/Gardena Zone, which has an average daily demand of 13,900 gpm, a maximum daily demand of 20,850 gpm, and a peak hour demand of 35,445 gpm. The Southwest District of Southern California Water purchases approximately 80 percent of its water demand from MWD connections within the service area, and approximately 20 percent of its water demand is supplied through company-owned deep wells.

*Additional information regarding water quality and conservation can be found in: Chapter 8, Open Space and Conservation Element of this General Plan. Information regarding drainage facilities can be found in Chapter 6, Safety Element, of this General Plan.*

## **ELECTRIC**

Electric service is provided to the Carson area by Southern California Edison (SCE), Compton Service Center. There are three major substations within 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 213<sup>th</sup> 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.

Electrical consumption factors are not available specifically for the City of Carson; however, annual estimated use factors are offered by SCE in Table TI-7, *Electrical Consumption for Various Land Uses*.

Southern California Edison is continually analyzing the capacity of its systems and projecting and planning for new load growth based on commercial, industrial and residential customer demand.

## **NATURAL GAS**

Natural gas is supplied to the City by Southern California Gas Company (The Gas Company), Pacific Region. As a public utility, The 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. There are no current deficiencies in the natural gas supply systems that serve Carson. The Gas Company continually assesses and upgrades its systems to meet current and future needs, and thus can accommodate any future expansion in residential, commercial or industrial uses. The Gas Company has also developed several programs to provide assistance in selecting energy efficient appliances and systems.



**Table TI-7  
Electrical Consumption for Various Land Uses**

Land Use Type	Unit Type	SCE Factor
Residential	Kilowatt-hour/Unit/Year	6,081.0
Food Store	Kilowatt-hour/Square Feet/Year	51.4
Restaurant	Kilowatt-hour/Square Feet/Year	47.3
Hospital	Kilowatt-hour/Square Feet/Year	17.9
Retail	Kilowatt-hour/Square Feet/Year	11.8
College/University	Kilowatt-hour/Square Feet/Year	11.6
High School	Kilowatt-hour/Square Feet/Year	8.8
Elementary School	Kilowatt-hour/Square Feet/Year	6.3
Office	Kilowatt-hour/Square Feet/Year	8.8
Hotel/Motel	Kilowatt-hour/Square Feet/Year	6.8
Warehouse	Kilowatt-hour/Square Feet/Year	3.4
Miscellaneous	Kilowatt-hour/Square Feet/Year	8.8

Source: South Coast Air Quality Management District, CEQA Air Quality Handbook, Appendix 9, September 1992.

**SOLID WASTE DISPOSAL**

Waste Management currently provides residential, commercial and industrial waste collection service for the City of Carson. Waste Management collects approximately 70,000 tons from residential customers and 153,500 tons from commercial and industrial customers per year. The disposal service uses traditional methods of solid waste collection using standard trash trucks and crews. The service also includes the pickup of sorted recyclable materials, which are transported directly to a company that separates and sells them.

The solid waste collected by Waste Management is transported 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, tires, green waste, steel, and wood are sent to special facilities for disposal or recycling. The remaining waste materials are loaded onto trailers and taken to the El Sobrante Landfill in Riverside County, a distance of 75 miles from Carson.

The El Sobrante Landfill currently has a capacity of 4000 tons a day but is expected to increase to 7500 tons per day by the year 2004, due to the construction of service roads. Its current life expectancy is 100 years. Waste Management also uses Lancaster Landfill and Simi Valley Landfill as alternates.

*Additional information regarding solid waste can be found in Chapter 8, Open Space and Conservation of this General Plan.*



## **CABLE**

The City has multiple cable providers. One upgraded its system within the last several years to the latest fiber optics. The increased capacity now allows the company to offer 65 basic channels and a choice of 12 premium channels. Internet connections are available through one provider.

## **TELEPHONE**

There are also multiple telephone service providers. The telephone service facilities consist of both fiber and copper facilities. A light span technique that enhances service is also used in the Carson area. A sonet ring provides improved service to the general South Bay area. There are both aerial and underground lines within the City of Carson. Undergrounding of new facilities is considered on a case-by-case basis. There is need for upgraded facilities to provide new services to existing customers and to expand services to new customer facilities, especially related to computers. The City has approved many telecommunications antennae.

# **4.0 FUTURE CIRCULATION SYSTEM CONDITIONS WITH GENERAL PLAN BUILDOUT**

## **4.1 AMBIENT TRAFFIC GROWTH**

Ambient traffic growth is the traffic growth, not including freeways, that will occur in the City due to general employment growth, housing growth and growth in regional through trips in southern California. Even if there were 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 City staff, an ambient growth rate of 0.25 percent per year for the next 20 years is used, which represents a total of 5 percent ambient growth over 20 years.

## **4.2 SHORT-TERM TRAFFIC GROWTH**

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 TI-8, *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.

## **4.3 FORECAST FUTURE TRIP GENERATION**

The first step in analyzing future traffic condition is to predict future trip generation. The Institute of Transportation Engineers (ITE) has published trip generation rates for numerous 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 Congestion Management Program (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 have therefore been calculated based on ITE’s trip rates for the General Plan buildout.

**Table TI-8  
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
<b>Trips for Development Status Report Projects</b>		<b>6,410</b>	<b>8,376</b>

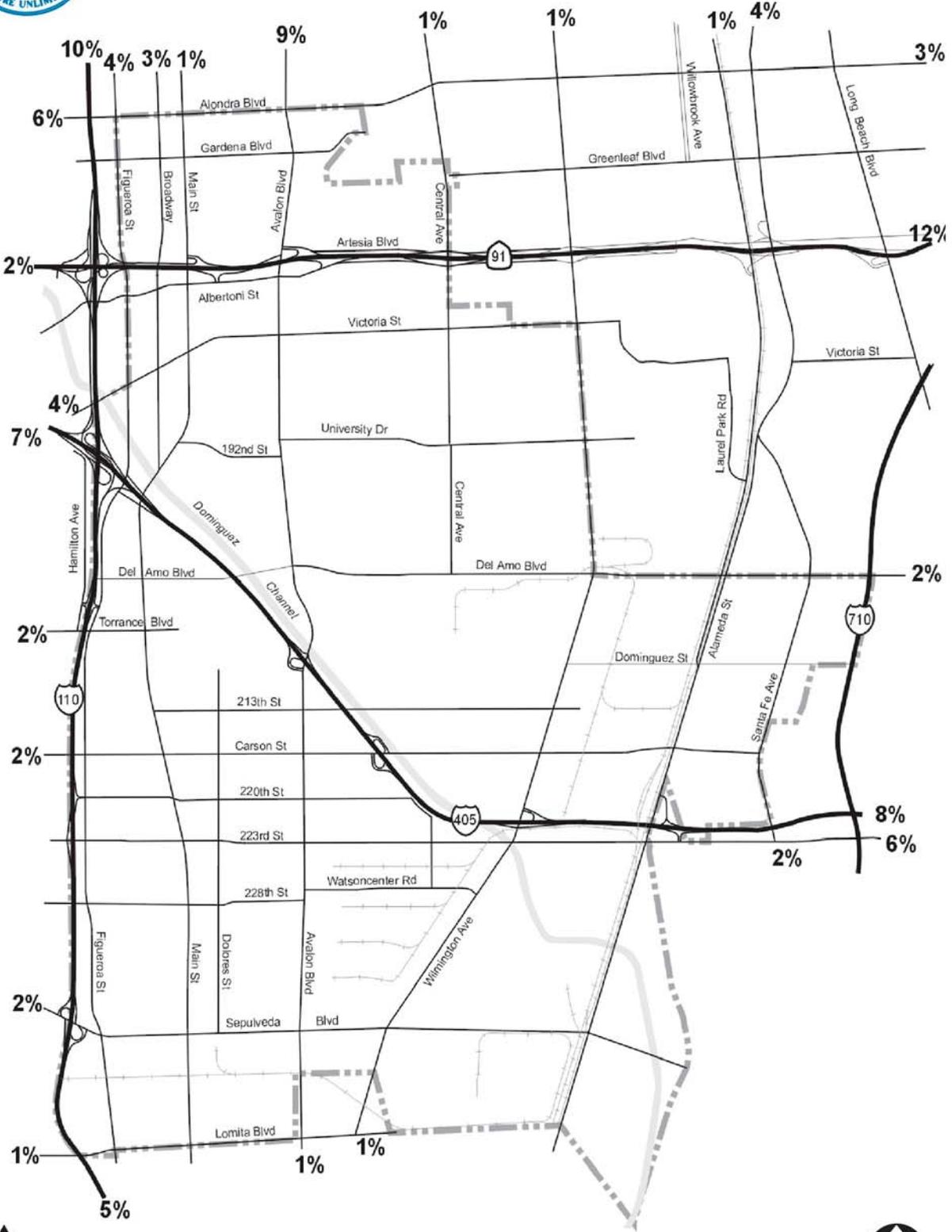
Future trip generation rates are described in *Table TI-9, Forecast Future Trip Generation in Carson*. As shown in Table TI-9, the greatest number of new trips would occur due to development in light industrial land uses, which accounts for approximately 61 percent of all new trips during the AM peak hour and 46 percent of all new trips during the PM peak hour, followed by development of residential, retail, and office. Pass-by trips were assumed to be 25 percent of all retail commercial trips (consistent with ITE standards).

**4.4 FUTURE TRIP DISTRIBUTION**

The distribution of the future trips describes the paths taken by new trips to and from the buildout locations. The traffic model that was developed for this Element includes a series of trip destination points around the City of Carson where trips will 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 is then refined for the City of Carson, based on the location of the City and its accessibility to regional freeways and roadway systems. *Exhibit TI-8, Project Trip Distribution Pattern*, illustrates the assumed trip distribution patterns that were developed for this Element. These patterns were varied as appropriate based on the location of individual project areas, for example, project areas closer to I-405 were



# CARSON GENERAL PLAN



 Meyer, Mohaddes Associates, Inc.

 NOT TO SCALE

Source: GIS Data, City of Carson  
NOVEMBER 25, 2002

## Project Trip Distribution Pattern

EXHIBIT TI-8



more heavily weighed to use the I-405 freeway, and similarly for those areas near the I-110 and SR-91, etc.

Table TI-9  
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	266	319
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
<b>Total Trips</b>		<b>14,565</b>	<b>20,682</b>

#### 4.5 TRAFFIC REDISTRIBUTION DUE TO DEL AMO OVER-CROSSING OF I-405 FREEWAY

The Del Amo over-crossing of the I-405 freeway was completed in May 2003. This new link in the circulation system resulted in traffic redistribution on parallel and connecting roadways of existing traffic volumes. The new facility enabled motorists to make the freeway crossing on Del Amo Boulevard, if desired, rather than using Carson Street or Victoria Street. The new crossing resulted in shorter path trips for some motorists.

The redistributed traffic was estimated using the regional model of the Southern California Association of Governments. The model was run with and without the new Del Amo over-crossing and the resulting differences in traffic loading was assessed. For both the AM and PM peak hours, adjustments to link volumes were applied to reflect the effects of the new over-crossing. As expected, the model results indicated that parallel route traffic volumes would decrease, while Del Amo Boulevard will 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 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.

#### 4.6 FUTURE TRAFFIC VOLUMES

Future traffic volumes with General Plan buildout were estimated by assigning project traffic to the City roadway network based on the trip distribution described above, and are shown in Exhibit TI-9, Projected Future Traffic Flow Map. The results were then evaluated for potential deficiencies (LOS E or F conditions with buildout



of general plan. Table TI-10, *Future AM Peak Hour Level of Service With General Plan Growth*, and Table TI-11, *Future PM Peak Hour Level of Service With General Plan Growth*, presents the Future Conditions levels of service with general plan buildout. The bold locations indicate forecast deficiencies in the future. Exhibit TI-10, *Deficient Segments (AM Peak Hour)*, and Exhibit TI-11, *Deficient Segments (PM Peak Hour)*, graphically depict the locations of the deficient roadway segments.

The following 17 roadway segments would operate at LOS E or F:

- 223<sup>rd</sup> Street from Wilmington Avenue to Alameda Street (PM)
- Avalon Boulevard from Dominguez Street to Del Amo Boulevard (PM)
- Carson Street from Figueroa Street to Main Street (PM)
- Carson Street from Main Street to Avalon Boulevard (PM)
- Carson Street from Avalon Boulevard to I-405 (PM)
- Central Avenue from University Drive to Victoria Street (AM/PM)
- Del Amo Boulevard from Avalon Boulevard to Central Avenue (PM)
- Main Street from Carson Street to 213<sup>th</sup> Street (AM/PM)
- Main Street from 213<sup>th</sup> Street to Torrance Boulevard (AM/PM)
- Main Street from Torrance Boulevard to Del Amo Boulevard (AM/PM)
- Sepulveda Boulevard from Figueroa Street to Main Street (PM)
- Torrance Boulevard from Figueroa Street to Main Street (AM/PM)
- Wilmington Avenue from 223<sup>rd</sup> Street to I-405 (AM/PM)
- Wilmington Avenue from I-405 to Carson Street (AM/PM)
- Wilmington Avenue from Carson Street to 213<sup>th</sup> Street (AM/PM)
- Wilmington Avenue from 213<sup>th</sup> Street to Del Amo Boulevard (AM/PM)
- Wilmington Avenue from University Drive to Victoria Street (AM/PM)

## 5.0 TRANSPORTATION SYSTEM IMPROVEMENTS

This report presents the summary of future operating conditions given the anticipated development in the City and in the area surrounding the City. It has been determined that several transportation system deficiencies would remain with the current Master Plan of Highways assumed to be built. This section discusses potential additional roadway system improvements to consider in order to maintain adequate service levels in the future.

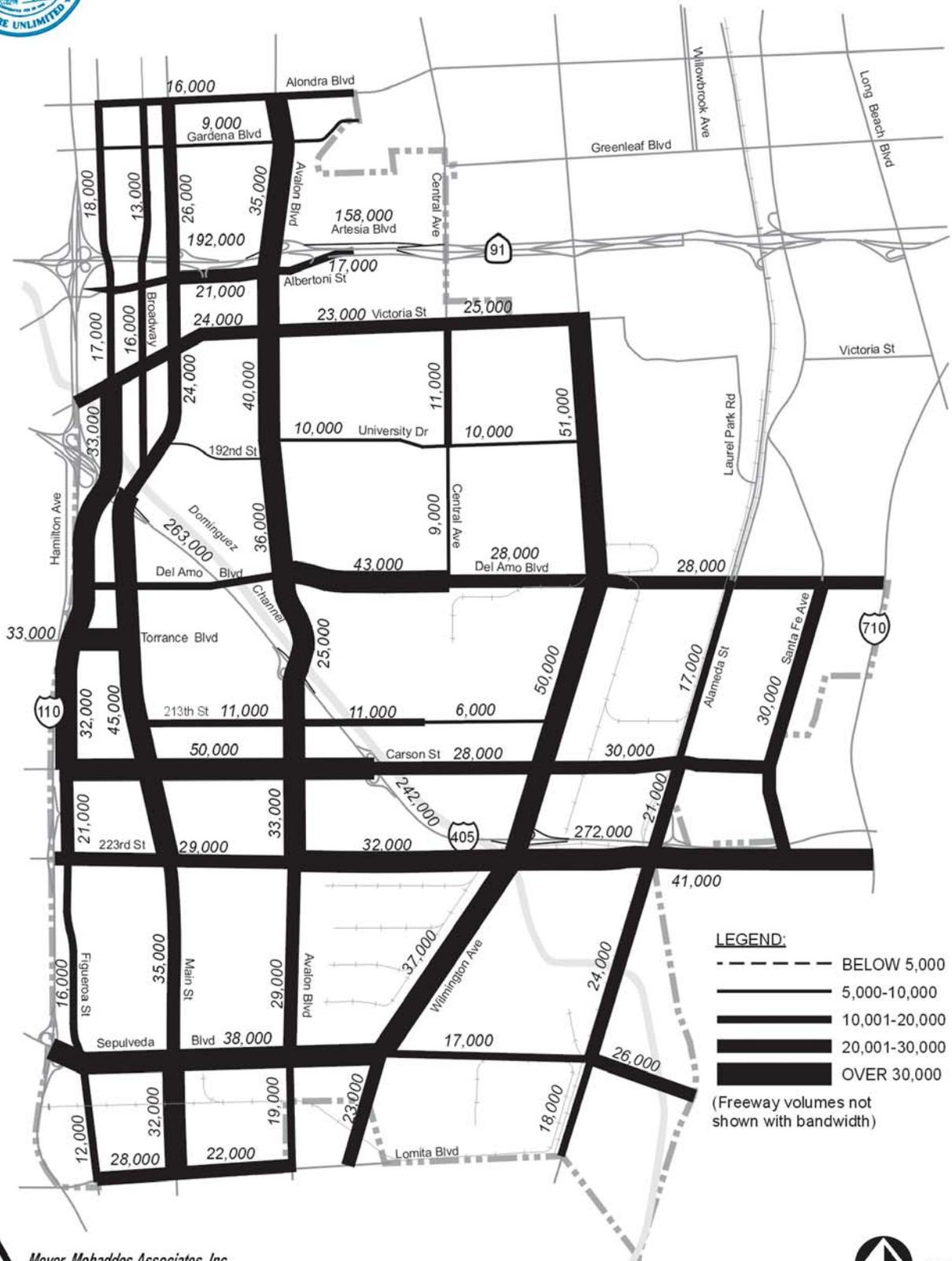
### 5.1 PLAN OF STREETS AND HIGHWAYS

The proposed Plan of Streets and Highways, shown as Exhibit TI-12, *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 Secondary Highway;
- A new roadway of Major Highway capacity be required through the 157 acre site at Avalon and I-405;



# CARSON GENERAL PLAN



 Meyer, Mohaddes Associates, Inc.

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Source: GIS Data, City of Carson  
NOVEMBER 25, 2002

## Projected Future Traffic Flow Map

**EXHIBIT TI-9**



**Table TI-10  
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	388	605	0.86	1.35	D	F
213th St	Avalon St	Chico St	Collector	750	1	1	325	378	0.72	0.84	C	D
213th St	Chico St	Wilmington Ave	Collector	750	1	1	151	178	0.34	0.39	A	A
220th St	Main St	Avalon Blvd	Collector	750	1	1	321	288	0.71	0.64	C	B
223rd St	Figueroa St	Main St	Major	750	3	3	707	964	0.47	0.64	A	B
223rd St	Main St	Avalon Blvd	Major	750	3	3	783	965	0.52	0.64	A	B
223rd St	Avalon St	Wilmington Ave	Major	750	3	3	840	906	0.56	0.60	A	B
223rd St	Wilmington Ave	Alameda St	Major	750	3	3	997	1202	0.66	0.80	B	D
228th St	Main St	Avalon Blvd	Collector	750	1	1	158	167	0.35	0.37	A	A
Alameda St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	456	645	0.30	0.43	A	A
Alameda St	Sepulveda Blvd	223rd St	Major	750	3	3	614	911	0.41	0.61	A	B
Alameda St	I-405 Fwy	Carson St	Major	750	3	3	725	791	0.48	0.53	A	A
Alameda St	Carson St	Dominguez St	Major	750	3	3	523	615	0.35	0.41	A	A
Albertoni St	Figueroa St	Main St	Secondary	750	2	2	429	550	0.36	0.46	A	A
Albertoni St	Main St	Avalon Blvd	Secondary	750	2	2	693	933	0.58	0.78	A	C
Albertoni St	Avalon St	SR-91 Fwy	Secondary	750	2	2	585	358	0.49	0.30	A	A
Alondra Blvd	Figueroa St	Main St	Major	750	3	3	400	483	0.18	0.21	A	A
Alondra Blvd	Main St	Avalon Blvd	Major	750	3	3	470	722	0.21	0.32	A	A
Avalon Blvd	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	731	477	0.49	0.32	A	A
Avalon Blvd	Sepulveda Blvd	223rd St	Major	750	3	3	1254	755	0.84	0.50	D	A
Avalon Blvd	223rd St	Carson St	Major	750	3	3	1253	1019	0.84	0.68	D	B
Avalon Blvd	Carson St	213th St	Major	750	3	3	1258	848	0.56	0.38	A	A
Avalon Blvd	213th St	I-405 Fwy	Major	750	3	3	1264	1187	0.56	0.53	A	A
Avalon Blvd	Dominguez St	Del Amo Blvd	Major	750	3	3	1999	1114	0.89	0.49	D	A
Avalon Blvd	Del Amo Blvd	University Dr	Major	750	3	3	1361	999	0.60	0.44	B	A
Avalon Blvd	University Dr	Victoria St	Major	750	3	3	1247	1337	0.55	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	1171	984	0.52	0.44	A	A
Avalon Blvd	Gardena Blvd	Alondra Blvd	Major	750	3	3	1019	1107	0.45	0.49	A	A
Broadway	Main St	Victoria St	Major	750	3	3	476	439	0.32	0.29	A	A
Broadway	Victoria St	Albertoni St	Major	750	3	3	549	497	0.37	0.33	A	A
Broadway	SR-91 Fwy	Gardena Blvd	Major	750	3	3	440	486	0.29	0.32	A	A
Broadway	Gardena Blvd	Alondra Blvd	Major	750	3	3	448	532	0.30	0.35	A	A
Carson St	Figueroa St	Main St	Secondary	750	2	2	1786	1261	1.19	0.84	F	D
Carson St	Main St	Avalon Blvd	Secondary	750	2	2	1479	1884	0.99	1.26	E	F
Carson St	Avalon St	I-405 Fwy	Major	750	3	3	1875	1930	1.25	1.29	F	F
Carson St	I-405 Fwy	Wilmington Ave	Major	750	3	3	1072	736	0.71	0.49	C	A
Carson St	Wilmington Ave	Alameda St	Major	750	3	3	835	1790	0.56	1.19	A	F
Carson St	Alameda St	Santa Fe Ave	Major	750	3	3	571	1455	0.38	0.97	A	E
Central Ave	Del Amo Blvd	Turmont St	Major	750	3	3	597	651	0.40	0.43	A	A
Central Ave	Turmont St	University Dr	Major	750	3	3	728	623	0.49	0.42	A	A
Central Ave	University Dr	Victoria St	Major	750	2	2	999	1717	1.11	1.91	F	F



**Table TI-10 [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	1246	662	0.83	0.44	D	A
Del Amo Blvd	Main St	Avalon Blvd	Major	750	3	3	1397	714	0.93	0.48	E	A
Del Amo Blvd	Avalon St	Central Ave	Major	750	3	3	1893	1537	1.26	1.02	F	F
Del Amo Blvd	Central Ave	Wilmington Ave	Major	750	3	3	743	1333	0.50	0.89	A	D
Dolores St	Sepulveda Blvd	228th St	Collector	750	1	1	67	150	0.15	0.33	A	A
Figueroa St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	350	341	0.23	0.23	A	A
Figueroa St	Sepulveda Blvd	223rd St	Major	750	3	3	415	307	0.28	0.20	A	A
Figueroa St	223rd St	Carson St	Major	750	3	3	1180	448	0.79	0.30	C	A
Figueroa St	Carson St	Torrance Blvd	Major	750	3	3	1962	527	1.31	0.35	F	A
Figueroa St	Torrance Blvd	Del Amo Blvd	Major	750	3	3	2042	848	1.36	0.57	F	A
Figueroa St	Del Amo Blvd	I-405 Fwy	Major	750	3	3	809	1058	0.54	0.71	A	C
Figueroa St	I-405 Fwy	Victoria St	Major	750	3	3	1059	968	0.71	0.65	C	B
Figueroa St	Victoria St	SR-91 Fwy	Major	750	3	3	659	622	0.44	0.41	A	A
Figueroa St	SR-91 Fwy	Gardena Blvd	Major	750	3	3	576	649	0.38	0.43	A	A
Figueroa St	Gardena Blvd	Alondra Blvd	Major	750	3	3	559	736	0.37	0.49	A	A
Gardena Blvd	Figueroa St	Main St	Secondary	750	2	2	214	317	0.18	0.26	A	A
Gardena Blvd	Main St	Avalon Blvd	Secondary	750	2	2	316	290	0.26	0.24	A	A
Lomita Blvd	Figueroa St	Main St	Major	750	3	3	1021	1049	0.68	0.70	B	B
Lomita Blvd	Main St	Avalon Blvd	Major	750	3	3	834	894	0.56	0.60	A	A
Lomita Blvd	Wilmington Ave	Alameda St	Major	750	3	3	355	330	0.47	0.44	A	A
Main St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	1260	1141	0.84	0.76	D	C
Main St	Sepulveda Blvd	223rd St	Major	750	3	3	973	758	0.65	0.51	B	A
Main St	223rd St	Carson St	Major	750	3	3	1396	967	0.93	0.64	E	B
Main St	Carson St	213th St	Major	750	3	3	2528	1161	1.69	0.77	F	C
Main St	213th St	Torrance Blvd	Major	750	3	3	2566	1042	1.71	0.69	F	B
Main St	Torrance Blvd	Del Amo Blvd	Major	750	3	3	2755	1247	1.84	0.83	F	D
Main St	Del Amo Blvd	I-405 Fwy	Major	750	3	3	1059	1084	0.71	0.72	C	C
Main St	I-405 Fwy	Broadway	Major	750	3	3	992	1118	0.66	0.75	B	C
Main St	Broadway	Victoria St	Major	750	3	3	570	619	0.38	0.41	A	A
Main St	Victoria St	Albertoni St	Major	750	3	3	798	825	0.53	0.55	A	A
Main St	SR-91 Fwy	Gardena Blvd	Major	750	3	3	948	934	0.63	0.62	B	B
Main St	Gardena Blvd	Alondra Blvd	Major	750	3	3	635	955	0.42	0.64	A	B
Moneta Ave	228th St	223rd St	Collector	750	1	1	205	135	0.46	0.30	A	A
Santa Fe Ave	Carson St	Dominguez St	Secondary	750	2	2	1039	1077	0.87	0.90	D	D
Santa Fe Ave	Dominguez St	Del Amo Blvd	Secondary	750	2	2	848	1108	0.71	0.92	C	E
Sepulveda Blvd	Figueroa St	Main St	Major	750	3	3	1439	1119	0.96	0.75	E	C
Sepulveda Blvd	Main St	Avalon Blvd	Major	750	3	3	1336	1049	0.89	0.70	D	B
Sepulveda Blvd	Avalon St	Wilmington Ave	Major	750	3	3	1212	863	0.81	0.58	D	A
Sepulveda Blvd	Wilmington Ave	Alameda St	Major	750	3	3	705	535	0.47	0.36	A	A
Sepulveda Blvd	Alameda St	Intermodal	Major	750	3	3	804	650	0.54	0.43	A	A



**Table TI-10 [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	1843	869	1.54	0.72	F	C
University Dr	Avalon St	Central Ave	Secondary	750	2	2	412	339	0.34	0.28	A	A
University Dr	Central Ave	Wilmington Ave	Secondary	750	2	2	381	367	0.32	0.31	A	A
Victoria St	Figueroa St	Main St	Major	750	3	3	1015	994	0.68	0.66	B	B
Victoria St	Main St	Avalon Blvd	Major	750	3	3	685	761	0.46	0.51	A	A
Victoria St	Avalon St	Tamcliff Ave	Major	750	3	3	917	616	0.61	0.41	B	A
Victoria St	Tamcliff Ave	Central Ave	Major	750	3	3	632	495	0.42	0.33	A	A
Victoria St	Central Ave	Wilmington Ave	Major	750	3	3	585	553	0.78	0.74	C	C
Wilmington Ave	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	1136	639	0.76	0.43	C	A
Wilmington Ave	Sepulveda Blvd	223rd St	Major	750	3	3	1639	909	1.09	0.61	F	B
Wilmington Ave	223rd St	I-405 Fwy	Major	750	3	3	2198	1773	1.47	1.18	F	F
Wilmington Ave	I-405 Fwy	Carson St	Major	750	3	3	2277	1463	1.52	0.98	F	E
Wilmington Ave	Carson St	213th St	Major	750	3	3	2759	1100	1.84	0.73	F	C
Wilmington Ave	213th St	Del Amo Blvd	Major	750	3	3	2162	1417	1.44	0.94	F	E
Wilmington Ave	Del Amo Blvd	University Dr	Major	750	3	3	1532	1261	1.02	0.84	F	D
Wilmington Ave	University Dr	Victoria St	Major	750	3	3	1324	2683	0.59	1.19	A	F



**Table TI-11  
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	484	642	1.08	1.43	F	F
213th St	Avalon St	Chico St	Collector	750	1	1	543	404	1.21	0.90	F	D
213th St	Chico St	Wilmington Ave	Collector	750	1	1	234	278	0.52	0.62	A	B
220th St	Main St	Avalon Blvd	Collector	750	1	1	409	328	0.91	0.73	E	C
223rd St	Figueroa St	Main St	Major	750	3	3	1094	792	0.73	0.53	C	A
223rd St	Main St	Avalon Blvd	Major	750	3	3	957	987	0.64	0.66	B	B
223rd St	Avalon St	Wilmington Ave	Major	750	3	3	1102	1221	0.73	0.81	C	D
223rd St	Wilmington Ave	Alameda St	Major	750	3	3	2216	1029	1.48	0.69	F	B
228th St	Main St	Avalon Blvd	Collector	750	1	1	150	152	0.33	0.34	A	A
Alameda St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	703	716	0.47	0.48	A	A
Alameda St	Sepulveda Blvd	223rd St	Major	750	3	3	1155	754	0.77	0.50	C	A
Alameda St	I-405 Fwy	Carson St	Major	750	3	3	706	742	0.47	0.49	A	A
Alameda St	Carson St	Dominguez St	Major	750	3	3	694	661	0.46	0.44	A	A
Albertoni St	Figueroa St	Main St	Secondary	750	2	2	630	418	0.53	0.35	A	A
Albertoni St	Main St	Avalon Blvd	Secondary	750	2	2	1256	435	1.05	0.36	F	A
Albertoni St	Avalon St	SR-91 Fwy	Secondary	750	2	2	1039	276	0.87	0.23	D	A
Alondra Blvd	Figueroa St	Main St	Major	750	3	3	435	490	0.19	0.22	A	A
Alondra Blvd	Main St	Avalon Blvd	Major	750	3	3	783	544	0.35	0.24	A	A
Avalon Blvd	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	611	903	0.41	0.60	A	B
Avalon Blvd	Sepulveda Blvd	223rd St	Major	750	3	3	928	1392	0.62	0.93	B	E
Avalon Blvd	223rd St	Carson St	Major	750	3	3	1125	1489	0.75	0.99	C	E
Avalon Blvd	Carson St	213th St	Major	750	3	3	1246	1635	0.55	0.73	A	C
Avalon Blvd	213th St	I-405 Fwy	Major	750	3	3	1392	1935	0.62	0.86	B	D
Avalon Blvd	Dominguez St	Del Amo Blvd	Major	750	3	3	1218	2320	0.54	1.03	A	F
Avalon Blvd	Del Amo Blvd	University Dr	Major	750	3	3	1748	1905	0.78	0.85	C	D
Avalon Blvd	University Dr	Victoria St	Major	750	3	3	2054	1860	0.91	0.83	E	D
Avalon Blvd	Victoria St	Albertoni St	Major	750	3	3	1361	1447	0.60	0.64	B	B
Avalon Blvd	SR-91 Fwy	Gardena Blvd	Major	750	3	3	1267	1444	0.56	0.64	A	B
Avalon Blvd	Gardena Blvd	Alondra Blvd	Major	750	3	3	1479	1138	0.66	0.51	B	A
Broadway	Main St	Victoria St	Major	750	3	3	609	688	0.41	0.46	A	A
Broadway	Victoria St	Albertoni St	Major	750	3	3	581	609	0.39	0.41	A	A
Broadway	SR-91 Fwy	Gardena Blvd	Major	750	3	3	575	459	0.38	0.31	A	A
Broadway	Gardena Blvd	Alondra Blvd	Major	750	3	3	657	479	0.44	0.32	A	A
Carson St	Figueroa St	Main St	Secondary	750	2	2	1988	1979	1.33	1.325	F	F
Carson St	Main St	Avalon Blvd	Secondary	750	2	2	2393	2010	1.60	1.34	F	F
Carson St	Avalon St	I-405 Fwy	Major	750	3	3	2345	2014	1.56	1.34	F	F
Carson St	I-405 Fwy	Wilmington Ave	Major	750	3	3	1071	1303	0.71	0.87	C	D
Carson St	Wilmington Ave	Alameda St	Major	750	3	3	1603	1027	1.07	0.68	F	B
Carson St	Alameda St	Santa Fe Ave	Major	750	3	3	1566	717	1.04	0.48	F	A
Central Ave	Del Amo Blvd	Turmont St	Major	750	3	3	751	763	0.50	0.51	A	A
Central Ave	Turmont St	University Dr	Major	750	3	3	647	837	0.43	0.56	A	A
Central Ave	University Dr	Victoria St	Major	750	2	2	1468	948	1.63	1.05	F	F



**Table TI-11 [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	907	1972	0.60	1.31	B	F
Del Amo Blvd	Main St	Avalon Blvd	Major	750	3	3	1834	1827	1.22	1.22	F	F
Del Amo Blvd	Avalon St	Central Ave	Major	750	3	3	1943	2476	1.30	1.65	F	F
Del Amo Blvd	Central Ave	Wilmington Ave	Major	750	3	3	1610	1025	1.07	0.68	F	B
Dolores St	Sepulveda Blvd	228th St	Collector	750	1	1	134	104	0.30	0.23	A	A
Figueroa St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	358	360	0.24	0.24	A	A
Figueroa St	Sepulveda Blvd	223rd St	Major	750	3	3	592	691	0.39	0.46	A	A
Figueroa St	223rd St	Carson St	Major	750	3	3	1048	880	0.70	0.59	B	A
Figueroa St	Carson St	Torrance Blvd	Major	750	3	3	1454	2093	0.97	1.40	E	F
Figueroa St	Torrance Blvd	Del Amo Blvd	Major	750	3	3	2220	2102	1.48	1.40	F	F
Figueroa St	Del Amo Blvd	I-405 Fwy	Major	750	3	3	749	1472	0.50	0.98	A	E
Figueroa St	I-405 Fwy	Victoria St	Major	750	3	3	945	1082	0.63	0.72	B	C
Figueroa St	Victoria St	SR-91 Fwy	Major	750	3	3	705	706	0.47	0.47	A	A
Figueroa St	SR-91 Fwy	Gardena Blvd	Major	750	3	3	759	813	0.51	0.54	A	A
Figueroa St	Gardena Blvd	Alondra Blvd	Major	750	3	3	895	659	0.60	0.44	A	A
Gardena Blvd	Figueroa St	Main St	Secondary	750	2	2	287	350	0.24	0.29	A	A
Gardena Blvd	Main St	Avalon Blvd	Secondary	750	2	2	415	371	0.35	0.31	A	A
Lomita Blvd	Figueroa St	Main St	Major	750	3	3	1407	899	0.94	0.60	E	A
Lomita Blvd	Main St	Avalon Blvd	Major	750	3	3	891	866	0.59	0.58	A	A
Lomita Blvd	Wilmington Ave	Alameda St	Major	750	3	3	455	376	0.61	0.50	B	A
Main St	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	1351	1080	0.90	0.72	E	C
Main St	Sepulveda Blvd	223rd St	Major	750	3	3	1076	1207	0.72	0.80	C	D
Main St	223rd St	Carson St	Major	750	3	3	1410	1611	0.94	1.07	E	F
Main St	Carson St	213th St	Major	750	3	3	2236	2841	1.49	1.89	F	F
Main St	213th St	Torrance Blvd	Major	750	3	3	1927	2786	1.28	1.86	F	F
Main St	Torrance Blvd	Del Amo Blvd	Major	750	3	3	2619	3342	1.75	2.23	F	F
Main St	Del Amo Blvd	I-405 Fwy	Major	750	3	3	1114	1273	0.74	0.85	C	D
Main St	I-405 Fwy	Broadway	Major	750	3	3	1087	1335	0.72	0.89	C	D
Main St	Broadway	Victoria St	Major	750	3	3	513	629	0.34	0.42	A	A
Main St	Victoria St	Albertoni St	Major	750	3	3	1025	1015	0.68	0.68	B	B
Main St	SR-91 Fwy	Gardena Blvd	Major	750	3	3	1121	959	0.75	0.64	C	B
Main St	Gardena Blvd	Alondra Blvd	Major	750	3	3	1055	703	0.70	0.47	C	A
Moneta Ave	228th St	223rd St	Collector	750	1	1	144	205	0.32	0.46	A	A
Santa Fe Ave	Carson St	Dominguez St	Secondary	750	2	2	1252	1281	1.04	1.07	F	F
Santa Fe Ave	Dominguez St	Del Amo Blvd	Secondary	750	2	2	1348	1023	1.12	0.85	F	D
Sepulveda Blvd	Figueroa St	Main St	Major	750	3	3	1591	2074	1.06	1.38	F	F
Sepulveda Blvd	Main St	Avalon Blvd	Major	750	3	3	1417	1536	0.94	1.02	E	F
Sepulveda Blvd	Avalon St	Wilmington Ave	Major	750	3	3	1160	1299	0.77	0.87	C	D
Sepulveda Blvd	Wilmington Ave	Alameda St	Major	750	3	3	597	765	0.40	0.51	A	A
Sepulveda Blvd	Alameda St	Intermodal	Major	750	3	3	875	1217	0.58	0.81	A	D

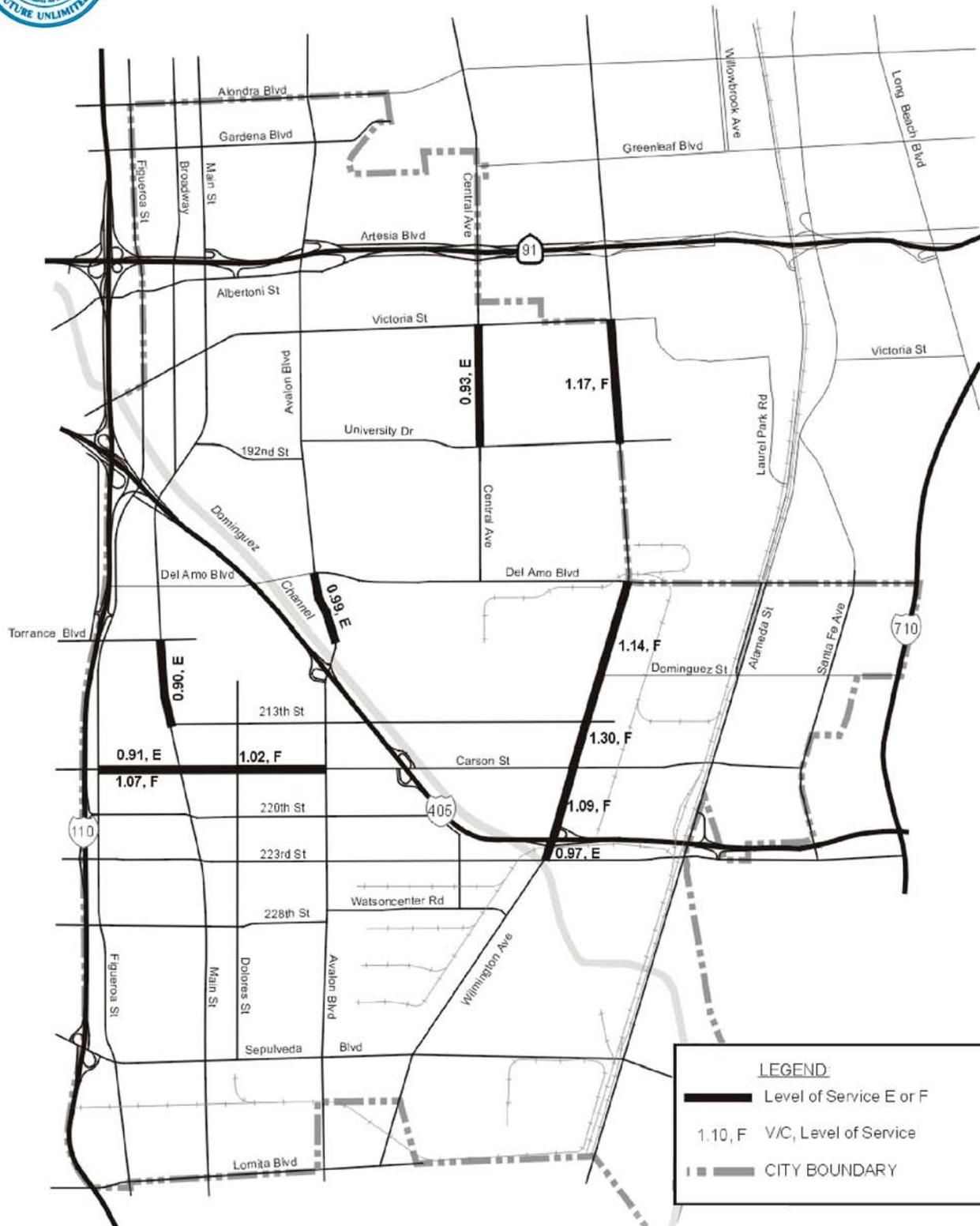


**Table TI-11 [continued]  
Future PM Peak Hour Level of Service With General Plan Growth**

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	1605	2303	1.34	1.92	F	F
University Dr	Avalon St	Central Ave	Secondary	750	2	2	375	416	0.31	0.35	A	A
University Dr	Central Ave	Wilmington Ave	Secondary	750	2	2	337	495	0.28	0.41	A	A
Victoria St	Figueroa St	Main St	Major	750	3	3	1341	975	0.89	0.65	D	B
Victoria St	Main St	Avalon Blvd	Major	750	3	3	917	509	0.61	0.34	B	A
Victoria St	Avalon St	Tamcliff Ave	Major	750	3	3	1190	1051	0.79	0.70	C	C
Victoria St	Tamcliff Ave	Central Ave	Major	750	3	3	1009	897	0.67	0.60	B	A
Victoria St	Central Ave	Wilmington Ave	Major	750	3	3	760	1236	1.01	1.65	F	F
Wilmington Ave	Lomita Blvd	Sepulveda Blvd	Major	750	3	3	547	1348	0.36	0.90	A	D
Wilmington Ave	Sepulveda Blvd	223rd St	Major	750	3	3	1157	1890	0.77	1.26	C	F
Wilmington Ave	223rd St	I-405 Fwy	Major	750	3	3	1556	3081	1.04	2.05	F	F
Wilmington Ave	I-405 Fwy	Carson St	Major	750	3	3	1436	2887	0.96	1.92	E	F
Wilmington Ave	Carson St	213th St	Major	750	3	3	1403	2868	0.94	1.91	E	F
Wilmington Ave	213th St	Del Amo Blvd	Major	750	3	3	1794	2554	1.20	1.70	F	F
Wilmington Ave	Del Amo Blvd	University Dr	Major	750	3	3	1508	1709	1.01	1.14	F	F
Wilmington Ave	University Dr	Victoria St	Major	750	3	3	2702	1518	1.20	0.67	F	B



# CARSON GENERAL PLAN



 Meyer, Mohaddes Associates, Inc.

 NOT TO SCALE

Source: GIS Data, City of Carson  
JUNE 25, 2003

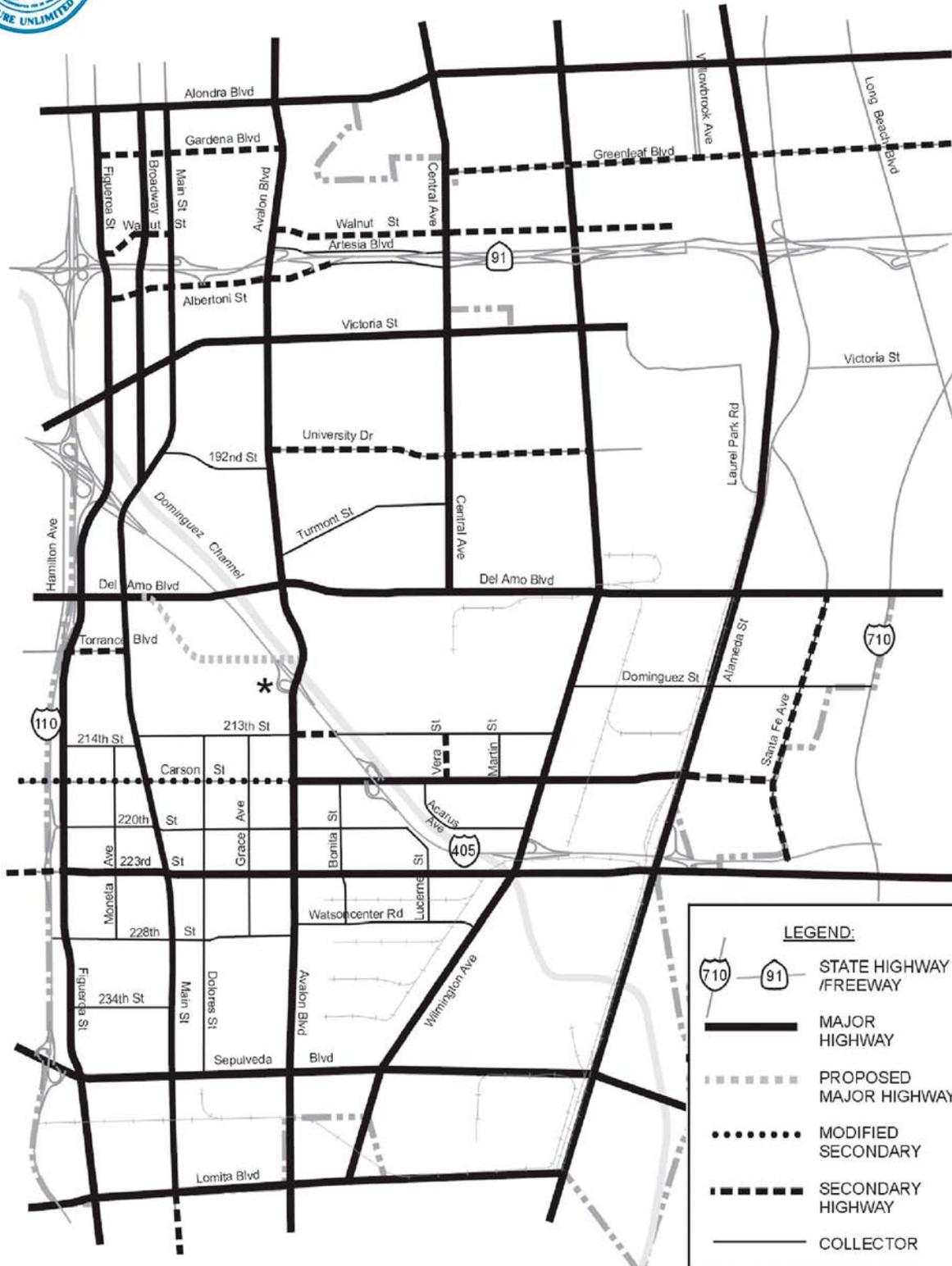
## Deficient Segments (AM Peak Hour)

EXHIBIT TI-10





# CARSON GENERAL PLAN



**LEGEND:**

- STATE HIGHWAY /FREEWAY
- MAJOR HIGHWAY
- PROPOSED MAJOR HIGHWAY
- MODIFIED SECONDARY
- SECONDARY HIGHWAY
- COLLECTOR

Meyer, Mohaddes Associates, Inc.

NOT TO SCALE



- An improved interchange at Avalon and I-405 be required prior to use of the 157 acre site; and
- Carson Street between Alameda Street and Santa Fe Street be made a Secondary Highway.

These changes are all needed by the type of land use which 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 no expanding the number of travel lanes it currently has. Carson Street will retain its 100 foot right of way but will retain its parking lanes.

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.

Carson Street at the east end of the City does not have an eastern extension out of the City, land uses are neighborhood in nature, and there is little chance of obtaining the full 100 feet of right of way required for a Major Highway without decimating the parcels on the north side of the roadway. The street would have an 83 foot right of way.

The cross sections for roadways required by the Plan of Streets and Highways are shown in Exhibit TI-13, Street Cross Sections.

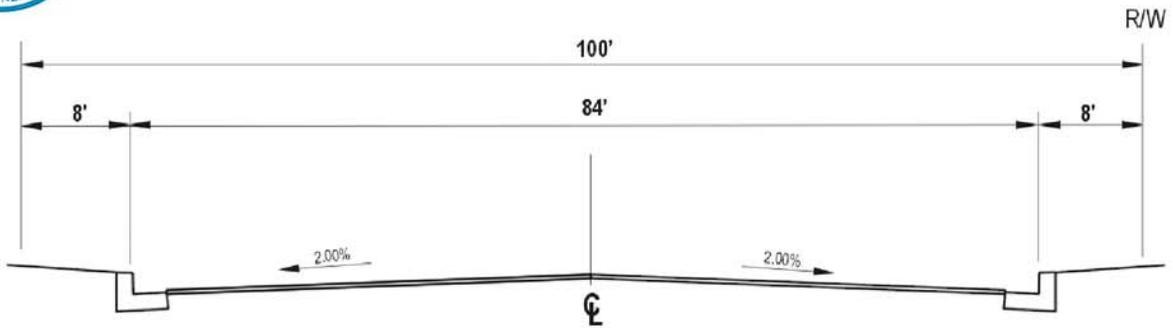
The City of Carson requires fuel improvements in public right-of-way pursuant to the Zoning Ordinance and the City Engineer’s Standard Drawings. Sidewalks are not required in some industrial areas as shown in Exhibit TI-14, Non-Sidewalk Areas.

## **5.2 OTHER IMPROVEMENTS BEYOND THE MASTER PLAN OF HIGHWAYS**

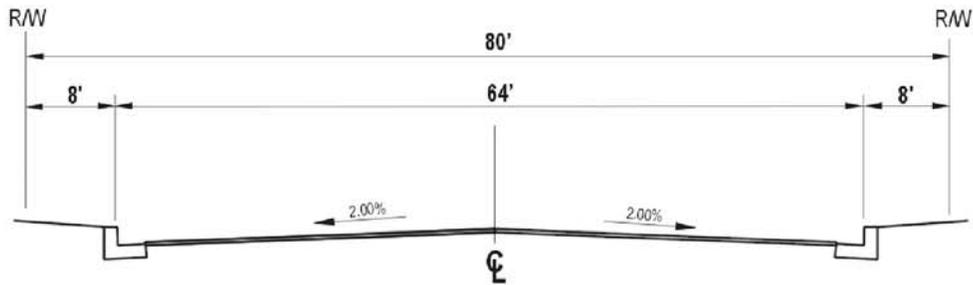
The analysis presented in this report demonstrates that several roadway segments are forecast to experience congestion and level of service E or F conditions even with the completion of the Master Plan of Highways. Therefore, in addition to the designated street system in the Master Plan, further transportation system enhancements are warranted to maintain adequate service levels. Those improvements to the transportation system are described below.

### **INTELLIGENT TRANSPORTATION SYSTEMS (ITS)**

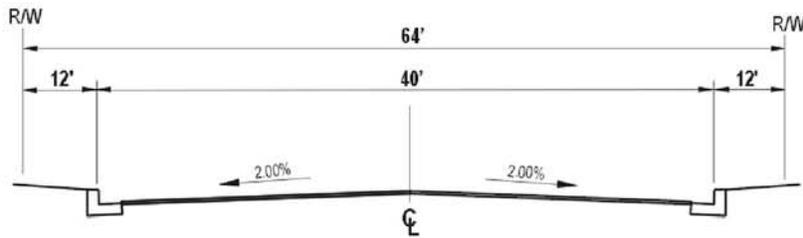
Nearly every jurisdiction in southern California has experienced roadway congestion problems that cannot be solved simply by adding roadway capacity. This is for several reasons, including the lack of right-of-way to accomplish various widening projects, as well as the environmental impacts associated with major roadway enhancements. As an alternative and supplemental improvements, many local agencies are implementing Intelligent Transportation Systems projects using advanced computer and communication technologies. The ITS projects that are being implemented provide improved traveler information, manage the flow of traffic, and utilize existing transportation systems more efficiently.



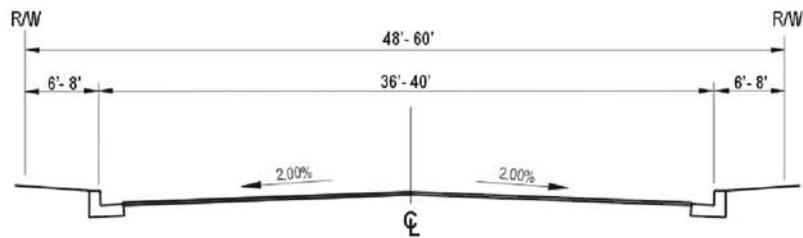
**MAJOR HIGHWAY**



**SECONDARY HIGHWAY**

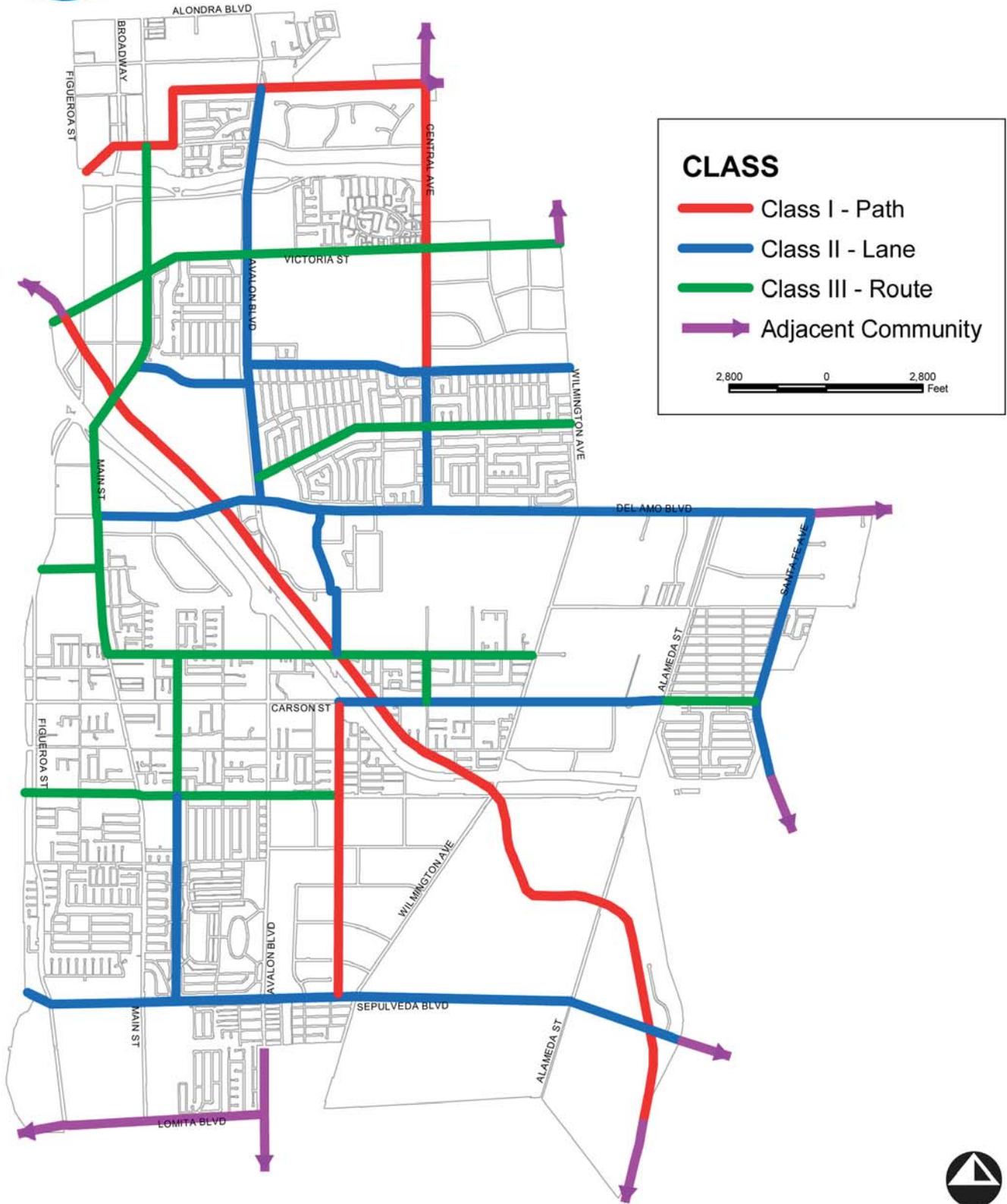


**COLLECTOR STREET**



**LOCAL STREET**





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

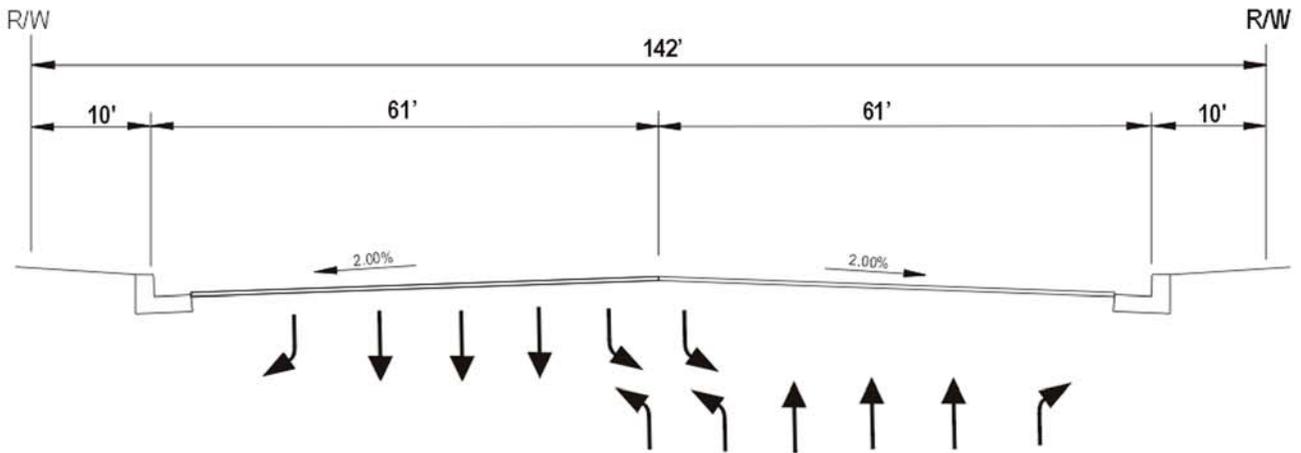


The goals of ITS are to reduce travel times, provide more reliable travel times, improve safety, reduce delay and reduce congestion. The high concentration of industrial employment in some areas of Carson makes it a City that is well suited for application of advanced technology to accomplish the goals 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 could be considered as 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 will yield the equivalent of a 5 to 10 percent improvement in traffic flow and reduction in delays.

### **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 will 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 TI-15, *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.



**MAJOR STREET - Maximum Feasible Intersection**



Source: GIS Data, City of Carson  
OCTOBER 28, 2002

**Maximum Feasible Intersection Concept**

**EXHIBIT TI-15**



## **NEIGHBORHOOD TRAFFIC CONTROL**

The City experiences traffic intrusion into residential neighborhoods as a result of many factors including arterial congestion (creating traffic by-passes), high student population at schools, adjacent commercial activities and other reasons. As these problems occur, they cause impacts on local residential streets such as speeding and excessive traffic volumes. In many cases, the impact is an “environmental impact” on the residential street. While the street has the total capacity for more traffic, the “environmental capacity” is exceeded based on the residential character of the adjoining land uses. Speeds and volumes are perceived to be too high and disrupt the character of the street.

While such impacts occur, it is necessary to address problems on a case-by-case basis, including the affected residents in the process. To accomplish this, a “Neighborhood Traffic Control Program” is proposed as part of the Transportation Element update. It should be noted that a program for neighborhood traffic control could require significant staff resources, outside consultant costs, and capital expenditures, depending on the extent of the program. This will require review and prioritization compared to other roadway infrastructure needs.

## **CONGESTION MANAGEMENT PROGRAM SYSTEMS ANALYSIS**

Development activity related to buildout of the General Plan will affect the regional transportation facilities in addition to the transportation system within Carson. In particular, the freeway system will 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 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 project 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 TI-12 and TI-13, 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 impact by the project. As identified on the tables, the results of the analysis indicate that the buildout of the 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, and 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 TI-12  
CMP Freeway Analysis Results for General Plan Buildout – 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 TI-13  
CMP Freeway Analysis Results for General Plan Buildout – 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	



## 6.0 PLANNING FACTORS, GOALS, POLICIES AND IMPLEMENTATION

The acronyms listed below are used for the implementation measures:

- RA/D: Responsible Agency/Division
- FS: Funding Source
- TF: Time Frame

### ISSUE: TRUCK TRAFFIC IN CARSON

*Some neighborhoods are impacted by noise and vibrations associated with truck traffic, particularly those residential areas adjacent to industrial uses. To mitigate this impact, the City should restrict truck traffic to certain essential streets in Carson. The City should develop acceptable development standards to control land uses which generate excessive truck traffic.*

**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.

### Implementation Measures:

- TI-IM-1.1 Periodically evaluate the City’s truck route system and determine the necessity of the routes. The truck route system should exclude streets with inadequate improvements or those intended to serve residential or pedestrian-oriented development. *(Implements Policies TI-1.1, TI-1.2, TI-1.3)*

- RA/D: Engineering
- FS: Gas Tax
- TF: Every two years



TI-IM-1.2      Require new development applications to provide estimates of truck trip generation as part of environmental studies and incorporate improvements as necessary to mitigate truck impacts. *(Implements Policies TI-1.1, TI-1.2, TI-1.3)*

**RA/D:**    Planning, Engineering  
**FS:**      Environmental Fees  
**TF:**      Ongoing

TI-IM-1.3      When necessary, use and enforce “No Truck Parking” signs on those residential-serving streets adjacent to industrial areas. *(Implements Policy TI-1.2)*

**RA/D:**    Engineering  
**FS:**      Gas Tax  
**TF:**      Ongoing

TI-IM-1.4      Ensure that the development review process incorporates consideration of and adequate design for off-street commercial loading requirements in all new commercial projects, where applicable. *(Implements Policy TI-1.4)*

**RA/D:**    Planning  
**FS:**      Application fees  
**TF:**      Ongoing

TI-IM-1.5      All new construction or reconstruction of streets or corridors that are designated as truck routes shall have a Traffic Index calculation as indicated by the State Department of Transportation. *(Implements Policy TI-1.5)*

**RA/D:**    Engineering  
**FS:**      Gas Tax  
**TF:**      Ongoing



**ISSUE:      IMPROVING AND MAINTAINING TRANSPORTATION INFRASTRUCTURE IN THE CITY**

*In addition to general street maintenance, it is important to provide additional signalization and street lighting on certain streets, as well as upgrade these systems when appropriate. Also, the City should work with County, State and Federal agencies to improve all circulation systems serving the City of Carson.*

**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 necessary 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 non-truck route streets and other streets as appropriate.

**Implementation Measures:**

- TI-IM-2.1 Evaluate and pursue design and operational improvements to improve the efficiency of arterials and intersections in the City to more closely approximate planned carrying capacities. Priorities should be given to the study of certain intersections on Wilmington and Avalon. *(Implements Policy TI-2.1)*  
  

**RA/D:** Engineering  
**FS:** Gas Tax, Application Fees  
**TF:** 2003-05
- TI-IM-2.2 Develop a Citywide traffic model to evaluate current and future circulation system impacts in the City. *(Implements Policy TI-2.1)*



**RA/D:** Engineering  
**FS:** Gas Tax, Impact Fees  
**TF:** 2003-05

TI-IM-2.3 Establish and maintain a Citywide traffic count program to ensure the availability of data needed to identify circulation problems and to evaluate potential improvements. *(Implements Policy TI-2.1)*

**RA/D:** Engineering  
**FS:** Gas Tax, General Fund  
**TF:** 2003-05

TI-IM-2.4 Perform an annual evaluation of the circulation system to determine segments and intersections not meeting LOS requirements. If necessary develop a deficiency plan in order to identify mitigations which achieve LOS goals. *(Implements Policy TI-2.1)*

**RA/D:** Engineering  
**FS:** Gas Tax  
**TF:** Annual

TI-IM-2.5 Evaluate traffic impacts, including truck impacts, associated with proposed new developments prior to project approval. Require the implementation of appropriate mitigation measures prior to, or in conjunction with, project development. Mitigation measures shall be required of the project developer on a “fair-share” basis. *(Implements Policies TI-2.1, TI-2.2, TI-2.3, TI-2.4, TI-2.8)*

**RA/D:** Engineering, Planning  
**FS:** Environmental Application Fees  
**TF:** Ongoing

TI-IM-2.6 Prepare a plan of traffic signals and traffic control to address the needs for new signals, signal synchronization at existing signalized intersection systems, the efficiency of existing signals, and the effect of traffic signals on vehicular and pedestrian safety Citywide. *(Implements Policies TI-2.1, TI-2.4, TI-2.5)*

**RA/D:** Engineering  
**FS:** Gas Tax  
**TF:** 2004-05

TI-IM-2.7 Prioritize capital improvements, focusing on those areas of the City which operate at unacceptable levels of



service, to improve levels of service and enhance travel safety. *(Implements Policies TI-2.1, TI-2.2, TI-2.3, TI-2.4, TI-2.5, TI-2.7, TI-2.8)*

**RA/D:** Engineering  
**FS:** General Fund, Redevelopment Funds  
**TF:** Ongoing

TI-IM-2.8 Investigate the feasibility of providing cameras at intersections for red-light photo enforcement. *(Implements Policy TI-2.4)*

**RA/D:** Engineering, Sheriff  
**FS:** Gas Tax, General Fund, Grant Funds  
**TF:** 2004-05

TI-IM-2.9 Conduct the necessary feasibility and nexus studies and establish a comprehensive traffic impact fee program to provide “fair-share” transportation project funding.

**RA/D:** Engineering  
**FS:** General Fund  
**TF:** 2003-04



**ISSUE: PROTECTION OF RESIDENTIAL NEIGHBORHOODS FROM TRAFFIC**

*Many residential streets in Carson are used by motorists to bypass heavier traffic on major arterials; vehicles using these streets are usually traveling at higher rates of speed than local residents, thus negatively impacting the safety of the neighborhood.*

**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 traffic traveling 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 resident requests, complaints, and traffic calming alternatives.

**Implementation Measures:**

TI-IM-3.1 Based on resident requests, conduct neighborhood circulation studies to determine the nature and extent of actual and perceived traffic through these areas. *(Implements Policy TI-3.1)*

**RA/D:** Engineering, Code Enforcement  
**FS:** General Fund  
**TF:** Ongoing

TI-IM-3.2 Create distinctive entry statements at identified neighborhood entrances that discourage through traffic. *(Implements Policy TI-3.2)*

**RA/D:** Engineering, Planning  
**FS:** Gas Tax, Assessment Districts, Homeowners' Associations, Grant Funds  
**TF:** Ongoing

TI-IM-3.3 Enforce posted speed limits and add awareness programs, such as mobile radar trailers, traffic stops, and decoy Sheriff cars. *(Implements Policy TI-3.2)*

**RA/D:** Public Safety  
**FS:** General Fund, grant funds  
**TF:** Ongoing

TI-IM-3.4 Include impact on neighborhood local streets as a criterion for determining capital improvement project priorities for public works. *(Implements Policy TI-3.3)*

**RA/D:** Engineering  
**FS:** General Fund  
**TF:** Ongoing

TI-IM-3.5 Develop Neighborhood Traffic Control Guidelines for use in evaluation of resident complaints, development of recommended solutions and prioritizing of funding requests. Guidelines should include processes to respond to resident concerns, evaluate impacts, provide alternative improvements, and test and implement the solutions. *(Implements Policies TI-3.1, TI-3.2, TI-3.4)*



**RA/D:** Engineering, Planning, Code Enforcement  
**FS:** General Fund  
**TF:** 2004-05



**ISSUE: ALTERNATE FORMS OF TRANSPORTATION**

*Alternative forms of transportation should be promoted in Carson: from additional bicycle routes and park-and-ride facilities, to expanded public transportation systems, such as the Carson Circuit. It is important to link public transportation systems on a local, sub-regional and regional level.*

**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 by implementing the Bicycle Plan.

**Implementation Measures:**

TI-IM-4.1 Pursue funding, including Proposition A and C funds as well as other sources, for bus transit facilities, bus shelters, signing, advertising and bus turnouts to encourage bus ridership. *(Implements Policy TI-4.1)*

**RA/D:** Transportation Services  
**FS:** General Fund, Prop A and C, Other Grant Funds  
**TF:** Ongoing

TI-IM-4.2 Ensure the installation of bus transit facilities, shelters and bus turnouts in all future arterial widening or new construction projects. *(Implements Policy TI-4.1)*

**RA/D:** Engineering, Planning, Transportation Services  
**FS:** Gas Tax, Prop A and C, Other Grant Funds  
**TF:** Ongoing

TI-IM-4.3 Locate sites for the implementation of park-and-ride facilities proximate to the I-405, I-110 and Route 91 Freeways. *(Implements Policy TI-4)*



**RA/D:** Transportation Services  
**FS:** General Fund, Redevelopment Funds  
**TF:** 2002-05

TI-IM-4.4 Work closely with the Los Angeles County Metropolitan Transportation Authority (LACMTA), Torrance Municipal Bus Lines, Long Beach Municipal Bus Lines and other public and private transit providers to expand and improve the public transit service within and adjacent to the City of Carson. *(Implements Policy TI-4.1)*

**RA/D:** Transportation Services  
**FS:** General Fund  
**TF:** Ongoing

TI-IM-4.5 Plan and construct a Transportation Center at either the South Bay Pavilion or the new commercial area west of I-405. This could include both bus and shuttle transit. *(Implements Policy TI-4.1)*

**RA/D:** Planning, Engineering, Transportation Services  
**FS:** Developer fees, impact fees, Prop A and C, Other Grant Funds, Developer Contributions  
**TF:** 2004-08

TI-IM-4.6 Require appropriate new developments to provide alternate fuel vehicle charging stations. *(Implements Policy TI-4.1)*

**RA/D:** Planning, Transportation Services  
**FS:** Developer contributions  
**TF:** Ongoing

TI-IM-4.7 Require new development to provide pedestrian walkways which serve the proposed development and link to the City's existing pedestrian system. *(Implements Policy TI-4.2)*

**RA/D:** Planning, Engineering  
**FS:** Developers  
**TF:** Ongoing

TI-IM-4.8 Ensure the installation of sidewalks in all future arterial widening or new construction projects to establish a continuous and convenient link for pedestrians. *(Implements Policy TI-4.2)*

**RA/D:** Engineering  
**FS:** Gas Tax, General Fund  
**TF:** Ongoing



- TI-IM-4.9 Investigate the feasibility of installing pedestrian signal lights at various locations. *(Implements Policy TI-4.2)*

**RA/D:** Engineering, Public Works, Sheriff, Public Safety  
**FS:** Gas Tax, General Fund  
**TF:** 2003-04
  
- TI-IM-4.10 Complete an approved Bicycle Plan (as defined by the MTA) and implement it as availability arises through private development, private grants, public grants (particularly the MTA call for projects), signing of shared routes, and cooperation with other agencies such as the County of Los Angeles for bicycle routes along channels. *(Implements Policy TI-4.3)*

**RA/D:** Engineering, Recreation and Community Services  
**FS:** Developer fees, Prop A and C, TDA Article 3, AB2766 Vehicle Registration Funds, Park Funds, Other Grant Funds  
**TF:** 2004-06
  
- TI-MI-4.11 Acquire right-of-way for completion of the adopted Bicycle Plan through available funding sources. *(Implements Policy TI-3)*

**RA/D:** Engineering, Recreation and Community Services  
**FS:** Prop A and C, park funds, other grant funds  
**TF:** Ongoing
  
- TI-IM-4.12 Encourage new development to provide facilities for bicyclists to park and store their bicycles as well as shower and changing facilities. *(Implements Policy TI-4.3)*

**RA/D:** Planning  
**FS:** Developer contributions  
**TF:** Ongoing
  
- TI-IM-4.13 Continue coordination of bicycle route planning and implementation with adjacent jurisdictions and regional agencies. *(Implements Policy TI-4.3)*

**RA/D:** Engineering, Recreation and Community Services  
**FS:** General Fund, Grant Funds  
**TF:** Ongoing



TI-IM-4.14 Design new streets and major street improvements with the potential for Class I or Class II bicycle routes, as appropriate, to separate automobile, bicycle and pedestrian movements to the extent feasible. *(Implements Policy TI-4.3)*

**RA/D:** Engineering  
**FS:** Gas Tax  
**TF:** Ongoing



**ISSUE: REDUCE TRIPS IN CARSON**

*Growth in Southern California will continue and the roadway system will be challenged accordingly to meet the needs of new residents and businesses. The removal of existing trips and the reduction of future increases in trip generation will help to alleviate the impacts of new growth and promote sustainability.*

**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.

**Implementation Measures:**

TI-IM-5.1 Provide information regarding TDM alternatives to developers early in the planning process. *(Implements Policy TI-5.1)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** Ongoing

TI-IM-5.2 Based on traffic impacts of new development, develop mitigation measures incorporating TDM measures. *(Implements Policy TI-5.1)*



**RA/D:** Planning  
**FS:** General Fund, Impact Fees  
**TF:** Ongoing

TI-IM-5.3 Develop provisions for preferential parking for high occupancy vehicles to include in the Zoning Code parking standards. *(Implements Policy TI-5.2)*

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2004-05

*See also Chapter 10, Air Quality.*



**ISSUE: FEDERAL, STATE AND REGIONAL COMPLIANCE**

*The City of Carson must remain in compliance with applicable Federal, State and regional regulations, and coordinate with neighboring jurisdictions in order to enhance eligibility for all potential transportation improvement program funding.*

**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 related 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 in order to allow efficient access into and out of the City.

TI-6.4 Assess adjacent 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.



**Implementation Measures:**

- TI-IM-6.1 Continue land use coordination through the use of standardized traffic impact analysis methodologies. *(Implements Policies TI-6.1, TI-6.2)*

**RA/D:** Planning, Engineering  
**FS:** General Fund  
**TF:** Ongoing
- TI-IM-6.2 Implement and enforce TDM strategies. *(Implements Policy TI-6.2)*

**RA/D:** Planning, Engineering  
**FS:** Developer Fees  
**TF:** Ongoing
- TI-IM-6.3 Maintain transit service standards. *(Implements Policy TI-6.2)*

**RA/D:** Transportation Services  
**FS:** General Fund  
**TF:** Ongoing
- TI-IM-6.4 Develop level of service deficiency plans where applicable. *(Implements Policy TI-6.2)*

**RA/D:** Engineering  
**FS:** General Fund  
**TF:** Ongoing
- TI-IM-6.5 Monitor and comply with all CMP provisions. *(Implements Policies TI-6.1, TI-6.2, TI-6.3, TI-6.4, TI-6.5)*

**RA/D:** Engineering  
**FS:** General Fund  
**TF:** Ongoing



**ISSUE: IMPROVING THE QUALITY OF TRANSPORTATION CORRIDORS**

*Some of the City’s major transportation corridors are deficient in infrastructure maintenance and landscaping improvement.*

**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.

**Implementation Measures:**

- TI-IM-7.1 Through design standards and zoning requirements, require landscaped medians and parkways for all new development on major arterials. *(Implements Policy TI-7.1)*
  - RA/D:** Planning, Engineering
  - FS:** Developer Fees, Impact Fees
  - TF:** Ongoing
- TI-IM-7.2 Pursue agreements with Caltrans to construct new sound walls, as necessary, with landscaping, along all State freeways in the City. *(Implements Policy TI-7.2)*
  - RA/D:** Engineering
  - FS:** State funds, Grant Funds
  - TF:** Ongoing
- TI-IM-7.3 Coordinate Gardena Municipal Bus, Long Beach Transit, MTA, and Torrance Transit with Carson Circuit to construct bus turn-outs at appropriate locations with attractive shelters designed for safe and comfortable use. *(Implements Policy TI-7.3)*
  - RA/D:** Transportation Services, Engineering
  - FS:** Various Transportation Grant Funds
  - TF:** 2004-06
- TI-IM-7.4 Develop design plans for all major streets to provide walls, landscape and hardscape features, as appropriate, to protect and beautify neighborhoods in order to provide an aesthetic environment for the users of the transportation corridors. First priority should be given to Avalon, south of Carson, and Wilmington, south of 213<sup>th</sup>. *(Implements Policy TI-7.3)*



**RA/D:** Planning, Engineering  
**FS:** Gas Tax, Redevelopment Funds, General Fund  
**TF:** Ongoing

TI-IM-7.5 Develop a land use and design plan for the Alameda Transportation Corridor to provide for appropriate uses, access, sound walls, landscape and hardscape features, to protect and beautify the Dominguez area/neighborhoods as well as to limit access to Alameda and improve the flow of traffic. *(Implements Policy TI-7.3)*

**RA/D:** Planning, Engineering  
**FS:** Gas Tax, Alameda Corridor Transportation Authority, Redevelopment Funds  
**TF:** 2003-04

TI-IM-7.6 Prepare a City-wide plan for the under grounding of utilities along the major transportation corridors. *(Implements Policy TI-7.4)*

**RA/D:** Engineering, Public Works  
**FS:** General Fund, grant funds  
**TF:** Ongoing



**ISSUE: IMPROVING AND MAINTAINING THE CITY'S INFRASTRUCTURE**

*The City's infrastructure systems must be expanded, improved and regularly maintained to meet both the existing needs of the community, as well as future needs associated with infill development. The City's infrastructure includes not only water, sewer, storm drainage systems, but also energy, communication, fiberoptic and other systems.*

**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 use, as well as existing uses.

**Implementation Measures:**

TI-IM-8.1 Review the Water Master Plan of the private water utilities and recommend changes as needed to ensure an adequate supply. *(Implements Policy TI-8.1)*



**RA/D:** Engineering, Public Works  
**FS:** General Fund  
**TF:** Ongoing

TI-IM-8.2 Review and update the Wastewater Master Plan. *(Implements Policy TI-8.1)*

**RA/D:** Engineering, Public Works  
**FS:** General Fund  
**TF:** Ongoing

TI-IM-8.3 Evaluate other agency master plans for water and wastewater facilities on a periodic basis and encourage appropriate updates and implementation. *(Implements Policy TI-8.2)*

**RA/D:** Engineering  
**FS:** General Fund  
**TF:** Ongoing

TI-IM-8.4 Evaluate utility infrastructure along those streets scheduled for reconstruction or improvements. When utility infrastructure improvements are necessary, encourage other agencies to include such as part of the street improvement or reconstruction project. *(Implements Policy TI-8.2)*

**RA/D:** Engineering, Public Works  
**FS:** Gas Tax, Redevelopment funds, General Fund  
**TF:** Ongoing

**Goal:** TI-9 Promote sustainable energy, communication, and other systems which meet the needs of the community.

**Policies:** TI-9.1 Cooperate with the providers of the energy, communication, 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 integrated communication and other systems to accommodate any intensification of uses, as well as existing uses.

**Implementation Measures:**

TI-IM-9.1 Inform system providers of roadway projects requiring the reconstruction of streets, so that these providers may



evaluate their infrastructure systems to determine if improvements are necessary and could be made during the street improvement or reconstruction project. *(Implements Policy TI-9.1, TI-9.2)*

**RA/D:** Engineering, Public Works

**FS:** General Fund

**TF:** Ongoing

TI-IM-9.2 Review and revise planning and building codes to provide for new technologies and appropriate integration with land use regulations. Promote incentive regulations. *(Implements Policy TI-9.1, TI-9.2)*

**RA/D:** Planning, Building & Safety

**FS:** General Fund

**TF:** 2003-05

**Goal:** TI-10 Provide sustainable civic facilities that are maintained and rehabilitated in a manner that provides an acceptable level of service and is cost-effective.

**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.

**Implementation Measures:**

TI-IM-10.1 Establish a capital improvement fund for development, construction and maintenance of civic physical assets. *(Implements Policies TI-10.1, TI-10.2, TI-10.3, TI-10.4)*

**RA/D:** Finance, Engineering

**FS:** General Fund

**TF:** 2003-04 and Annually

TI-IM-10.2 Revise the Civic Center Master Plan to include appropriate communications technologies, energy and



water savings, and other cost effective applications.  
*(Implements Policies TI-10.3, TI-10.4)*

**RA/D:** Engineering  
**FS:** General Fund  
**TF:** 2005-06

TI-IM-10.3 Implement a Facility Replacement Fund for civic improvements as necessary.

**RA/D:** Finance, Engineering  
**FS:** General Fund  
**TF:** 2003-04

*See also Chapter 6, Safety Element, for drainage and flood control.*



# CHAPTER 5

## HOUSING ELEMENT



# CHAPTER 5

## HOUSING ELEMENT



### **GUIDING PRINCIPLE**

*The City of Carson is committed to providing and improving a broad range of quality housing opportunities, promoting home ownership, and enhancing residential neighborhoods.*

### **1.0 INTRODUCTION**

As the population of the State continues to grow and pressure on resources increases, Carson is concerned with providing adequate housing opportunities while obtaining a high standard of living for all citizens in the community.

Recognizing the importance of providing adequate housing, the State has mandated a Housing Element with every General Plan since 1969. This Housing Element (1998-2005) was created in compliance with State General Plan law pertaining to Housing Elements and was certified by the California Department of Housing and Community Development in July 2002.

### **1.1 PURPOSE**

The State of California has declared that “the availability of housing is of vital statewide importance and the early attainment of decent housing and a suitable living environment for every California family is a priority of the highest order.” In addition, government and the private sector should make an effort to provide a diversity of housing opportunities and accommodate regional housing needs



through a cooperative effort, while maintaining a responsibility toward economic, environmental and fiscal factors and community goals within the General Plan.

The City of Carson's General Plan Housing Element articulates the City's plan (1998 to 2005) relative to the maintenance and development of housing to respond to current and future housing needs within the limitations posed by available resources. The Housing Element, as required by State law, will provide a detailed analysis of existing housing stock, housing and household characteristics, ability of the housing industry to provide the necessary type and cost of housing, housing needs for all economic levels and for special needs groups and specific housing program development and priority.

The purpose of these requirements is to develop an understanding of the existing and projected housing needs within the community and to set forth policies and schedules that promote preservation, improvement and development of diverse types and costs of housing throughout Carson.

## **1.2 CITIZEN PARTICIPATION**

Public participation for the 1998-2005 Housing Element included workshops and public hearings conducted by the City's consultants, Planning Commission and City Council. The notices for these workshops and hearings were published in a local newspaper and prominently posted at Carson's City Hall and other public facilities, as well as on the City's website. The Carson Vision, adopted in September 1997 serves as a basis for issues addressed in the Housing Element. Development of the City's Vision was accomplished through outreach programs involving City residents, businesses, property owners, affordable housing advocates and community development organizations.

## **1.3 HOUSING ELEMENT PLANNING CYCLE**

State planning law mandates that jurisdictions within the Southern California Association of Governments (SCAG) region adopt and update their Housing Element by July 1, 2000. As a consequence of this due date, a series of time frames for various aspects of the Housing Element preparation are established. There are three relevant time periods identified:

- 1989-1997: the review period to measure accomplishments of the 1989 Housing Element;
- 1998-July 2005: the planning period for assessing housing construction needs; and
- 2000-2005: the implementation period for programs identified within this Housing Element.

The planning period for the Regional Housing Needs Assessment (RHNA) as prepared by SCAG, is from January 1998 to June 2005. Pursuant to State law, the City of Carson, along with other jurisdictions prepare their next revision of the housing element to cover the period from 2005 to 2010.



## **2.0 AUTHORITY FOR THE ELEMENT**

The Housing Element is one of the seven General Plan Elements mandated by the State of California, as expressed in Sections 65580 to 65589.8 of the California Government Code. California State Law requires that the Housing Element consist of “an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement and development of housing.” The Housing Element establishes policies that will guide the City’s decision-making in developing and implementing its goals through 2005.

The State Department of Housing and Community Development (HCD) sets forth specific requirements regarding the scope and content of City and county housing elements.

## **3.0 COMMUNITY FACTORS**

### **3.1 DEMOGRAPHIC CHARACTERISTICS**

The growth trends in Carson show moderate population growth (31 percent) between 1970 and 2000. Between 1990-2000 Carson grew by 11 percent, making it the fastest growing city of the four cities in the Carson vicinity. Although the City of Carson has one of the larger percent growth rates over the 1990 to 2000 time period, when compared to the surrounding cities, Carson’s annual change of population per land area is the smallest. Current data shows the population growth in Carson will continue to increase, but at a slower rate. The current population is 93,196 persons and is projected to grow by 8,700 persons or 9.3 percent over the next 20 years.

The 1990 Census data shows Carson is ethnically and culturally diverse, with 34.7 percent of the population white, 26.2 percent of the population black, 25.0 percent of the population of Asian/ Pacific Islander origin and 27.9 percent of Hispanic origin. The median age of the population is 31.5 years, however population trends show an aging population within Carson.

There are segments of the population that may have more difficulty finding affordable housing due to their special needs. The special needs groups in Carson may include the elderly, disabled, single-parent households, large families, farm workers, homeless and persons with HIV/AIDS and related diseases. These special needs groups along with low-income groups should be addressed in the City’s implementation of the Housing Element.

1990 Census data has the median family income for Carson as \$43,882. This represents an 84.4 percent increase between 1980 and 1990. In comparison, the median household income was \$24,965 in Los Angeles County. National Decision Systems estimates the 2000 household median income in the City of Carson to be \$52,509. This figure represents an increase of 20.0 percent from the 1990 median family income. However, the CPI shows a 25.0 percent increase, reflecting Carson’s household median income is falling behind the overall inflation rate.



## NEIGHBORHOOD AND HOUSING CHARACTERISTICS

The population growth in Carson has increased at a greater rate than the housing supply. During the period of 1990 to 2000, the estimated population increased by 9,201 persons, while the housing stock increased by 542 units from 1990-1999. Carson has a high percentage of single-family residential units, comprising 77.9 percent of its housing stock. However, the percentages of single-family units have been decreasing while the percentage of multi-family units have been increasing from 1980 to 1999. Carson has a proportionally larger number of owners than renters. In 1990, 79.0 percent of the households were owners and 21.0 percent were renters.

Carson is approaching build out, with limited potential for new residential construction. Approximately 131.22 acres of vacant or underutilized land are zoned for residential uses in the City. Vacant and underutilized land could provide 1,047 additional housing units in Carson. Of the 1,047 possible additional housing units, 99.3 percent (1040 units) could be produced in the Residential Single Family zoning, with the remaining 0.7 percent (7 units) potentially being built in the Residential Multifamily zone.

The condition of the City’s housing stock may be characterized by its age. In Carson over 70 percent of the housing stock was built before 1969. A majority of the housing units, 39.9 percent, were built in the period of 1960 to 1969. This demonstrates Carson’s housing stock is older, and a larger percentage of housing units are likely to be substandard due to age.

## 4.0 DESCRIPTION OF THE HOUSING PLAN

### 4.1 QUANTIFIED OBJECTIVES

The Regional Housing Needs Assessment (RHNA) basic construction need through 2005 for the City of Carson is 623 total housing units at varying income groups (refer to Table H-1, Basic Construction Needs-City of Carson 1998-2005). This represents an annual average of approximately 83 units over seven years for the City. Currently, the City has 1,252 housing units proposed and/or pending in the City. Therefore, it is anticipated that the City will meet and exceed its RHNA share.

**Table H-1  
Basic Construction Needs-City of Carson 1998-2005**

Income Group	Number of Housing Units	Proposed and/or Pending Projects*
Very Low (<50% AMI)	117	62
Low (50-80% AMI)	104	91
Moderate (80-120% AMI)	143	141
Above Moderate (120% + AMI)	259	958
Total	623	1,525
Note: *As of March 2001		



## 5.0 PLANNING ISSUES, GOALS, POLICIES AND IMPLEMENTATION

The acronyms listed below are used for the implementation measures:

- RA/D: Responsible Agency/Division
- FS: Funding Source
- TF: Time Frame

### ISSUE: PROPERTY MAINTENANCE

*Property maintenance is a major concern to residents of Carson. Citizens recommended that the City take a more assertive approach to code enforcement and related activities.*

**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.

### Implementation Measures:

The following programs are designed to promote the rehabilitation and continued maintenance of existing housing units. In addition, the programs will affect the livability of the neighborhoods in the City.



**Table H-2  
Quantified Objectives for Housing Rehabilitation (1998-2005)**

Year	CDBG Funding	Redevelopment Funding	Total
1998	110	10	120
1999	108	5	113
2000	122	16	138
2001	75	50	125
2002	75	50	125
2003	75	50	125
2004	75	50	125
2005	75	50	125
TOTAL	715	281	996

H-IM-1.1 Maintain the City’s Neighborhood Pride Program to continue rehabilitation of lower income single-family owner-occupied homes. The Neighborhood Pride Program offers grants/loans and deferred plans to qualified applicants.

**1999 – 2005 Action Plan:**

- Implement a modified residential repair program for low income households which establishes priorities for needs identified in the program evaluation.
- Assess and evaluate retrofits related to energy efficiency for low and very low income housing units in order to reduce living costs.

**RA/D:** Development Services Department

H-IM-1.2 Maintain Home and Garden Program for single-family and multi-family low income households. This program offers grant and loans to low income households in a specific target area.

**1999 – 2005 Action Plan:**

- Continue to make this program available to qualified households.
- Expand this program to other areas in the City.

**RA/D:** Development Services Department



H-IM-1.3 Maintain a Housing Code Enforcement Program. The Building and Safety Division responds to complaints of violations of the City’s building codes and provides inspections and notices to property owners to bring their unit/s into compliance.

**1998 – 2005 Action Plan:**

- Continue to implement the City’s housing code enforcement program. The Building and Safety Division will continue to coordinate with the Development Services Department to provide information on available rehabilitation assistance to code deficiencies.

**RA/D:** Building and Safety Division

H-IM-1.4 Maintain Architectural Review Guidelines and Development Compatibility. As a means of providing greater certainty for project developers, the City has adopted architectural guidelines for project that require architectural review approval. The City also regularly reviews and revises its development standards to ensure compatibility between its development standards and architectural review guidelines.

**1999 – 2005 Action Plan:**

- Continue to implement City architectural review guidelines and development standards, revise as necessary, to provide project developers with clear design direction and standards.

**RA/D:** Development Services Department, Planning Division

H-IM-1.5 Maintain the Residential Property Report (RPR) program. City of Carson Ordinance Number 99-1155 requires that a RPR be obtained from the City before the sale, exchange, or transfer of a previously occupied residential property. This report allows the City to verify that residential buildings meet certain Zoning and Building Code requirements at the time of sale.

**1999 – 2005 Action Plan:**

- Continue to require the RPR program for home sales to ensure that the City’s residential dwellings meet current Building and Zoning Codes.



**RA/D:** Development Services Department, Building and Safety Division

**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.

**Implementation Measures:**

The following programs are designed to protect and enhance quality housing and neighborhoods in the City.

H-IM-2.1 Provide a Residential Neighborhood Safety Program. The City through the Los Angeles County Sheriffs Department, offer a number of residential safety programs including the following:

- Neighborhood Watch Program – Provides grants and services to Neighborhood Watch Groups.
- Property Identification Program – Encourages residents to engrave valuable items with an identification number to assist with the recovery of stolen property.
- Community Forums – Conducts neighborhood and community forums on public safety programs.
- Residential Security Survey Program – Provides home security assessments and offers suggestions for improvements to home security.
- Crime prevention and community relations as well as educational materials for residents.

**1999 – 2005 Action Plan:**

- Continue to offer a range of neighborhood safety programs through the Public Safety Department.
- Through a coordinated effort between Public Safety and Community Development, offer free home security



surveys and provide subsidies to low-income households to improve household security against crime.

- Assess the feasibility of creating a program to facilitate the installation of deadbolts, peepholes in entry doors, window locks and exterior motion detector lighting.

**RA/D:** LA County Sheriffs Department, Public Safety, Development Services Department

H-IM-2.2 Provide Historic Preservation Programs. Incentives should be made to encourage owners of designated properties to maintain and preserve their structures. These incentives may include the elimination of building permit fees, administrative planning fees, and parking incentives as well as others.

**1999 – 2005 Action Plan:**

- Conduct community workshops and develop brochures for distribution to owners of eligible properties to promote historic preservation.
- Initiate and implement a property tax reduction program for historic properties.
- Develop and maintain a comprehensive preservation plan for the City.

**RA/D:** Development Services Department, Planning Division



**ISSUE: DIVERSITY OF HOUSING**

*Citizens are interested in the availability of a variety of housing types and prices: from entry level to move-up housing and the provision of quality seniors housing.*

**Goal:** H-3: The City shall seek to provide an adequate supply of housing for all economic segments of the City.



**Table H-3  
Quantified Objectives for Affordable Rental Units (1998-2005)**

Year	Affordable Units
1998	50
1999	50
2000	50
2001	60
2002	60
2003	60
2004	60
2005	60
TOTAL	450

- 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.

**Implementation Measures:**

The following programs are designed to adhere to the City’s commitment to provide housing for all income levels within the City.

H-IM-3.1 Foster housing development through the use of Development Agreements. A Development Agreement (DA) is an agreement between a developer and a local government that outlines the regulations and policies governing the development of a specific piece of property. Within these DAs, special affordable housing obligations are often incorporated.

**1999 – 2005 Action Plan:**

- Establish and maintain into Development Agreements the inclusion of on-site affordable housing or payment of housing in-lieu fees, above and beyond existing City Requirements.



**RA/D:** Development Services Department, Planning Division; City Attorney's Office

H-IM-3.2 Assess the use of City-owned/publicly-owned land for affordable housing. As a highly built-out city, Carson has a decreasing supply of vacant lands for residential development. This shortage of vacant land may in the near future necessitate the need to find alternative means to provide sites for housing. Alternative sites include long-term leasing of City-owned or public-owned land for housing development. These leases may include as a part of the leasing agreement, stipulation for affordable housing and/or a long-term commitment to maintain the properties.

**1999 – 2005 Action Plan:**

- Prepare an inventory of publicly-owned land and examine the feasibility of their use for housing.
- Assess the use of City-owned, publicly-owned and privately-owned land for housing development.

**RA/D:** Development Services Department, Planning Division

H-IM-3.3 Assess Alternative Affordable Housing Finance Programs. Under this program, the City will assess a variety of alternative funding mechanisms for the construction of new affordable housing. Potential funding mechanisms include:

- Tax Exempt Bonds and State Low Income Housing Finance Programs, whereby loans are made to property owners in exchange for deed-restricting 20 percent of the units to households earning no more than 50 percent of the median County income or 40 percent of the units are deed-restricted for households earning no more than 60 percent of the median County income.
- HUD Section 108 Program, whereby loans are made using future Development Services Block Grant funds as collateral.
- Mortgage Credit Certificates, whereby first time homebuyers earning up to 120 percent of the median County income may take an annual credit against federal income taxes of up to 20 percent of the annual interest paid on their mortgage.



**1999 – 2005 Action Plan:**

- Assess creative financing mechanisms such as tax-exempt bond financing to increase available City financing for housing programs.
- Consider utilizing HUD’s Section 108 loan programs.
- Assess a Mortgage Credit Certificate program to provide assistance to first-time homebuyers.
- Continue to develop a working relationship with private lenders to leverage City funds.
- Encourage developers to take advantage of affordable housing bond financing and facilitate coordination among developers when appropriate.

**RA/D:** Development Services Department

H-IM-3.4 Facilitate the development and maintenance of Special Needs Housing. Housing for seniors and for the physically and mentally disabled will need to address their special needs, such as a barrier-free environment and accessibility to transit and services.

**1999 – 2005 Action Plan:**

- Identify existing resources and develop new resources to fund the development of supportive housing and associated services.
- Strengthen partnerships with service providers to support the efficient provision of services to special needs housing development with current City resources.
- Assess the development of a high subsidy program for the development of permanently affordable housing for very low and low income households which would include both SRO and family units.

**RA/D:** Development Services Department

**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.

**Implementation Measures:**

Programs to protect the existing supply of affordable housing are necessary to ensure the future availability of affordable housing.

- H-IM-4.1 Facilitate the preservation of at-risk housing. The City has assisted in the development of a variety of affordable housing projects. Some of these projects are at-risk of converting to market rate due to expiration of use restrictions. Section IV- Existing Housing Resources of the Housing Element evaluates the at-risk potential of these projects. The at-risk projects are identified in Table 61 of the Housing Element.

**1999 – 2005 Action Plan:**

The City will consider the following actions as efforts to preserve the at-risk housing stock:

- **Monitor Units at Risk:** Regularly monitor the status of at-risk projects. The City will inform the tenants of the status of at-risk projects in advance of the potential conversion date.
- **Tenant Education:** The City will work with tenants living in units that are at-risk of converting to provide information regarding potential tenant purchase of units. The City will act as a liaison between tenants and non-profit organizations potentially involved in construction or acquiring replacement housing.

**RA/D:** Development Services Department

- H-IM-4.2 Protection of mobile home park tenants. There are currently 26 mobile home parks in the City with 2,641 spaces. Mobile home parks constitute a significant proportion of the low- and moderate-income housing in the City. The City of Carson has rent control for mobile home spaces only, and the City's rent control ordinance is administered by a board appointed by the City Council. There are only 11 market-



rate mobile home rental spaces in Carson. All other mobile home spaces are under rent control.

**Table H-4  
Quantified Objectives for Mobile Home Improvement (1998-2005)**

<b>Year</b>	<b>Mobile Home Rehabilitation</b>
1998	50
1999	50
2000	60
2001	60
2002	60
2003	60
2004	60
2005	60
TOTAL	460

**1999 – 2005 Action Plan:**

- Continue to require rent control for the City’s mobile home parks.
- Assist with mobile home park rehabilitation or conversion to ownership housing if appropriate and/or feasible.
- Assess the reasons for mobile home park closures and assist mobile home park owners in finding solutions to resist closure.
- Evaluate the removal of mobile home parks located in commercial and industrial zones.

**RA/D:** Development Services Department, Planning Division

**Goal:** H-5: Housing opportunities to all persons regardless of race, religion, ethnicity, sex, age marital status, household composition, or other arbitrary factor.



**Table H-5  
Quantified Objectives for First-Time Homebuyers (1998-2005)**

Year	First-Time Home Buyers
1998	4
1999	4
2000	15
2001	50
2002	50
2003	50
2004	50
2005	50
TOTAL	273

- 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.

**Implementation Measures:**

The following programs are intended to implement the City's goal of eliminating discrimination in access to housing. Additional programs listed under the other goals in this Element will aid in accomplishing this goal.

H-IM-5.1 Provide tenant/landlord mediation and legal services assistance. The City may provide funding to nonprofit organizations to provide dispute resolution services, legal advice and representation on tenant/landlord matters, as well as other civil and consumer issues.

**1999 – 2005 Action Plan:**

- Establish and support tenant/landlord mediation and legal services assistance.

**RA/D:** Development Services Department; City Attorney's Office; Public Information Office

H-IM-5.2 Develop a public education program on reverse mortgages. A reverse mortgage is a deferred payment loan or series of such loans for which a home is pledged as security. Qualification for the loan is based primarily on property value, rather than income, allowing an elderly homeowner on



a fixed income to receive a loan for which he or she would otherwise not qualify. The reverse mortgage is generally taken out by a senior who is in immediate need of cash, often for emergency health care needs. While reverse mortgages offer many benefits to senior homeowners in need of cash, without proper information they can also be abused and may not always serve their best financial interest.

**1999 – 2005 Action Plan:**

- Prepare education materials outlining the availability, benefits and liabilities of reverse mortgages and disseminate these materials to seniors through local service organizations which serve seniors.

**RA/D:** City Attorney’s Office; Community Services

H-IM-5.3 Maintain Fair Housing Programs. Uphold the City’s and State of California’s Fair Housing Laws.

**1999 – 2005 Action Plan:**

- Establish a complaint referral procedure to refer all complaints concerning housing discrimination to the appropriate City, County, State or Fair Housing Office.
- Educate landlords about discrimination against families with children, seniors, persons with disabilities and minorities to encourage them to rent to these groups.
- Educate the real estate community of the necessity of ensuring that their practices meet the objectives of the fair housing laws.

**RA/D:** City Attorney’s Office



**ISSUE: PRIVATE PROPERTY WITH COMMON AREA OWNERSHIP (CONDOMINIUMS AND PLANNED UNIT DEVELOPMENTS)**

*Citizens expressed concern relating to the long-term maintenance of common area (e.g., streets, roofs, building exteriors, etc.) and the need for supportive programs to assist homeowners and regulations to assure property maintenance.*

**Goal:** H-6: Long-term maintenance of private properties with common area ownership, such as condominiums and planned unit developments.



- Policies:**
- H-6.1 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.

**Implementation Measures:**

The following programs are designed to promote long-term maintenance of common areas in developments with common area ownership.

- H-IM-6.1 Establish development standards specifically intended for areas with common area ownership in order to regulate the upkeep of common areas in this type of development.

**1999 – 2005 Action Plan:**

- Examine different strategies for requiring housing developments to maintain common areas as a part of the development agreement.



- Assess establishing Neighborhood Improvement Zones which are specifically intended for common area ownership areas.
- Investigate design guidelines to enhance the safety and aesthetic requirements for common areas (i.e. open fencing, security lighting, etc.).

**RA/D:** Development Services Department

H-IM-6.2 Maintain Home and Garden Program for single-family and multi-family low income households. This program offers grant and loans to low income households in a specific target area.

**1999 – 2005 Action Plan:**

- Continue to make this program available to qualified households.
- Expand this program to cover private property common areas.

**RA/D:** Development Services Department

H-IM-6.3 Develop a Neighborhood Improvement Grant/Loan Program designed specifically for the upkeep and improvement of common areas.

**1999 – 2005 Action Plan:**

- Examine the various Federal and State loan and grant programs that may be used for a Neighborhood Improvement Program.
- Work with various condominium and neighborhood associations to establish their need for loan/grant funding.

**RA/D:** Development Services Department



**ISSUE: ENERGY CONSERVATION**

*As non-renewable energy resources have progressively been depleted and energy costs continue to rise, people have become increasingly aware of energy conservation measures. While the use of alternative energy sources and energy-conserving designs is most advantageous when building new housing, there are also numerous energy-conserving measures which can be applied to older housing.*



- 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 Promote the use of alternative energy sources.
- H-7.3 Promote financial reimbursement programs for the use of energy efficient building products and appliances.

**Implementation Measures:**

The following programs are intended to conserve natural resources and reduce energy consumption.

H-IM-7.1 Facilitate sustainable housing development. With the implementation of a City sustainable housing development program, principles, goals and targets could be written to achieve citywide sustainable housing.

**1999 – 2005 Action Plan:**

- Continue to educate non-profit and for-profit housing developers in ways to create environmentally sustainable housing developments in Carson.
- Support and encourage the efforts of housing developers, designers and contractors in their use of sustainable building practices by exploring various incentive options.

**RA/D:** Development Services Department, Planning Division



# CHAPTER 6

## SAFETY ELEMENT



# CHAPTER 6

## SAFETY ELEMENT



### **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.*

### **1.0 INTRODUCTION**

The Safety Element is an official guide for the City Council, government agencies, and individuals to identify and understand potential hazards confronting the City of Carson. The Element evaluates 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 of death, injuries, property damage and the economic and social dislocation resulting from them. The concerns are subsequently incorporated into goals, policies and implementation actions to reduce the impacts of hazards.

### **2.0 STATE LAW REQUIREMENTS**

The State of California Government Code Section 65302(g) requires that a General Plan include:

*“...a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction and other seismic hazards identified pursuant to Chapter 7.8 (commencing with §2690) of the*



*Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wild land and urban fires.”*

Policies and information for this element are contained in the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621, et seq.), the Seismic Hazards Mapping Act (Public Resources Code Section 2690, et seq.), and the Unreinforced Masonry Law (Government Code Section 8875, et seq.).

## **3.0 SUMMARY OF FINDINGS**

### **3.1 CITY PLANS AND PROGRAMS**

The Standardized Emergency Management System (SEMS), California Code of Regulations, Title 19, Division 2, Section 2443, requires compliance with the SEMS to... “be documented in the areas of planning, training, exercise, and performance.” Compliance with the SEMS requires that emergency plans address the following five SEMS functions:

- Management;
- Operations;
- Logistics;
- Planning/Intelligence; and
- Finance/Administration.

The plan should also address mutual aid, operational areas, and multi/inter-agency coordination.

Carson has prepared a Multi-Hazard Functional Plan (1996) for emergency response within the City. The Plan meets the State’s Standardized Emergency Management System (SEMS) requirements of State law. The City also complies with the Los Angeles County Emergency Management Plan.

Threats and emergency response are thoroughly described and outlined in the SEMS Multi-Hazard Functional Plan. Key points of the plan include the identification of critical areas in the City that represent both dangers, as well as areas for meeting and staging in an emergency event, communications, and emergency evacuation. Parks and other large areas are identified as emergency shelter and meeting locations. An Emergency Operation Center (EOC), fully equipped with emergency communication equipment and cooking, showering and sleeping facilities is provided in City hall for seismic or other disaster situations. A Citywide amateur radio operating system has been implemented to maintain communications should other systems fail.

The Plan also identifies emergency routes. The City is fortunate in having four major freeways (I-405, SR-91, I-110, and I-710) that would serve as potential evacuation routes during a disaster. Arterial streets with right-of-way widths of from 80 to 100 feet form a grid pattern throughout the City at one-half mile intervals. East-west arterial streets that would be used as evacuation routes include Lomita



Boulevard, Sepulveda Boulevard, 223<sup>rd</sup> Street, Carson Street, Del Amo Boulevard, Victoria Street, Artesia Boulevard, and Alondra Boulevard. North-south arterial streets include Santa Fe Avenue, Alameda Street, Wilmington Avenue, Avalon Boulevard, Main Street, Figueroa Street and Broadway.

## **3.2 EXISTING CONDITIONS**

The potential threat from natural and man-made hazards can pose significant danger to a community. Natural hazards include flooding, seismic activity, geology, soils and wind. Man-made hazards involve hazardous materials, transportation, oil production facilities, civil unrest, national security emergencies and terrorism. This section of the Safety Element addresses the existing conditions of these hazards and programs currently in place to address them.

### **3.2.1 NATURAL HAZARDS**

#### **FLOODING**

##### **Flood Hazards**

Historically, flooding problems in the City of Carson have occurred in low lying areas and in areas where slopes are very flat and peak storm flows are unable to be quickly conveyed into the storm water collection system. Although Carson is located relatively close to the Pacific Ocean, the City has not been vulnerable to storm surge inundation associated with hurricanes and/or tropical storms. According to the City of Carson's SEMS Multi-Hazard Functional Plan, the City is not subject to inundation associated with dam failure. The limits of the 100-year storm are limited to the Dominguez Channel. In the event of a 500-year storm, the entire City would be flooded. Areas outside the 100-year storm limits may also flood due to deficient storm water conveyance.

During heavy rains, run-off 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 County 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 a catch basin located on Santa Fe Street between Carson and Wardlow Streets. Run-off 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.

According to the National Flood Insurance Program (NFIP) administered by the Federal Emergency Management Agency (FEMA), Carson is designated 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 redesignated this area as not being within a flood zone, due to 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. As a result of the restoration, areas in the City of Carson that were previously designated within Zone AR have been changed to the Zone X designation. Within the designation of Zone X, there is no federal obligation on lenders to require flood insurance. Exhibit SAF-1, *Flood Zones Map*, shows existing flood zone areas within Carson.

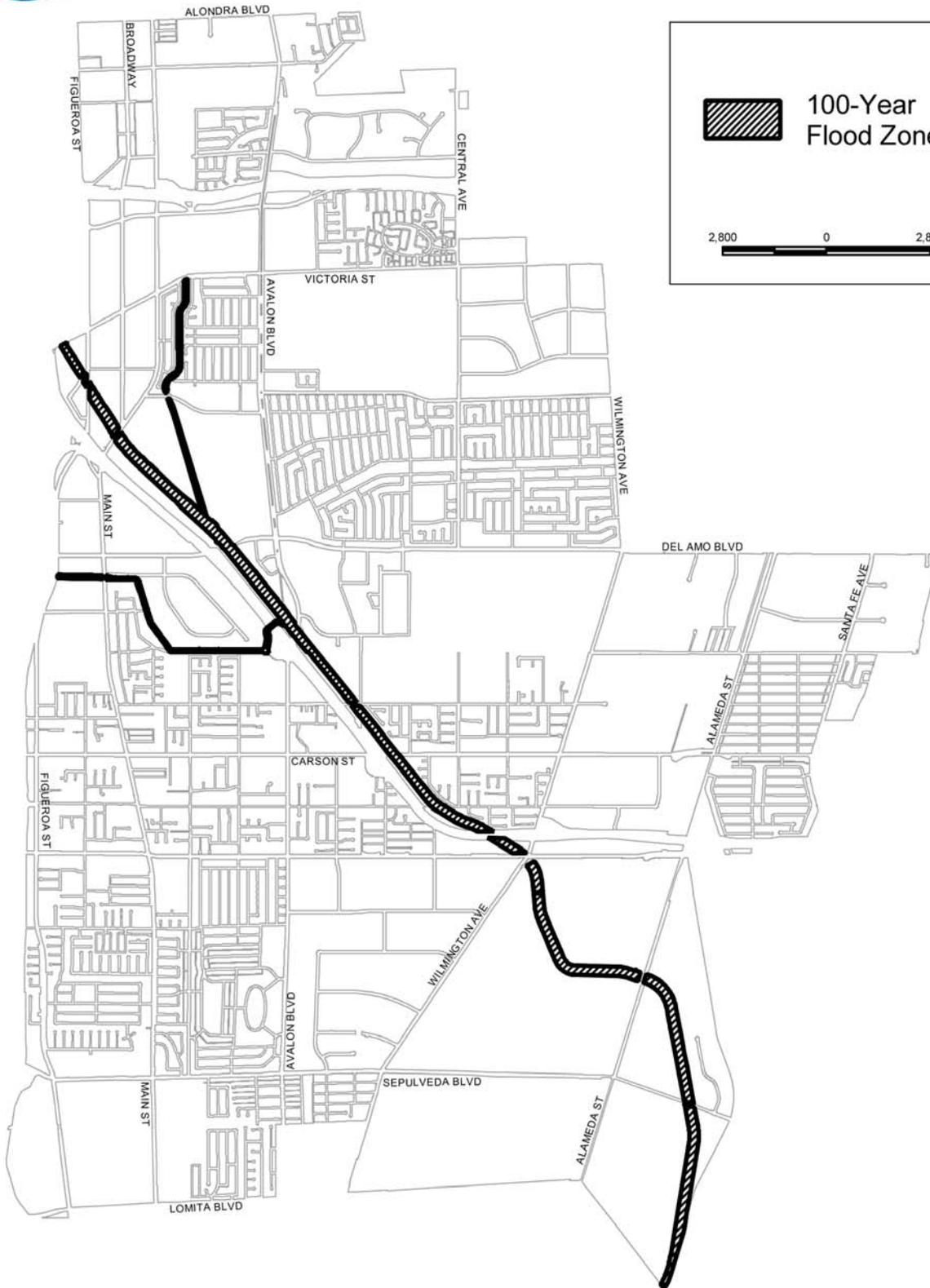
The City’s Emergency Operations Center (EOC) is located at City Hall. Should the City Hall EOC not be available for use due to flooding, or any other circumstances, the designated alternate EOC at the City’s Corporate Yard, would be activated. The City also has a mobile command unit.

### **Drainage Facilities**

The Los Angeles County Department of Public Works (LACDPW) is the responsible agency for regional flood control protection within Los Angeles County. LACDPW presently owns and maintains three regional flood control facilities within or in close proximity to the City of Carson. These facilities include the Dominguez Channel, Compton Creek, and Wilmington Channel. Flows in the City are conveyed by several networks of large drainage facilities to the Dominguez Channel, the primary regional flood control system that traverses and serves the City. Areas in the southwest portion of the City and two smaller areas to the northeast do not convey flows to the Dominguez Channel.



# CARSON GENERAL PLAN



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

## Flood Zone Map

EXHIBIT SAF-1



Two drainage reaches in the City of Carson are classified as unimproved watercourses. The first reach is aligned through the Victoria Golf Course, a Los Angeles County Department of Parks and Recreation facility, and extends from Dominguez Channel to 192<sup>nd</sup> Street. The second reach is aligned through the Carson Harbor Village Mobilehome Park, from Victoria Street to Albertoni Street.

The California State Department of Transportation (Caltrans) also operates and maintains several drainage facilities within the State's operating rights-of-way associated with the Harbor (I-110), Redondo Beach/Artesia (SR-91), and San Diego (I-405) Freeways.

In 1987, the City of Carson developed a Master Plan of Drainage. The Master Plan of Drainage divided the City into 12 major drainage zones and described the existing and proposed facilities required in each zone. In addition to the drainage facilities identified above, the Master Plan of Drainage identifies approximately 130 additional existing storm drains within the City.<sup>1</sup> 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. Exhibit SAF-2, *Existing Drainage Facilities*, shows the existing drainage facilities within Carson.

The Master Plan of Drainage 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. For all other areas, flood protection from a storm with a return frequency of ten years is provided for in the Plan.

## **GEOLOGY**

### **Geologic Characteristics**

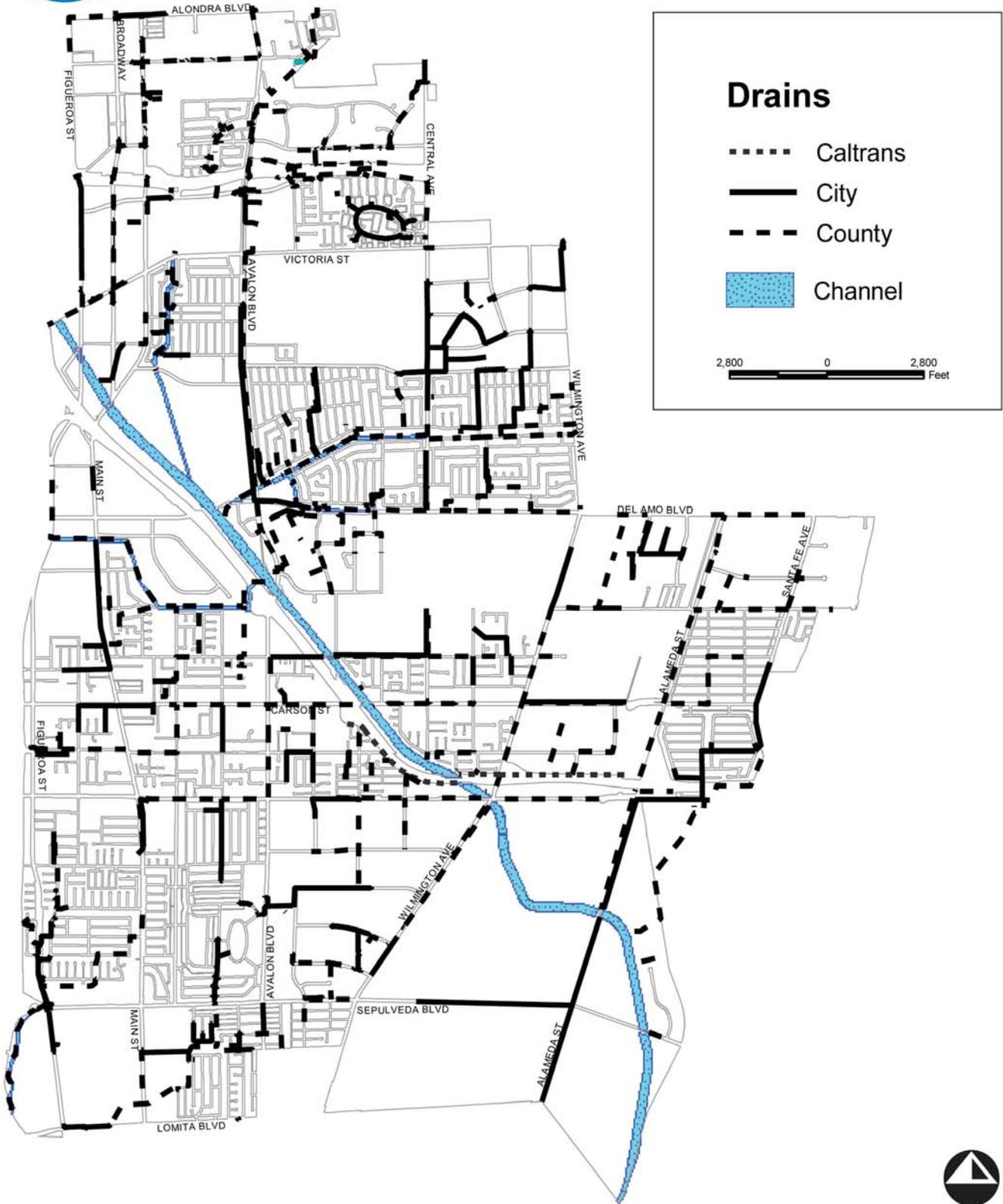
The City of Carson is located within the northerly end of the Peninsular Ranges geomorphic province. The Peninsular Ranges province extends from the Los Angeles Basin south of the Santa Monica Mountains to the tip of Baja California. This geomorphic province is characterized by elongated northwest trending mountain ranges separated by straight-sided sediment floored valleys. 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<sup>2</sup>, the Dominguez anticline<sup>3</sup>, 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

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<sup>1</sup> *City of Carson Master Plan of Drainage*, page 5, September 1987.

<sup>2</sup> Syncline: A fold that is convex downwards.

<sup>3</sup> Anticline: A fold that is convex upwards.



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

## Existing Drainage Facilities

EXHIBIT SAF-2



Cretaceous to Holocene epochs. The north, west, and southern portions of Carson is underlain by stream Quaternary Non-marine Terrace Deposits (Qt). The central and southeastern portion of the City of Carson is directly underlain by Holocene age alluvial (Qal) deposits of the Downey Plain and Dominguez Gap. The alluvial deposits are composed of poorly consolidated sand, silt, clay, and gravel.

The City of Carson is situated in the northern part of the physiographic basin known as the Los Angeles Basin, or the Coastal Plain of Los Angeles. The most prominent landform within the City is the Dominguez Hills, which represents the central portion of the Newport-Inglewood fault zone (or uplift). In addition, the 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. The 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 Downey 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. 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.

### **Mineral Resources**

Carson is located in the Los Angeles Basin, a major oil-producing district in Southern California. The City is located within the Wilmington and Dominguez oil fields. Oil was first discovered in the basin in 1889, and many active oil wells exist today within the City.

### **Soils**

Soils within Carson are variable, ranging from sand to clay loam soil types. Table SAF-1, *General Physical Properties of Soils in the Carson Area*, which is based on information from the Los Angeles Soil Survey (USSCS, 1969) general soils map, indicates the general properties of soil associations that underlay Carson. According to the standards set by the Soil Conservation Service of the U.S. Department of Agriculture (USSCS), no prime agricultural soils exist within the City of Carson.



**Table SAF-1  
General Physical Properties of Soils in the Carson Area**

Association Number	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.

### Geotechnical Constraints

**Differential Settlement.** A major geotechnical consideration for development in the City of Carson is differential settlement. Differential settlement occurs when loose, cohesionless sandy sediments consolidate or compact under the load of an overlying static mass, such as a building. Clayey soils, generally cohesive, typically do not consolidate under loads as much as cohesionless soils. Differential settlement is related to dynamic settlement but differs in that it occurs under static loading, and not as a result of shaking or seismic loading. 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.

Differential settlement may also occur within the 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.

**Subsidence.** As previously mentioned, the Dominguez and Wilmington oil fields are located within the City. 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. By the early 1980s, subsidence at the oil fields had been mitigated and was no longer occurring.<sup>4</sup>

<sup>4</sup> Source: *City of Carson Safety Element*, 1981.



Shallow or Perched Groundwater. Shallow or perched groundwater can also 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.<sup>5</sup>

Slope Instability/Landslides. 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 slopes that are not faced with concrete may cause the slopes to be surficially unstable.

Shrink/Swell Potential. The shrink/swell characteristics of soils also present a geotechnical constraint within the City. Soils with a high clay content typically have high shrink/swell characteristics. Shrinking and swelling of soil can cause overlying concrete to crack and settle. Refer to Table SAF-1, which cites the general characteristics of soils in the City.

## **SEISMICITY**

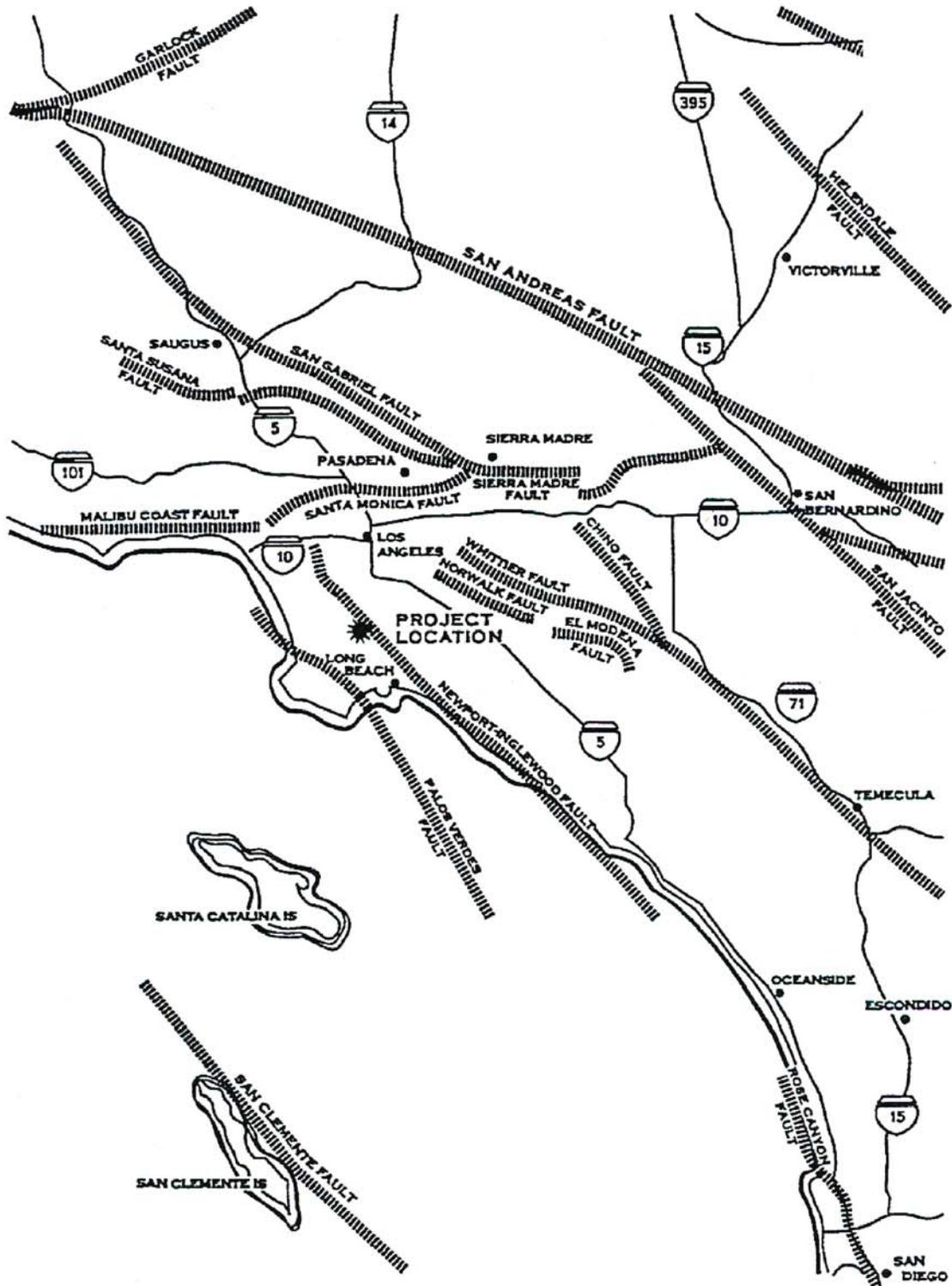
Earthquakes occur frequently in Southern California, and particularly in the Los Angeles Basin, where numerous faults accommodate the complex tectonic stresses caused by the convergence of the North American and Pacific Plates.

Seismic activity of a fault is measured by the frequency and magnitude of past earthquakes associated with that fault. An active fault is a fault that exhibits movement or shows evidence of movement within the last 11,000 years. A potentially active fault is a fault that has exhibited evidence of movement within the last two million years. The better known seismically active faults in Southern California are shown on Exhibit SAF-3, *Regional Fault Map*.

The intensity of earthquakes is measured, or expressed, in terms of two scales. One, the Richter scale, measures the strength of an earthquake, or the strain energy released, as determined by seismographic observations. The second, the Mercalli Intensity Scale, describes the intensity in terms of observable impacts. See Table 3.4-4 in the *Existing Conditions Report*. Historical records indicate that the faults described below are considered active and capable of generating earthquakes that could affect the City.

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<sup>5</sup> *Annual Survey and Report of Groundwater Replenishment*, Water Replenishment District of California, Plate 2, 1998.



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

**Regional Fault Map**

**EXHIBIT SAF-3**



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. This zone, commonly referred to as the Newport-Inglewood uplift zone, can be traced at the surface by following a line of geomorphically young anticlinal 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 of a magnitude 7.0 on the Richter Scale. The Cherry Hill branch of the Newport-Inglewood fault zone traverses the City 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. It was previously designated as an Earthquake Fault Zone but was removed by the State prior to 1986.

Avalon-Compton Fault Zone. The Avalon-Compton Fault zone, which is part of the Newport-Inglewood Fault Zone, is the only active fault located in the City of Carson. The Avalon-Compton fault is located immediately east of Avalon Boulevard and north of the Redondo Beach/Artesia Freeway. Historically, the Avalon-Compton fault/Regional Shear Zone has moderate to high seismic activity with numerous earthquakes greater than Richter magnitude four.

San Andreas Fault Zone. The San Andreas fault zone is California's most prominent structural feature, trending in a general northwest direction for almost the entire length of the state. 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; rather, the fault is composed of several branches. The fault is considered capable of generating a maximum credible earthquake of magnitude 8.25 on the Richter Scale.

Palos Verdes Fault Zone. The Palos Verdes fault zone is located southwest of the City and is traceable in the subsurface along the northern front of the Palos Verdes Hills. Offshore data, consisting of acoustic and reflection profiles, suggests very recent movement along the Palos Verdes Fault.

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, or the Elysian Park structure. 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 a source of future seismic activity. As such, the structure should be considered an active feature capable of generating future earthquakes.



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. Annual slip rate is estimated between 0.27 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 Richter magnitude earthquake.

### **Seismic Hazards**

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 destructive 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.

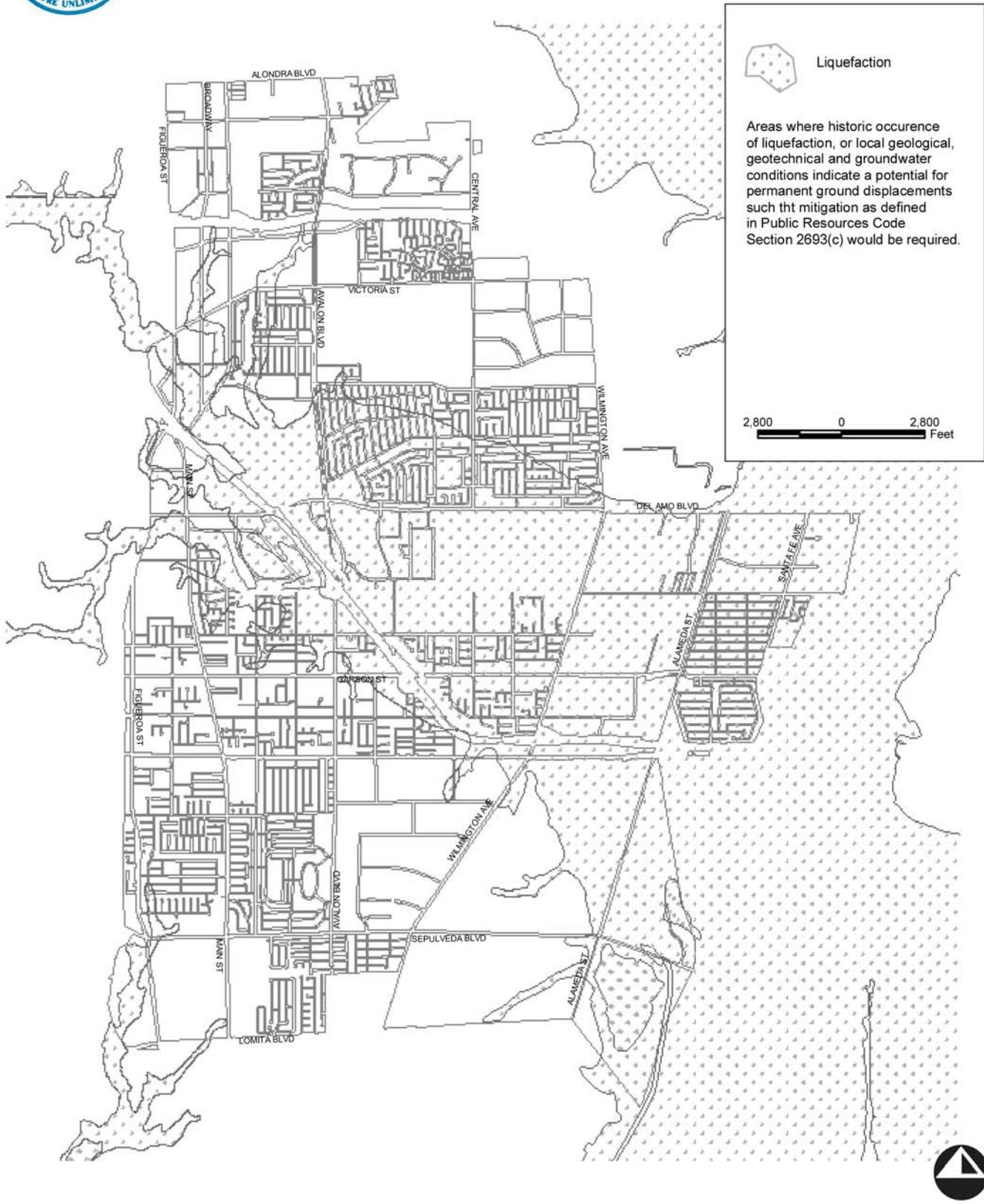
Detectable ground shaking within the City of Carson could be caused by any of the active or potential active faults shown on (Exhibit SAF-3, Regional Fault Map). The Newport-Inglewood, Whittier, Santa Monica, and Palos Verdes Faults are the active faults most likely to cause high ground accelerations in the City. The San Andreas Fault has the highest probability of generating a maximum credible earthquake in California within the next thirty years. The anticipated “Big One”, with a magnitude ranging between 7.5 and 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.

As previously described above, the central and southeastern portions of the City are underlain by alluvial deposits; the northern, western and southern portions of the City are underlain by Quaternary non-marine terrace deposits. 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.

### **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 is a process by which water-saturated granular soils transform from a solid to a liquid state because of a sudden shock or strain. Basic conditions necessary for liquefaction to take place are soil conditions conducive to liquefaction, saturation or these materials by water, and a source of shaking. The Newport-Inglewood fault zone is a potential source of ground stress, and liquefaction could occur in the City of Carson 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



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

**Seismic Hazards**

**EXHIBIT SAF-4**



impact buildings and/or other structures in the event of an earthquake. Exhibit SAF-4, *Seismic Hazards*, shows the areas in the City which have shown historical occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements. Liquefaction can result in the 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. A significant portion of the City has been designated as potential liquefaction area and geotechnical investigation reports are required as part of the environmental and building permit processes for most development within these areas.

Differential Compaction or Settlement. Differential compaction resulting from earthquake ground shaking is potentially damaging to structures and 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. Given the lateral and vertical variation of the alluvial soils underlying Carson, differential settlement could occur as a result of an earthquake in areas thought to have a low susceptibility to settlement. Whereas differential settlement is a potential hazard in Carson, the significance of the hazard at any particular site may only be determined by soils investigations.

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. Areas within Carson occur in those regions indicated on Exhibit SAF-4, *Seismic Hazards*, that have a high potential for liquefaction.

Lateral spreading (a form of landsliding) is referred to as limited displacement ground failure, often associated with liquefaction. Compact surface materials may slide on a liquefied, or low shear strength layer at a shallow depth, moving laterally several feet down slopes of less than two degrees. Such a condition may be present where conditions conducive to shallow liquefaction exist.

Surface Faulting. Surface faulting, rupture of the ground surface along a causative fault trace, is associated with the primary movement that produced the seismic event and should not be confused with secondary ground cracking which is simply a result of ground shaking and may occur at some distance from the causative fault. The likelihood of surface rupture on a given fault can be determined principally studying the seismic history of the fault and reviewing geologic evidence which suggests historic or prehistoric surface rupture. Many past studies have shown that future



surface faulting is most likely to occur where the trace ruptured last, especially if there is evidence of repeated and significant displacement on the trace.

The only active fault within the City limits is the Avalon-Compton structural zone, which is part of the Newport-Inglewood Fault Zone. Although the Newport-Inglewood structural zone is seismically active, surface faulting does not appear to be a significant potential hazard. It is shown on Exhibit SAF 4, *Seismic Hazards*.

Seismically 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 restrictive body of water due to earthquake motions.

Due to the distance of the City to the Pacific Ocean, the potential for tsunami effects within the City is negligible. The absence of any large bodies of water within Carson preclude the possibility of damage from seiche effects. This could change should lakes or large reservoirs be constructed within the City.

## **3.2.2 MAN-MADE HAZARDS**

### **HAZARDOUS MATERIALS**

The State of California defines a hazardous material as a substance that is toxic, ignitable or flammable, or reactive and/or corrosive. 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 materials, is material that is to be abandoned, discarded, or recycled, and includes chemical, radioactive, and biohazardous waste (including medical waste).

#### **Setting**

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.

Since the 1980s, hazardous materials have been governed by a variety of environmental regulations that require proper storage, handling, employee and public noticing, spill contingency planning, business/environmental management



plans, and other emergency response measures necessary to ensure public safety and to minimize the risk of accidental releases or environmental impacts. While it is less likely for newer uses to have involved hazardous materials releases, the potential for accidental releases, while minimized under current regulations, is inherent to industrial areas.

The increasing volume and variety of hazardous materials that are generated, stored, or transported within the City of Carson is a problem of great concern to public officials and the community. A number of freight trains traverses the City, hauling various types of hazardous and explosive materials including chlorine gas, and low pressure natural gas (LPG). Several fixed-site industrial firms require the use of potentially hazardous materials to operate their businesses. Finally, there are numerous underground pipelines within the City limits that carry flammable and hazardous liquids.

### **Hazardous Waste Management**

Regulation of hazardous wastes is provided on the Federal, State and local levels. The United States 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. 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 toxins 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 in the 1970s and 1980s, 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. In 1988, Los Angeles County adopted the Los Angeles County Hazardous Waste Management Plan, which was subsequently approved by the State Department of Health Services. The City of Carson subsequently adopted the Plan. The Los Angeles County Hazardous Waste Management Plan provides policy direction and action programs to address current and future hazardous waste management issues that require local responsibility and involvement in Los Angeles County. In addition, the Plan discusses hazardous waste issues, and analyzes current and future waste generation in the incorporated cities, County, and State and Federal lands.

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 has since 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 Los Angeles County Fire Department and its name changed to Health Hazards Division.



## **Household Hazardous Waste Element**

Adopted in January 1992, the City Household Hazardous Waste Element describes existing and future programs to reduce household hazardous waste (HHW). The Element seeks to provide safe and convenient means to dispose of HHWs, increase recycling and reuse of HHWs, increase education about HHWs to decrease dependency and usage of HHWs, and methods to monitor and enforce regulatory requirements concerning HHW management.

### **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. The 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.

Significant concentrations of hazardous materials, at levels for which a business plan is required, are generally associated with manufacturing and industrial areas. It should be noted, however, that hazardous materials are also used and stored in commercial and residential areas.

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 MATERIALS AND TOXICS IN CARSON**

### **Waste Generators**

There are approximately 324 businesses in the City of Carson that handle hazardous materials and have a business plan on file or pending with the County of Los Angeles Fire Department. As of March 1999, 43 of these businesses handle acutely, or highly hazardous materials. A significant portion of these generators are associated with the petroleum industry. Other contributors to hazardous waste in the City include small quantity generators (SQGs). SQGs refer to generators of less than 1,000 kilograms (kg) of hazardous waste per month, such as gas stations,



automotive repair shops, dry cleaners, and photo finishers. A small percentage of the City's hazardous waste is classified as "household hazardous waste," which includes waste associated with painting, automobiles, cleaning solvents, and pesticides used for gardening.

There are 16 businesses in the City and immediately surrounding unincorporated area that have Risk Management Plans (RMPs), in compliance with California's Accidental Release Program, 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 RMP is currently being updated. In addition, the City of Carson contains numerous regulatory program sites (Fee Groups 03-05). Refer to Exhibit 3.7-1, Sites with Regulatory Programs, and Table 3.7-1, City of Carson Regulatory Fee Groups, in the *Existing Conditions Report*.

### **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.

### **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 travels 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, 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 Element, 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.

As previously mentioned, 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 4,400,000 barrels of oil. See Table 3.7-4, Oil and Gas Well Inventory, in the *Existing Conditions Report*.

### **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 or fire.

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 BP, British Petroleum) are located within the City. The Southern Pacific Pipeline transports an unlimited amount of various products through the City from several locations (refer to Appendix C, Hazardous Materials, in the *Existing Conditions Report*). If one of these pipes is broken, 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 (refer to Hazardous Materials Incidence Response, and Exhibit 3.7-3, Los Angeles Basin Call Wheel, in the *Existing Conditions Report*). In addition, the Fire Department has to report any pipe rupture, fire, or explosion to the State Office of Emergency Services. Although a release of crude oil and/or refined petroleum product would not pose as immediate a threat to the City residents as a toxic cloud would, the long-term environmental impacts of such an incident can be serious and costly. For example, if spilled crude



oil and/or refined product leak into the ground, the shallow ground water could be contaminated, requiring ground water clean-up or remediation.

### **Superfund Sites**

A search of the EPA's database of Superfund Sites revealed a total eight hazardous waste sites in Carson; however, none of the sites has been placed on the National Priorities List.<sup>6</sup> The search query results can be found in Appendix C, of the *Existing Conditions Report*.

### **Underground Storage Tank Leaks**

Based on a review of the California Environmental Protection Agency (EPA), 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), in 1999, at least 72 Leaking Underground Storage Tanks (LUSTs) had 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. Refer to Table 3.7-2 and Appendix C in the *Existing Conditions Report*.

### **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 potentially hazardous waste sites included 14 sites within the City that were investigated by the EPA. The CERCLIS inventory lists sites that have been identified as having a potential for releasing hazardous substances into the environment (refer to Appendix C of the *Existing Conditions Report*). According to information provided by VISTA Information Solutions, Inc., there are no Federal National Priorities List (NPL) sites within the City. However, these 14 sites are currently being reviewed/ assessed for possible inclusions on the NPL.

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 City currently has 14 inactive sanitary landfills and no active landfills. Although none of these landfills currently accepts materials that decompose chemically or biologically, some of these sites had 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. Other

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<sup>6</sup> Source: <http://www.epa.gov/superfund>. November 16, 2001.



sites will probably not produce landfill gases since they contain non-water soluble, non-decomposable inert solids.

## **HAZARDOUS MATERIALS RESPONSE**

The City of Carson recognizes that the presence of hazardous materials associated with industrial activities poses unique dangers to the health and welfare of the citizens of Carson. In order to efficiently manage hazardous materials emergencies and to minimize their effects, the City of Carson and assisting agencies have developed a comprehensive Hazardous Material Response Plan. The Los Angeles County Fire Department is responsible for responding to hazardous material release incidents in Carson. The Los Angeles County Fire Department is not a 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.<sup>7</sup> First response to all hazardous materials incidents within the City is conducted by the Los Angeles County Fire Department.

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 3.9, Public Services, in the *Existing Conditions Report* for the location of these fire stations). 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 the same as for a fire, approximately five minutes.

### **Los Angeles Basin Call Wheel**

In addition to the Los Angeles County Fire Department, an industry developed and maintained “Call Wheel” notification system has been prepared for pipeline leak notification to petroleum companies within the Los Angeles Basin, as shown on Exhibit, 3.7-3, Los Angeles Basin Call Wheel, in the *Existing Conditions Report*. The purpose of the “Call Wheel” is for leak information notification to those companies on the Call Wheel, who may be the parties responsible for the leak.

## **3.2.3 AIR TRAFFIC, RAIL LINE AND TRUCKING HAZARDS**

### **AIRCRAFT OVERFLIGHT HAZARDS**

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

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<sup>7</sup> Telephone interview with Battalion Chief John Tucker of the Los Angeles County Fire Department on March 17, 1999.



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 could inadvertently enter the restricted TCA airspace. This misunderstanding could result in a mid-air collision.

Two busy general aviation airports are also located near the City—Compton and Torrance Airports—and accidents have occurred from aircraft using these airports.

### **Train Derailment**

The City of Carson is served by three railroads. All 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 light rail traverses the City. 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. 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 7<sup>th</sup> 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 3.2, Circulation, of the *Existing Conditions Report*.)

### **Trucking Hazards**

A major truck incident could encompass many threats, such as a hazardous materials incident, fire, severe damage to either buildings or vehicles, and loss of life to pedestrians or those in buildings or vehicles. Carson is served by four major freeways, several major north-south/east-west truck routes, and contains 29 truck parking zones. See Exhibit 3.2-5, Truck Routes and Truck Parking Zones in the *Existing Conditions Report* and additional discussion in Chapter 3, Transportation and Infrastructure Element.

## **3.2.4 CRIME, FIRE AND MEDICAL EMERGENCIES**

### **POLICE PROTECTION SERVICES**

Police services are provided by the Los Angeles County Sheriff's Department. There is one existing Carson Sheriff Station, located at 21356 South Avalon in Carson, as shown on Exhibit 3.9-1, Existing Fire and Sheriff Stations, located in the *Existing Conditions Report*. In 2002, 187 sworn personnel and 35 civilian personnel operated from this station. There are approximately 2.1 sworn personnel per 1,000 residents and 0.40 civilian personnel per 1,000 residents. A standard of 1.7 officers per 1,000 residents is considered excellent. Within a 24-hour period, there are approximately 31 patrol cars serving the Carson area, divided among three work shifts.

### **Response Times**

Data for response times is divided into three categories: 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). Refer to Table SAF-2, Emergency Response Times.

**Table SAF-2  
Emergency Response Times**

Type of Response	Month	Daily Average
EMERGENT	May 2002	5.1
	June 2002	4.9
	July 2002	4.3
	<b>Average</b>	<b>4.7</b>
IMMEDIATE	May 2002	7.6
	June 2002	7.1
	July 2002	7.6
	<b>Average</b>	<b>7.4</b>
ROUTINE	May 2002	34.1
	June 2002	36.0
	July 2002	34.9
	<b>Average</b>	<b>35.0</b>

## **FIRE PROTECTION SERVICES**

Fire protection services in the City of Carson are provided by the Los Angeles County Fire Department. There are six primary fire stations that provide both fire and emergency medical service to the City of Carson, with four of the stations located within Carson's boundaries. In addition to the fire stations, there is a Fire Prevention Office located at the Carson City Hall. 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 9-1-1 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.

Table SAF-3, Fire Station Response Times for Carson, shows the number of incidents and the average response time for each category of fire calls.



**Table SAF-3  
Fire Station Response Times for Carson**

	<b>Number of Incidents</b>	<b>Average Response Time</b>
Emergency Medical Service	1,047	4.7
Fire	81	5.0
Hazardous Materials	78	5.0
Other	377	5.4
Grand Total	1,583	4.9

**Paramedic Care**

Squads 36 and 116, located within the City of Carson, provide paramedic definitive care. Additional paramedic squads are located in the surrounding area (Lomita, Lawndale, Hawthorne, Lakewood, Paramount and Rolling Hills) to augment coverage in Carson. Three LACFD helicopters are strategically located to provide air ambulance and paramedic service to the area that includes Carson.

Ambulance service for the Carson area is provided by American Medical Response, with units based at East 223<sup>rd</sup> Street and Lucerne Avenue in Carson.

**Emergency Response and Recovery**

The City of Carson conducted a hazard analysis study as part of the preparation of its SEMS Multi-Hazard Functional Plan, which is summarized on the following pages. 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 Services, Development Services, Administrative Services, and Economic Development 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. Following are descriptions of various types of events that could trigger the need for emergency response, in addition to hazardous materials and natural disaster response. These list specific conditions or details related to such events in the City of Carson when applicable.

Civil Unrest. An incident of civil unrest could impact not only the immediate area, but possibly the entire City. Civil unrest can be spurred by specific events, such as large sporting events or criminal trials, or can be the result of long-term disfavor with authority. Civil unrest is usually noted by the fact that normal on-duty police and safety forces cannot adequately deal with the situation until additional resources



can be acquired. The City of Carson has faced civil unrest in various forms since the Watts Riots of 1964. The 1992 Rodney King verdicts caused the most widespread rioting in recent history, with countywide losses of property in the millions.

National Security Emergency. The entire Los Angeles basin is considered a risk area for a nuclear weapons event; therefore, both sheltering and evacuation should be considered. Neither the City nor the County of Los Angeles has the capability to plan for the organized evacuation of the basin; therefore, the extent of planning at this time is restricted to assisting and expediting spontaneous evacuation. In the increased readiness stage, expedient shelters would be utilized as appropriate and information would be provided to the public, but the fallout shelter identification program is no longer maintained or utilized within the State of California. The City of Carson is not within the planned range of a radioactive plume from any nuclear power plants, however, the recent approval of the nuclear storage facility in Nevada, and the transport of radioactive materials to that site increases the potential for this type of event.

Terrorism. Throughout California there is a nearly limitless number of potential targets for terrorist activity, depending on the cause supported by a terrorist or a terrorist group. Some of these targets include: religious facilities, government offices, abortion clinics, public places, schools, power plants, refineries, utility infrastructures, water storage facilities, dams, private homes, prominent individuals, financial institutions, and businesses. In conducting a threat assessment, a variety of situations should be considered: the groups that exist or operate within an area; the structural targets; the significant dates for specific terrorist groups; the potential personal targets; and the special events held in the area.

Any single incident or a combination of events could require evacuation and/or sheltering of the population of Carson.

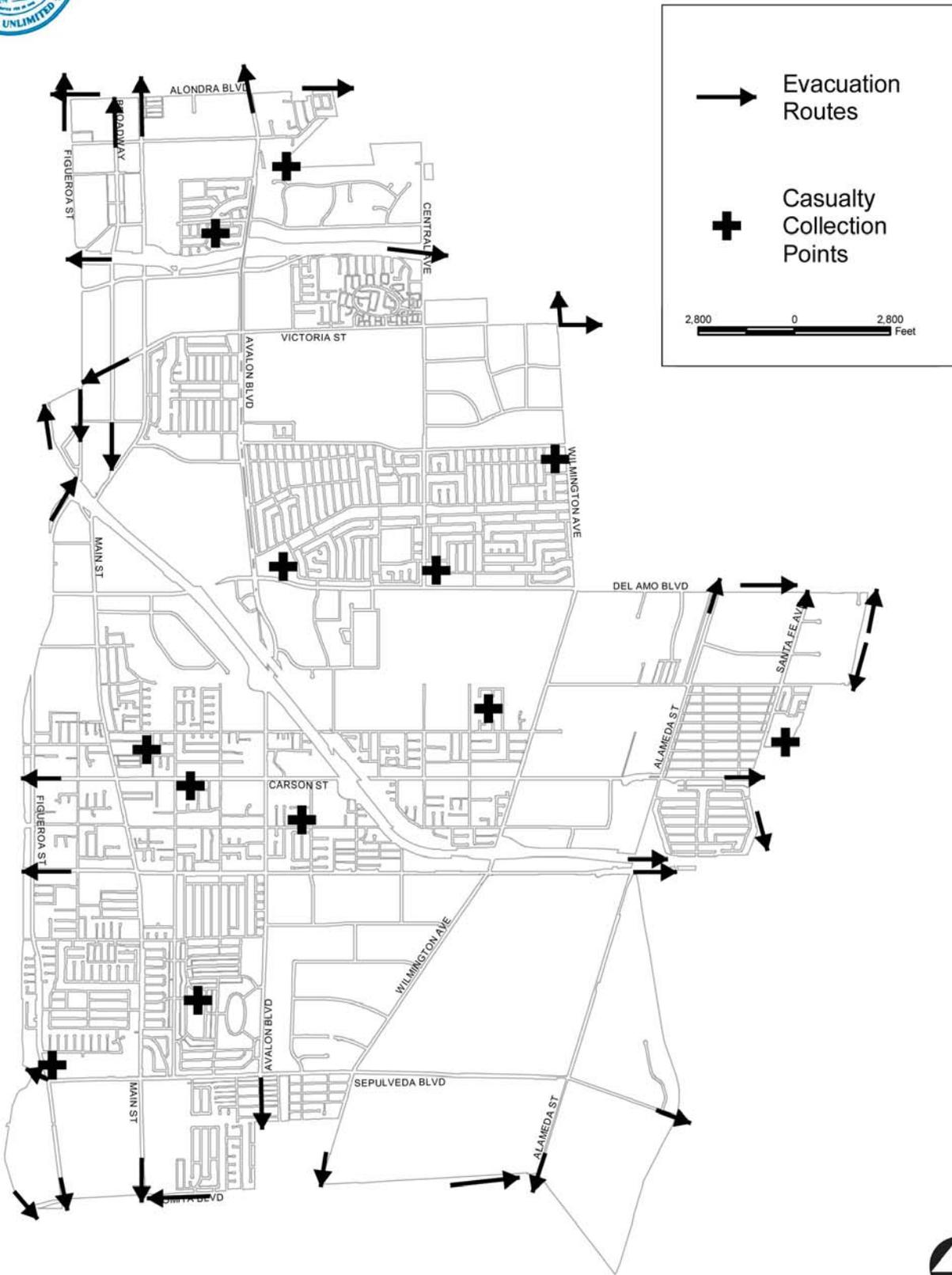
### **Evacuation Routes**

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. 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.

The City has also created a list of numerous locations within the City of Carson that would be used in case of a disaster or major emergency, referred to as Casualty Collection Points. See Table 3.8-1 in the *Existing Conditions Report*. Exhibit SAF-5, Evacuation Routes/Casualty Collection Points, shows the location of the Points and the evacuation routes for the City.



# CARSON GENERAL PLAN



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

## Evacuation Routes/Casualty Collection Points

EXHIBIT SAF-5



## 4.0 PLANNING ISSUES, GOALS, POLICIES AND IMPLEMENTATION

The acronyms listed below are used for the implementation measures:

RA/D: Responsible Agency/Division  
 FS: Funding Source  
 TF: Time Frame

### ISSUE: PROTECTION IN THE EVENT OF NATURAL DISASTERS

*It is important that there is adequate protection from such natural disasters as earthquakes and flooding, and that the City is adequately prepared in the event of an emergency.*

**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.

### Implementation Measures:

SAF-IM-1.1 Apply City Building Code consistently to all development. *(Implements SAF-1.1)*

**RA/D:** Building & Safety  
**FS:** Building fees, General Fund  
**TF:** Ongoing

SAF-IM-1.2 Design and complete flyers, website pages, and programs. *(Implements SAF-1.2)*



**RA/D:** Public Information Office, Public Safety, GIS  
**FS:** General Fund, grants  
**TF:** 2003-05

SAF-IM-1.3 Assign a task force to research feasibility and funding sources for a retro-fit loan program. (*Implements SAF-1.3*)

**RA/D:** Development Services Administration, Building & Safety  
**FS:** General Fund  
**TF:** 2003-04

**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.

**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.

**Implementation Measures:**

SAF-IM-2.1 Target areas which experience storm drainage deficiencies for improvements through the Capital Improvement Program.



**RA/D:** Public Works  
**FS:** CIP  
**TF:** 2003-08

SAF-IM-2.2 Propose that the Los Angeles County Department of Public Works construct and operate a new storm water pump station in an area prone to flooding.)

**RA/D:** Public Works  
**FS:** CIP  
**TF:** 2003-2004

**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.

**Implementation Measures:**

SAF-IM-3.1 Review neighborhood access needs and solve problems, if possible. *(Implements SAF-3.1)*

**RA/D:** Engineering, Planning  
**FS:** General Fund, Gas Tax  
**TF:** 2004-2005 and Ongoing

SAF-IM-3.2 Regularly update the SEMS Multi-Hazard Functional Plan. *(Implements SAF-3.2)*

**RA/D:** Public Safety  
**FS:** General Plan  
**TF:** Annually



SAF-IM-3.3 Meet regularly with aid agencies to coordinate resources. *(Implements SAF-3.3)*

**RA/D:** Public Safety  
**FS:** General Fund  
**TF:** Ongoing

SAF-IM-3.4 Meet and implement regular safety educational programs. *(Implements SAF-3.4)*

**RA/D:** Public Safety/PIO  
**FS:** General Fund, Grants  
**TF:** Ongoing

SAF-IM-3.5 Monitor legislation and prepare positions for the City Council. *(Implements SAF-3.5)*

**RA/D:** Public Safety, City Attorney  
**FS:** General Fund  
**TF:** Ongoing



**ISSUE: PUBLIC SAFETY RELATING TO THE HANDLING AND EXPOSURE OF THE COMMUNITY TO HAZARDOUS MATERIALS**

*The administration of appropriate safety procedures to protect the public from accidents involving the handling, use and transportation of hazardous materials is important.*

**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.

**Implementation Measures:**

- SAF-IM-4.1 Require that businesses located within ¼-mile or less from a residential neighborhood, or ½-mile from a critical care facility follow the strictest guidelines possible regarding the handling, storage, containment, and transportation of extremely hazardous substances.

**RA/D:** Public Safety  
**FS:** General Fund  
**TF:** Ongoing

- SAF-IM-4.2 Continue to conduct periodic inspections of all businesses using or storing hazardous materials to ensure safe practices and improve communications with business personnel.

**RA/D:** Public Safety  
**FS:** General Fund  
**TF:** Ongoing



**ISSUE: URBAN FIRES**

*Urban fires represent a significant risk to both residents and workers within Carson. Fires in commercial and industrial areas can result in the release of hazardous toxic substances, fires in high occupancy apartment and office buildings present special safety problems, and fires spread by “branding,” wind driven embers, can threaten whole neighborhoods where roofing materials are not fire resistant.*



**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.

**Implementation Measures:**

SAF-IM-5.1 Request that the Fire District maintain a level of service to allow for personnel to attend meetings and to respond promptly to the City's environmental, site planning, and building plan review processes.

**RA/D:** Fire, Planning Division

**FS:** District

**TF:** Ongoing

SAF-IM-5.2 Continue to conduct annual fire prevention inspections.

**RA/D:** Fire

**FS:** District

**TF:** Ongoing



SAF-IM-5.3 Urge the use of smoke alarms, sprinkler systems, evacuation ladders, and offer fire protection and/or risk reduction devices.

**RA/D:** Fire, Building and Safety  
**FS:** District, General Fund  
**TF:** Ongoing

SAF-IM-5.4 Encourage the replacement of wood shake roofs with Class C roofing materials or better.

**RA/D:** Fire, Building and Safety  
**FS:** District, General Fund  
**TF:** Ongoing



**ISSUE: SAFETY FROM CRIME**

*Safety from crime is a primary concern in any community; specific concerns in Carson relate to graffiti, gang activity, burglary, and assault.*

**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 Community Watch Programs.
- 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.
- SAF-6.9 Evaluate the need for future new Sheriff facilities.

**Implementation Measures:**

- SAF-IM-6.1 Train new planners in the principles of CPTD. *(Implements SAF-6.2)*
- RA/D:** Planning, Sheriff  
**FS:** General Fund  
**TF:** Ongoing
- SAF-IM-6.2 Prepare CPTD standards and guidelines for public use. *(Implements SAF-6.3)*
- RA/D:** Planning, Sheriff  
**FS:** General Fund  
**TF:** 2005-2006
- SAF-IM-6.3 Prepare a display for the City Hall lobby showing the principles of CPTD. *(Implements SAF-6.3)*
- RA/D:** Planning, Sheriff  
**FS:** General Fund  
**TF:** 2005-2006



SAF-IM-6.4 Work with the Sheriff’s Department to implement and fund existing and new policing and community programs. *(Implements SAF-6.4-SAF-6.7)*

**RA/D:** Public Safety, Sheriff  
**FS:** General Fund, Grants  
**TF:** Ongoing

SAF-IM-6.5 Provide flyers and other materials promoting safety measures for youth, including bicycle, skateboard and scooter helmets and other protection. *(Implements SAF-6.5)*

**RA/D:** Sheriff, Recreation Services  
**FS:** General Fund, Grants  
**TF:** Ongoing

SAF-IM-6.6 Research, implement, and maintain pedestrian safety devices. *(Implements SAF-6.8)*

**RA/D:** Engineering, Public Works, Sheriff  
**FS:** General Fund, Grants  
**TF:** 2003-2004 and Ongoing

SAF-IM-6.7 Identify needs and alternatives for providing new Sheriff facilities. *(Implements SAF-6.9)*

**RA/D:** Sheriff, Public Safety, City Manager  
**FS:** General Fund  
**TF:** 2006-2007

**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.

**Implementation Measures:**

- SAF-IM-7.1 Sheriff, Public Safety, and City Management implement existing and new programs targeting youth crime. *(Implements SAF-7.1, SAF-7.3, SAF-7.5-SAF-7.7)*

- RA/D:** Sheriff, Public Safety, City Manager
  - FS:** General Fund, Grants
  - TF:** Ongoing

- SAF-IM-7.2 Research and implement new jobs programs for youth. *(Implements SAF-7.4)*

- RA/D:** Employment Development
  - FS:** Federal and State Grants
  - TF:** Ongoing



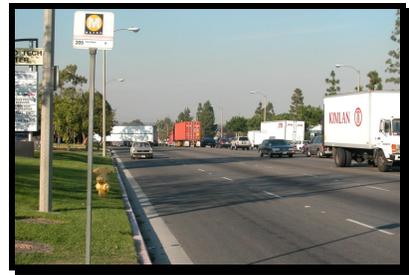
# CHAPTER 7

## NOISE ELEMENT



# CHAPTER 7

## NOISE ELEMENT



### **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.*

### **1.0 INTRODUCTION**

The Noise Element of a general plan is a comprehensive program to limit the exposure of the community to excessive noise levels. The Element lists and maps current and projected noise levels for existing and planned uses within the City of Carson. The projected noise levels are used to guide future land decisions to limit noise and its effects on the community, including noise-sensitive land uses. Federal, State and City regulations relating to noise are outlined in this section. This Noise Element establishes goals, policies and programs to ensure that Carson residents will be protected from excessive noise. In addition, noise contours in the form of community noise equivalent level (CNEL) or day-night average level (Ldn) are provided for all referenced sources.

The adopted Noise Element serves as a guideline for compliance with the State's noise element, which serves as a guideline for compliance with the state's noise insulation standards.



## 2.0 STATE LAW REQUIREMENTS

The State of California Government Code Section 65302(f) requires that a General Plan include:

*“...a noise element which shall identify and appraise noise problems in the community. The Noise Element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify...current and projected noise levels for all of the following sources: (1) highways and freeways; (2) primary arterials and major local streets; (3) passenger and freight on-line railroads operations and ground rapid transit systems; (4) commercial, general aviation, heliport, and military operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation; (5) local industrial plants, including but not limited to, railroad classification yards; (6) other ground stationary noise sources identified by local agencies as contributing to the community noise environment.”*

## 3.0 SUMMARY OF FINDINGS

### 3.1 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 N-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).



**Table N-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.



### **3.1.1 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 reading represents the average of 24 hourly readings of equivalent levels, known as Leq's, 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".

### **3.1.2 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.

### **3.1.3 DAY NIGHT AVERAGE (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's 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. 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., L90, L50, L10, etc.). L50 equals the level exceeded 50 percent of the time, L10 ten percent of the time, etc.

## **3.2 NOISE STANDARDS**

### **3.2.1 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.



### 3.2.2 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 dBA is undesirable. Whenever such units are to be located in such areas, the developer must incorporate into building design construction features which reduce interior noise levels to 45 dBA CNEL. Tables N-2 and N-3, below, summarize standards adopted by various State and Federal agencies. Table N-2, *Noise and Land Use Compatibility Matrix*, presents criteria used to assess the compatibility of proposed land uses with the noise environment. Table N-3, *Interior and Exterior Noise Standards*, 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.

### 3.2.3 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 N-4, *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 will be reviewed periodically for adequacy and amended as needed to address community needs and development patterns.



**Table N-2  
Noise and Land Use Compatibility Matrix**

Land Use Category	Community Noise Exposure			
	Ldn or CNEL, dB			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential-Low Density	50-60	60-65	65-75	75-85
Residential-Multiple Family	50-60	60-65	65-75	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	50-65	NA	65-85
Sports Arenas, Outdoor Spectator Sports	NA	50-70	NA	70-85
Playgrounds, Neighborhood Parks	50-70	NA	70-75	75-85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-70	NA	70-80	80-85
Office Buildings, Business Commercial and Professional	50-67.5	67.5-75	75-85	NA
Industrial, Manufacturing, Utilities, Agriculture	50-70	70-75	75-85	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 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 N-3  
Interior and Exterior Noise Standards**

Land Use Categories		CNEL	
Categories	Uses	Interior <sup>1</sup>	Exterior <sup>2</sup>
Residential	Single family Duplex, Multiple Family	45 - 55	50 – 60
	Mobile Home	45	65
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	45	65
	Church, Library	45	--
Open Space	Parks	--	65

**NOTES:**

1. Indoor environmental including: Bedrooms, living areas, bathrooms, toilets, closets, 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 CNEL.



**Table N-4  
Noise Ordinance Standards**

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval (dB)	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.

### **3.3 EXISTING NOISE CONDITIONS**

The sources of noise in Carson fall into four basic categories. These are:

- Roadways (including major and minor arterials and freeways);
- Aircraft overflights (from the Compton Airport and Long Beach Airport);
- Stationary sources (including construction activity and industrial and commercial centers); and
- Trains (including Union Pacific Railroad (UPRR), Burlington Northern Santa Fe (BNSF) Railroad and the Metro Blue Line).

#### **3.3.1 ROADWAY NOISE**

As is typical of most urbanized areas, the most pervasive noise source 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, 223<sup>rd</sup> 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, Interstate 405 (I-405) and State Route 91 (SR-91) generate substantial noise levels within the community.



Noise levels along roadways are determined by a number of traffic characteristics. Most important is the average daily traffic (ADT). Additional factors include the percentage of trucks, vehicle speed, the time distribution of this traffic, and gradient of the roadway. 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.

### **3.3.2 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 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. However, there is some intrusion of noise from the airport in Long Beach.

Flyover noise is generated from air traffic into Los Angeles International Airport, Long Beach Airport, and, to a lesser extent, Torrance General Aviation Airport. Should the volume of air traffic at the Long Beach Airport increase, it could become a significant problem for residential areas on the east side of the City.

### **3.3.3 STATIONARY NOISE**

#### **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 impact generated by industrial uses, and hence the characterization of any given industrial use as a noise source, is dependent upon various critical factors, including type of industrial activity, hours of operation, and the location relative to other land uses.

Industrial noise sources are located in several isolated pockets throughout the City. Delivery trucks, other truck movements, 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 norm for residential areas.

#### **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.

### **3.3.4 RAIL LINE NOISE**

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; no Blue Line stations are in the City.

Three UPRR lines run within the City of Carson: San Pedro line, Wilmington line, and Dominguez Channel line. 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. In approximately three years, the San Pedro line will be the only UPRR line in operation. However, the Wilmington line will remain in place and serve as an auxiliary line. The Dominguez Channel line carries five (5) 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.<sup>1</sup>

According to the *Alameda Corridor Environmental Impact Report*, dated January 1993, residents located immediately adjacent to the Alameda and Wilmington lines between Dominguez Street and 223<sup>rd</sup> Street are experiencing noise levels of 68 dBA CNEL, which exceeds the City exterior noise standard of 65 dBA CNEL by 3 dBA. However, this noise level includes vehicular-generated noise associated with Alameda Street.

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.<sup>2</sup> There are approximately 38 trains that utilize the BNSF rail line within the City of Carson each day. No acoustical data or additional operational information was provided by BNSF, regarding operations within the City of Carson.

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<sup>1</sup> Mr. Mike Irvine, General Superintendent of Transportation, Union Pacific Railroad, April 7, 1999.

<sup>2</sup> Train operation data associated with the BNSF Railroad line were provided by Mr. Don Cleveland, staff with BNSF, April 14, 1999.



The City has no control over railroad noise which is preempted by the Federal Government.

### 3.4 NOISE SENSITIVE RECEPTORS

The City of Carson has identified residences, public and private school/preschool classrooms, churches, hospitals and elderly care facilities as noise sensitive receptors. 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 N-5, *Noise Sensitive Receptors*, provides a listing of noise sensitive land uses along with their street address. Exhibit N-1, *Location of Sensitive Receptors*, illustrates the location of these land uses.

The potential exists for noise sensitive receptors located adjacent to roadways to experience 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).

Field measurements to identify ambient noise levels within the City limits were conducted on March 9, March 10, and March 11, 1999.<sup>3</sup> Field monitoring consisted of 30 noise measurements recorded at various locations throughout the City. Each measurement was recorded for a period of between 5 and 8 minutes on the sidewalk adjacent to the roadways. The noise measurements take into account mobile noise sources (i.e., vehicular and aircraft) and stationary noise sources (i.e., playgrounds, industry, manufacturing), and are shown in Table N-6, *Existing Noise Levels*. In addition refer to Exhibit N-2, *Location of Noise Measurements*, for an approximate location of the field noise recordings.

Table N-6 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 throughout the City. As previously indicated above, the noise measurements were taken on the sidewalk immediately adjacent to the roadway within the right-of-way. In addition, heavy truck traffic was observed on many of the roadways during the field measurements. It should be noted that the noise measurements do not take into account noise attenuation measures (i.e., soundwalls, berms) or setbacks. Therefore, it is anticipated that existing residential areas along the roadways identified in Table N-6, are experiencing noise levels below the ambient noise measurements due to existing soundwalls or physical setbacks from the existing edge of right-of-way.<sup>4</sup>

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<sup>3</sup> Measurements taken by RBF Consulting.

<sup>4</sup> Sound/privacy walls typically provide sound attenuation on the order of 5 to 10 dBA.



**Table N-5  
Noise Sensitive Receptors**

Facility	Street Address
<b>HEALTH CARE</b>	
Carson Senior Social Services	3 Civic Plaza
El Nido Family Center	460 East Carson Plaza Drive
Family Services	340 West 224 <sup>th</sup> Street
Department of Rehabilitation	451 East Carson Plaza Drive
<b>CHILD CARE</b>	
Schmitt Family Day Care	21826 Moneta Avenue
Patricia Shanklin	22821 Catskill Avenue
Voneta Day Care	1225 Bankers Drive
Sotelo Family Day Care	135 East 229 <sup>th</sup> 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 213 <sup>th</sup> Street
Olivia's Family Day Care	2556 East Jackson Street
Parra Family Day Care	177 West 234 <sup>th</sup> 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 237 <sup>th</sup> 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 220 <sup>th</sup> Street



**Table N-5 [continued]  
Noise Sensitive Receptors**

Facility	Street Address
<b>CHILD CARE – Continued</b>	
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
<b>PRE-KINDERGARTEN</b>	
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
Carson Street School	161 East Carson Street
Towne Avenue School	18924 Towne Avenue
<b>SCHOOLS</b>	
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
232 <sup>nd</sup> 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
<b>CHURCHES</b>	
Baptist Temple of Prayer	224 East Carson Street
Calvary Chapel of South Bay	415 West Torrance Boulevard
Carson Baptist Church	520 East 228 <sup>th</sup> Street
Carson Christian Center/Carson-Wilmington Minister’s Fellowship	19303 Annalee Avenue
Carson Christian Church	356 East 220 Street

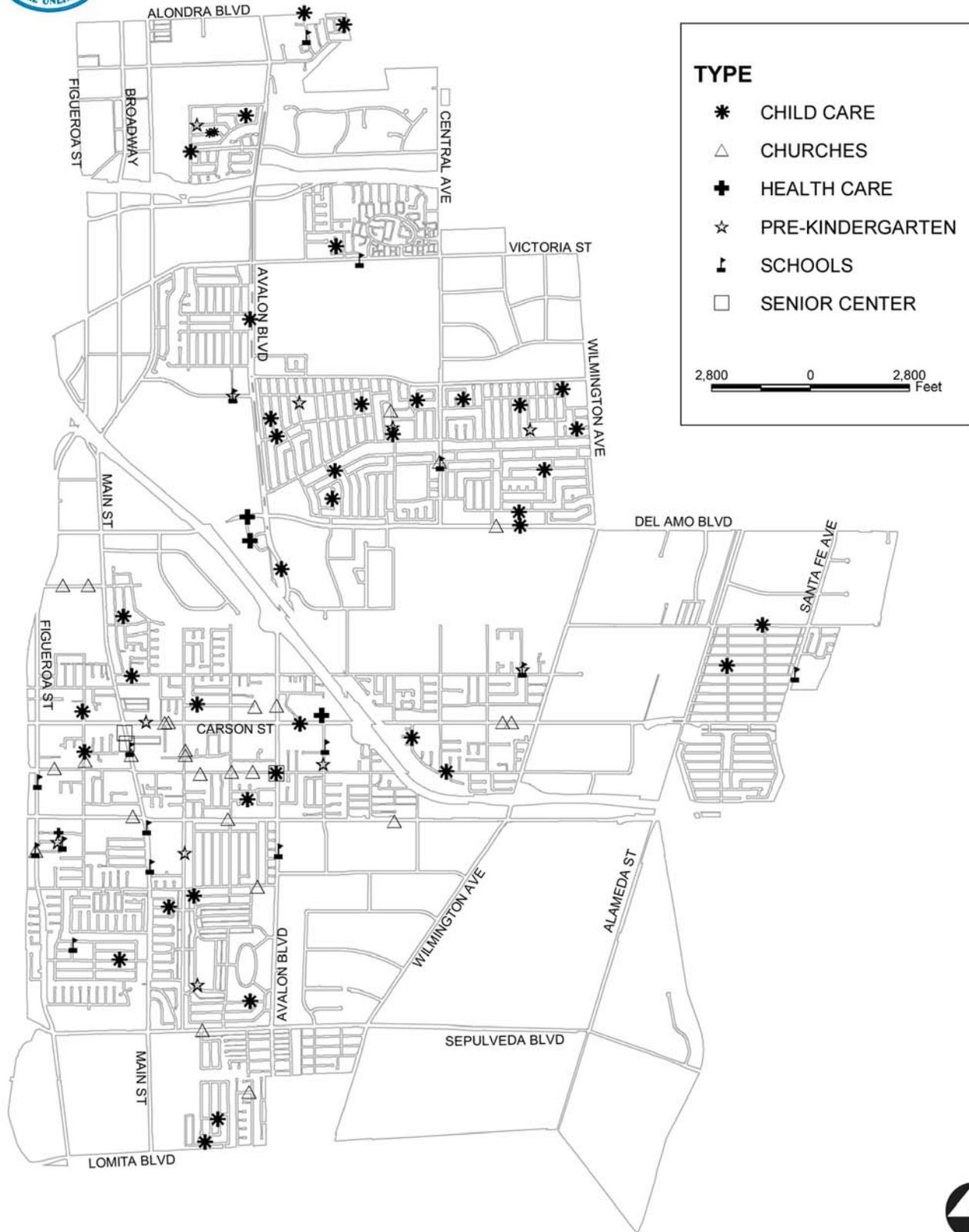


**Table N-5 [continued]  
Noise Sensitive Receptors**

<b>Facility</b>	<b>Street Address</b>
<b>CHURCHES – Continued</b>	
Carson Church of Religious Science	220 East Carson Street
Carson Hope Chapel Foursquare	129 East 223 <sup>rd</sup> Street
Carson Pentecostal Church	555 East 220 <sup>th</sup> 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 220 <sup>th</sup> Street
Judson Baptist Church	451 East 223 <sup>rd</sup> 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 245 <sup>th</sup> Street
New Life Christian Center	1210 East 223 <sup>rd</sup> Street
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 220 <sup>th</sup> Street
United Samoan Church	600 East Double Street
United Samoan Congregational Christian Church	1717 East Carson Street
<b>SENIOR CENTERS</b>	
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



# CARSON GENERAL PLAN



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

## Location of Sensitive Receptors

EXHIBIT N-1



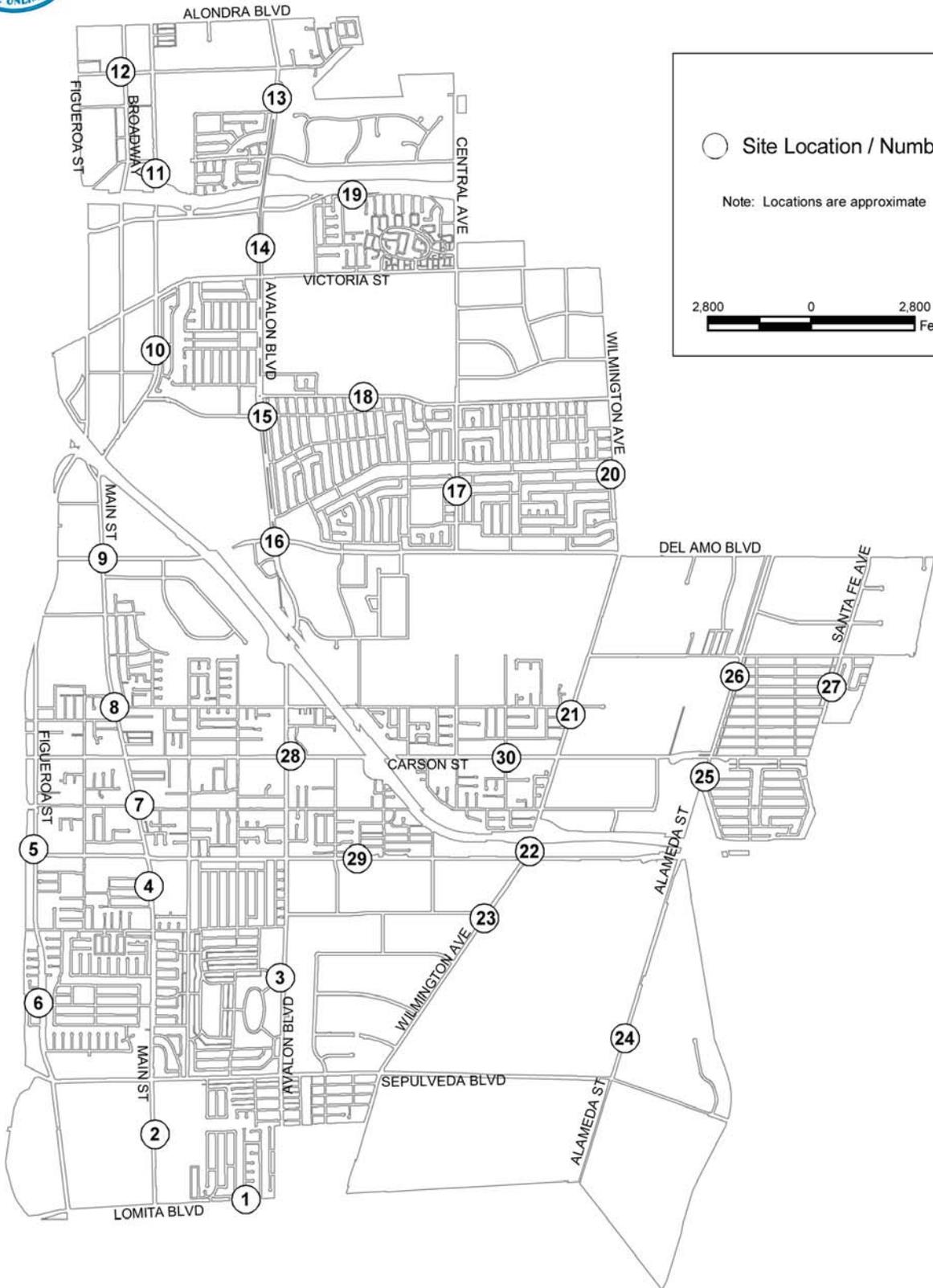
**Table N-6  
Existing Noise Levels  
(Based on Field Measurements)**

<b>Site Number</b>	<b>General Location of Noise Measurement</b>	<b>Leq dBA</b>	<b>Orientation/ Type of Sensitive Receptor</b>
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 223 <sup>rd</sup> 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 223 <sup>rd</sup> Street.	71.2	Carson High School immediately to the east and single-family residential to the west.
5	Figueroa Street between Carson Street and 223 <sup>rd</sup> 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 228 <sup>th</sup> Street and Sepulveda Boulevard (at intersection of 234 <sup>th</sup> Street and Figueroa Street)	68.3	Single-family residential located to the east and west respectively.
7	Main Street between Carson Street and 223 <sup>rd</sup> Street (at intersection 22 <sup>nd</sup> Street and Main Street	67.2	Multiple-family residential to the west; church and school to the east.
8	Intersection of Main Street and 213 <sup>th</sup> 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
15	Intersection of Avalon Boulevard and 192 <sup>nd</sup> 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 west.
21	Wilmington Avenue between 213 <sup>th</sup> Street and Carson Street	79.5	Single-family residential to the west.



**Table N-6 [continued]  
Existing Noise Levels  
(Based on Field Measurements)**

<b>Site Number</b>	<b>General Location of Noise Measurement</b>	<b>Leq dBA</b>	<b>Orientation/ Type of Sensitive Receptor</b>
22	Immediately south of I-405	83.2	None
23	Wilmington Avenue between 223 <sup>rd</sup> Street and Sepulveda Boulevard	75.2	None
24	Alameda Street between Sepulveda Boulevard and 223 <sup>rd</sup> Street	77.7	None
25	Alameda Street between I-405 and Carson Street ( at intersection 218 <sup>th</sup> 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	223 <sup>rd</sup> 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.			



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

## Location of Noise Measurements

EXHIBIT N-2



### 3.5 COMMUNITY NOISE CONTOURS

The noise environment for Carson can be described using noise contours developed for the major noise sources within the City. These contours represent lines of equal noise exposure, just as the contour lines on a topographic map are lines of equal elevation. The contours shown are the 60 and 65 dB(A) CNEL (Community Noise Equivalency Level) contours. As previously stated, CNEL is a 24-hour time-weighted average noise level where noise which occurs during sensitive time periods is weighted more heavily.

Noise contours for Carson were developed based on existing and future traffic levels, and other sources of noise in the community. Carson noise contours are presented in Exhibits N-3 and N-4. Exhibit N-3 shows the noise environment as estimated in 2001 for existing land uses and traffic on major streets in the City. Exhibit N-4 shows the future noise environment as it would exist in 2020 with implementation of the General Plan.

The exhibits display the average daily traffic (ADT) volume noise levels at 100 feet from the roadway centerline and the distance from the roadway centerline to the 70, 65 and 60 dBA CNEL contours. Tables in the Circulation and Infrastructure Element indicate traffic volumes on designated street segments. Surface traffic noise has the greatest impact on the noise environment of Carson's residential and sensitive-receptor properties. Contours between 55 and 60 dBA CNEL are common along City collector streets, while 65 dBA CNEL or great contours are common along major streets.

The inclusion of an area within a 60 or 65 CNEL contour on Exhibit N-3, *Existing Noise Contours (2001)*, or Exhibit N-4, *Future Noise Contours (2020)*, indicates that noise levels are high enough to be of potential concern, but does not imply that excessive noise levels are present uniformly 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.

Exhibit N-4 shows projected 60 dB contours ranging between approximately 32 feet and 439 feet from the roadway centerlines. The 65 dB contour ranges between 15 feet and 204 feet along the roadways modeled. This impacts existing residential neighborhoods and school facilities located throughout the City, as identified below:

- Along Main Street north of Sepulveda Boulevard to Del Amo Boulevard;
- Along Carson Street from I-405 to Figueroa Street;
- Along Carson Street from Alameda Street to Santa Fe Avenue;
- Along Sepulveda Boulevard from Main Street to Avalon Boulevard;
- Along Figueroa Street from Carson Street to Torrance Boulevard;
- Along Central Avenue from University Drive to Del Amo Boulevard; and
- Along Wilmington Avenue from University Drive to Del Amo Boulevard.



All other noise impacts are located within commercial or industrial areas in the City, which are not identified as sensitive receptors. Future noise-sensitive uses constructed along these roadways will therefore require noise mitigation.

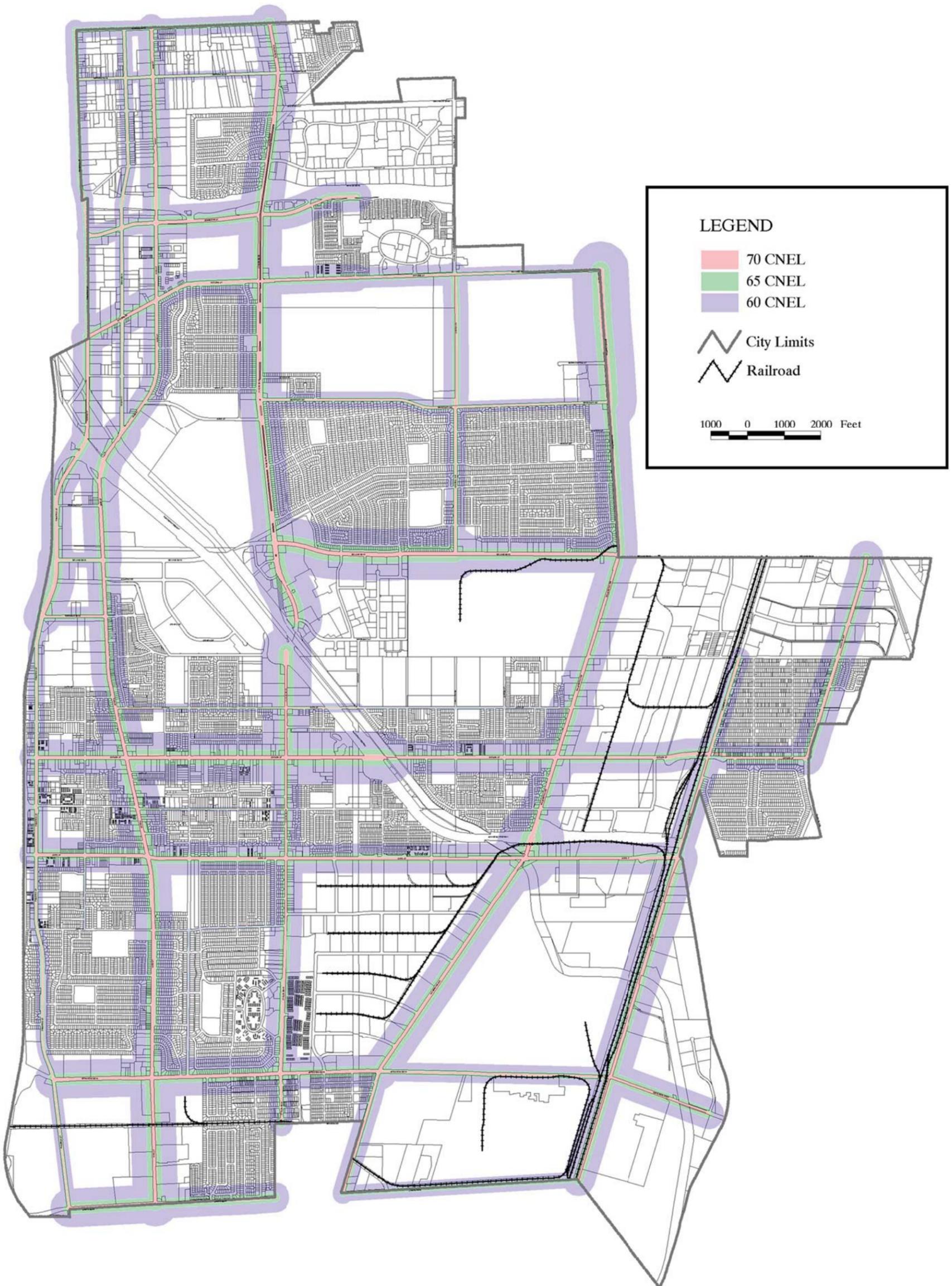
60 CNEL. The 60 CNEL contour defines the Noise Study Zone. The noise environment for any proposed noise-sensitive land use (for example, single- or multi-family residences, hospitals, schools, or churches) within this zone should be evaluated on a project specific basis. The project may require mitigation 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 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.

### **3.6 CARSON NOISE CONTROL PROGRAM**

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. The Community Noise Equivalent Level (CNEL), as adopted and utilized in the Noise Element, serves as the basis for other regulations. Noise control is an intergovernmental responsibility since noises readily cross over territorial boundaries. This is reflected in Carson's existing Noise Control Program. Specific activities identified in the Program include:

- The Sheriff's Department shall enforce local, state and federal noise laws for mobile sources and complaints in residential zones.
- The Building and Safety Division of the Development Services Work Group shall enforce noise related building regulations of state and local noise control ordinances and the Building Code.
- The Planning Division of the Development Services Work Group shall review potential noise impacts on new developments which require environmental assessments and/or environmental impact reports and permits/variances for new uses.
- The County of Los Angeles Department of Animal Care and Control shall continue the abatement of annoyance caused by barking dogs.



**LEGEND**

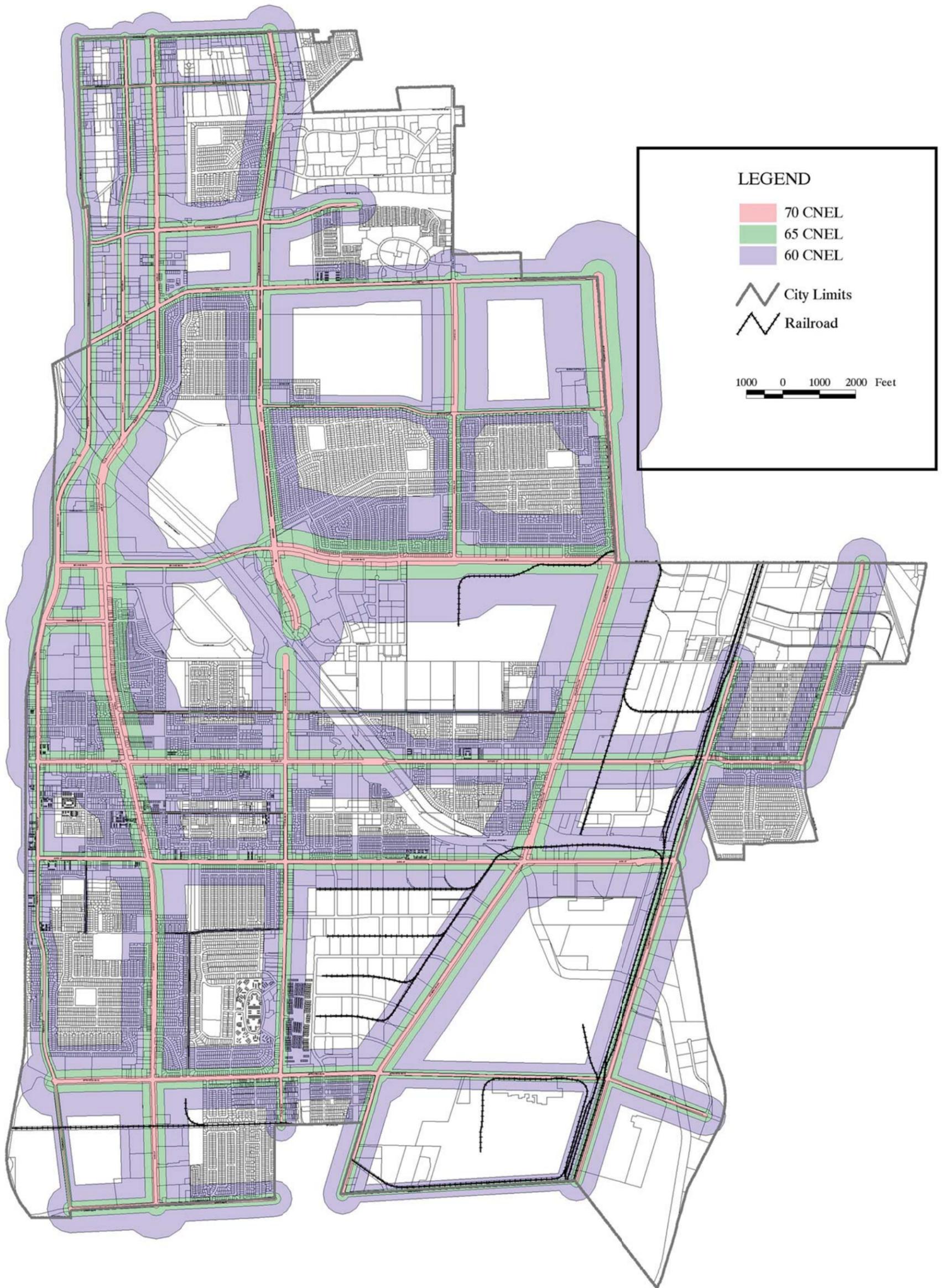
- 70 CNEL
- 65 CNEL
- 60 CNEL

- City Limits
- Railroad

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- The Code Enforcement Division of the Public Safety Work Group shall enforce the City Noise Ordinance.

### **3.7 STANDARD NOISE ATTENUATION TECHNIQUES**

Noise reduction can be accomplished by placement of walls, landscaped berms, or a combination of the two, between the noise source and the receiver. Generally, effective noise shielding requires a solid barrier with a mass of at least four pounds per square foot of surface area that is large enough to block the line of sight between 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. Nearby noise generators should be recognized in determining the location of doors, windows and vent openings. Sound-rated windows (extra thick or multi-paned) and wall insulation are also effective. None of these measures, however, 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. And, of course, sound-rated doors and windows will have little effect if left open. This may require installation of air conditioning for adequate ventilation.

Noise impacts can be reduced by insulating noise sensitive uses, such as residences, schools, libraries, hospitals, nursing and carehomes and some types of commercial activities. But perhaps a more efficient approach involves limiting the level of noise generation at the source. State and Federal statutes have largely preempted local control over vehicular noise emissions, but commercial and industrial operations 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 congestion aids in 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.



## 4.0 PLANNING FACTORS, GOALS, POLICIES AND IMPLEMENTATION

The acronyms listed below are used for the implementation measures:

RA/D: Responsible Agency/Division  
FS: Funding Source  
TF: Time Frame

### ISSUE: CARSON'S NOISE ORDINANCE

*Enforcement of the City's noise ordinance is important in order to protect the serenity of residential neighborhoods. Education of the public may assist in the reduction of noise levels.*

**Goal:** N-1: Maximize efficiency in noise abatement efforts through clear and effective policies, plans and ordinances.

**Policies:** N-1.1 Continue to implement the City's Noise Ordinance and Noise Control Program.

N-1.2 Periodically review and amend (and/or combine if appropriate) plans, ordinances and policies relating to noise control.

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.

### Implementation Measures:

N-IM-1.1 Reinforce City policies and regulations by enhancing enforcement methods and/or mechanisms.

**RA/D:** Code Enforcement  
**FS:** General Fund  
**TF:** Ongoing

N-IM-1.2 Noise ordinance review and revisions should 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.), and other like issues.

**RA/D:** Planning, Code Enforcement  
**FS:** General Fund  
**TF:** 2003-2005

N-IM-1.3 Designate one division to act as noise control coordinator. Establish and maintain coordination among appropriate divisions and agencies involved in noise abatement.

**RA/D:** Code Enforcement  
**FS:** General Fund  
**TF:** 2003-2004

N-IM-1.4 Require that new equipment purchased by the City comply with noise performance standards.

**RA/D:** Public Works, Engineering  
**FS:** General Fund, Gas Tax, Grants, Props A and C  
**TF:** Ongoing

N-IM-1.5 Support a national uniform sound certification program of published sound ratings for various types of equipment that are sources of noise.

**RA/D:** Public Works, Code Enforcement  
**FS:** General Fund  
**TF:** 2003-2004

N-IM-1.6 Examine the potential to establish a Violators Fee for persons requiring a second call/visit for violating the noise ordinances.

**RA/D:** Code Enforcement  
**FS:** General Fund  
**TF:** 2004-2005

N-IM-1.7 Create flyers, Web Site information, articles in *Carson Report*, and other methods of informing the public regarding noise issues, including health and abatement and enforcement procedures.

**RA/D:** Code Enforcement  
**FS:** General Fund  
**TF:** Ongoing





**ISSUE: BUFFERING OF SENSITIVE LAND USES**

*Noise sensitive land uses, such as homes, schools and hospitals, should be buffered from areas where noise levels may exceed normal expectations including major thoroughfares and truck routes, industrial uses, concert venues, and other noise generating 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.

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 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-2.5 Discourage through traffic in residential neighborhoods.

N-2.6 Actively advocate noise control requirements for all motor vehicles.

N-2.7 Continue to promote the use of alternative clean fueled vehicles for personal and business use.

**Implementation Measures:**

N-IM-2.1 Evaluate specific sound attenuation measures, such as, retrofitting existing residences with double-glazed windows and sound insulation, construction of sound walls, use of lower walls and berms, and enclosed courtyards. 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.

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2005-2006

N-IM-2.2 Develop a streamlined process to expedite and ease approval of the overlay zone techniques.

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2005-2006

N-IM-2.3 Prepare an informational booklet explaining the purpose of the overlay zone for all owners of property located in the zone.

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2005-2006

N-IM-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.

**RA/D:** Housing, Planning  
**FS:** General Fund  
**TF:** 2005-2006

N-IM-2.5 Ensure the inclusion of noise mitigation measures in the design of new roadway projects in the City.

**RA/D:** Planning, Engineering, Public Works  
**FS:** Gas Tax  
**TF:** Ongoing

N-IM-2.6 Provide for continued evaluation of truck movements and routes to provide effective separation from residential or other noise sensitive land uses.

**RA/D:** Engineering/Traffic  
**FS:** General Fund  
**TF:** Ongoing



N-IM-2.7 Encourage the enforcement of State Motor Vehicle noise standards for cars, trucks and motorcycles through coordination with the California Highway Patrol and the Sheriff's Department.

**RA/D:** Public Safety  
**FS:** General Fund  
**TF:** Ongoing

N-IM-2.8 Establish a noise monitoring and abatement program to identify sound levels in all neighborhoods significantly affected by increased traffic, and if problems, identify potential solutions.

**RA/D:** Code Enforcement, Engineering  
**FS:** General Fund  
**TF:** 2005-2006

N-IM-2.9 Study the use of electric, fuel cell or other non-polluting fuels, which are also quieter, for Carson Circuit buses and other City vehicles.

**RA/D:** Transportation  
**FS:** General Fund, Grants  
**TF:** 2003-2004

**Goal:** N-3: Minimize noise impacts from the Alameda Corridor.

**Policies:** N-3.1 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-3.2 Continue to incorporate noise assessments into the environmental review process for both transportation-related and development projects along the Corridor.

N-3.3 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.

**Implementation Measures:**

N-IM-3.1 The environmental noise assessments should identify potential noise sources, potential noise impacts, and appropriate sound attenuation. Potential noise sources include truck pick-up and loading areas, locations of mechanical and electrical equipment, and similar noise sources. Mitigation of all significant noise impacts should be required as a condition of project approval.

**RA/D:** Planning  
**FS:** Application Fee  
**TF:** Ongoing

**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.

**Implementation Measures:**

N-IM-4.1 Coordinate with Caltrans to ensure that sound walls are installed along residential areas abutting the freeways. Sound walls are to use landscaping and other attractive treatments.

**RA/D:** Engineering, Planning  
**FS:** State Funds  
**TF:** 2003-2006

N-IM-4.2 Encourage Caltrans to develop a range of sound attenuation alternatives. Sound walls should not be the only mitigation measure presented or available.



**RA/D:** Engineering, Planning  
**FS:** State Funds  
**TF:** 2003-2006

N-IM-4.3 Evaluate interior sound attenuation measures such as, double-glazed windows and sound insulation, additional right-of-way to provide a buffer, and land uses and developments which act as manmade noise buffers.

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2005-2006

**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, and the operators address other noise concerns.

**Implementation Measures:**

N-IM-5.1 Meet regularly with railroad and transit operators to discuss mutual issues. *(Implements Policies N-5.1, N-5.3)*

**RA/D:** Engineering, Planning  
**FS:** General Fund  
**TF:** Ongoing

N-IM-5.2 Require noise impact studies as part of any environmental review of new projects and establish mitigation measures as required to meet City noise standards. *(Implements Policy N-5.2)*

**RA/D:** Planning  
**FS:** Application Fee  
**TF:** Ongoing



- 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.

**Implementation Measures:**

N-IM-6.1 Assign coordination of airport noise to the Code Enforcement Division.

**RA/D:** City Manager  
**FS:** General Fund  
**TF:** 2003-2004

**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-3. 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-2. 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.

**Implementation Measures:**

N-IM-7.1 Adopt the noise standards presented in Table N-2, Noise and Land Use Compatibility Matrix, which identify interior and exterior noise standards in relation to specific land uses.

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2003-2005

N-IM-7.2 Ensure that the noise standards fully integrate noise considerations into land use planning decisions to prevent new noise/land use conflicts. Use the criteria of Table N-2.

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2003-2005

N-IM-7.3 Incorporate noise reduction features during site planning.

**RA/D:** Planning  
**FS:** Application Fees  
**TF:** Ongoing

N-IM-7.4 Require a noise impact evaluation for projects through the environmental review process, if determined necessary.

**RA/D:** Planning  
**FS:** Application Fees  
**TF:** Ongoing

N-IM-7.5 Establish a noise monitoring program to identify progress in achieving noise abatement and to perform necessary updating of the Noise Element.

**RA/D:** Code Enforcement, Planning  
**FS:** General Fund  
**TF:** 2005-2006



N-IM-7.6 Require that automobile and truck access to commercial and industrial developments, when located adjacent to residential neighborhoods, be located at the maximum practical distance from the residential parcel(s).

**RA/D:** Planning  
**FS:** Application Fees  
**TF:** Ongoing

N-IM-7.7 Maintain a technical resource for builders, developers, and operators of construction equipment which discusses a variety of sound attenuation measures, the amount of noise reduction each produces and how to combine them to meet City requirements.

**RA/D:** Planning  
**FS:** General Fund  
**TF:** 2005-2006

N-IM-7.8 Require that new commercial, industrial or any redevelopment projects or proposed developments near existing residential land uses demonstrate compliance with the City Noise Ordinance prior to approval of the project.

**RA/D:** Planning  
**FS:** Application Fees  
**TF:** Ongoing

**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.

**Implementation Measures:**

N-IM-8.1 Orient residential units away from major noise sources in mixed use projects.

**RA/D:** Planning  
**FS:** Application Fees  
**TF:** Ongoing



N-IM-8.2 Locate balconies and operable windows of residential units in mixed use projects away from primary roadways and other major noise sources.

**RA/D:** Planning  
**FS:** Application Fees  
**TF:** Ongoing



## CHAPTER 8

# OPEN SPACE AND CONSERVATION ELEMENT



# CHAPTER 8

## OPEN SPACE AND CONSERVATION ELEMENT



### **GUIDING PRINCIPLE**

*The City of Carson is committed to conserving and enhancing its key natural features and resources, 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.*

### **1.0 INTRODUCTION**

At one time, Carson had ample accessible open spaces and natural resources within its boundaries. During the Rancho period in California history, vast herds of cattle freely roamed the Dominguez Rancho, of which the City of Carson is a part. The area had a rich endowment of natural resources: abundant potable groundwater, prime agricultural soils, a mild and healthful climate, and oil. However, these open space areas and resources began to diminish as the City grew and the region urbanized. As the area population grew, economics dictated that the most profitable use of land was not for agricultural production but rather development.

### **2.0 STATE LAW REQUIREMENTS**

The California State Government Code mandates that all general plans include both an open space and a conservation element. The open space and conservation elements complement one another due to the overlap in State requirements and the inter-relationship of issues within each element. This is particularly true in Carson, which no longer has abundant open space and undeveloped natural resources. It is therefore important to focus on the conservation of the City's remaining resources



and open spaces. For these reasons, the Open Space and Conservation Elements have been combined in the Carson General Plan.

## **2.1 OPEN SPACE ELEMENT**

Government Code Section 65302(e) stipulates that a general plan include an open space element. The contents of the open space element are identified in Government Code Section 65560 as follows:

*“(b) Open space land is any parcel or area of land or water which is essentially unimproved and devoted to an open space use...and which is designated on a local, regional or state open space plan as any of the following:*

- (1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life...*
- (2) Open space used for the managed production of resources, including but not limited to...agricultural lands... areas required for recharge of ground water basins...and areas containing major mineral deposits, including those in short supply.*
- (3) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes...and areas which serve as links between major recreation and open space reservations, including utility easements...trails, and scenic highway corridors.*
- (4) Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soils areas, floodplains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.”*

The intent of the open space element is to assure that cities “recognize that open space land is a limited and valuable resource which must be conserved wherever possible” and “will prepare and carry out open space plans which, along with state and regional open space plans, will accomplish the objectives of a comprehensive open space program.” (Government Code Section 65562.)

## **2.2 CONSERVATION ELEMENT**

Government Code Section 65302(d) requires that the general plan include a conservation element for the “conservation, development, and utilization of natural resources including water and its hydraulic force...soils, rivers and other waters...wildlife, minerals, and other natural resources. That portion of the



conservation element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the county or city for which the plan is prepared... The conservation element may also cover:

- The reclamation of land and waters.
- Prevention and control of streams and other waters.
- Regulation of the use of land in...areas required for the accomplishment of the conservation plan.
- Prevention, control, and correction of the erosion of soils, beaches, and shores.
- Protection of watersheds.
- The location, quantity and quality of the rock, sand and gravel resources.
- Flood control.”

### **3.0 SUMMARY OF FINDINGS**

#### **3.1 OPEN SPACE**

The City’s open space is comprised of Recreational Open Space which includes parks and a public golf course and General Open Space which consists of utility transmission corridors, drainage and flood control facilities (i.e., Dominguez Channel, Compton Creek and Wilmington Channel), the Blimp Port. The various forms of open space within the City and the associated current acreage is summarized in Table OSC-1, *Open Space in Carson*, below.

**Table OSC-1  
Open Space in Carson**

Type of Open Space	Approximate Acreage
Recreational Open Space <ul style="list-style-type: none"> <li>• Parks</li> <li>• Victoria Public Golf Course</li> </ul>	153 162
General Open Space <ul style="list-style-type: none"> <li>• Blimp Port</li> <li>• Drainage Courses and Utility Transmission Corridors</li> </ul>	30 254
<b>TOTAL</b>	<b>599</b>

In addition to the above, substantial open space is incorporated into street medians and parkways throughout the City. Also, public schools in the City include approximately 197 acres, of which about 60 percent or 118 acres are open space. Finally, California State University Dominguez Hills (CSUDH) has 125 acres of existing and planned recreational open space (including the planned 85-acre National Training Center).



There are also other areas in Carson which contain temporary open space. These areas are designated for a variety of uses other than Recreational and/or General Open Space. They include the Dominguez Public Golf Course, which is designated for General Commercial use on the Land Use Policy Map, and closed landfills which have not yet been fully remediated.

### **3.1.1 OPEN SPACE FOR THE PRESERVATION OF NATURAL RESOURCES**

The Government Code requires that open space for the preservation of natural resources be incorporated into the General Plan. Such resources include areas required for the preservation of plant and animal life, areas of ecological and other scientific study value, rivers, streams, bays and estuaries, coastal beaches, and lake shores. The only such area identified within Carson is the lake within the Carson Village Mobilehome Park. This lake, covering approximately 17 acres, provides habitat for a variety of plants and small animals.

### **3.1.2 OPEN SPACE FOR THE PRODUCTION OF RESOURCES**

In Carson, open space used for the production of resources includes agricultural lands and areas used for the production and management of oil and petroleum products.

Excluding small agricultural areas along the utility transmission corridors, there are approximately 62 acres of property within the City which are under agricultural production. Under the Zoning Ordinance, agricultural uses are permitted within the Residential - Agricultural, General Commercial, and Open Space zones. While agricultural production is not a significant factor in the City's economy, agriculture does offer a positive contribution to the City's inventory of open space.

As discussed later in this Element, portions of Carson are located within the Dominguez and Wilmington Oil Fields. As a result, there are large areas of the City devoted to the management and production of oil and petroleum products. These areas are designated Heavy Industrial on the Land Use Policy Map due to the nature of activities associated with these uses. These areas have been approved for approximately 4.7 million square feet of commercial and industrial development. That development was underway as of adoption of this Element. Continued buildout will proceed based on market factors.

### **3.1.3 OPEN SPACE FOR OUTDOOR RECREATION**

As discussed in the Parks, Recreation and Human Services Element, the recreational land in the City totals 315 acres (including Victoria Park and Victoria Golf Course, both County facilities). The City's target for the ratio of park acres to population is four acres per 1,000 population. The current ratio of park acres to population is 3.5 acres per 1,000 (counting the Victoria Golf Course). However, this ratio does not take into account the joint use of public school athletic fields or the Dominguez Golf Course (designated General Commercial). If these facilities are included, the City meets its target parkland-to-population ratio.



Because the City is virtually built-out and vacant land (other than closed landfills which require remediation) is scarce, opportunities for new park development are limited. In addition to the joint use of public school facilities and commercial recreational uses, existing open space in the City which may be suitable for recreation purposes include: utility transmission corridors, areas along the banks of drainage channels, and closed landfills (after appropriate remediation).

*Additional information regarding outdoor recreation can be found in: Sections 3.2, Circulation, and 3.12, Parks and Recreation, in the Existing Conditions Report; and Chapter 9, Parks, Recreation and Human Services Element in this General Plan.*

### **3.14 OPEN SPACE FOR PUBLIC HEALTH AND SAFETY**

“Open space for public health and safety,” is defined as those “areas which require special management or regulation because of hazardous or special conditions.” There are four types of special management areas in Carson:

- Utility Corridors. In order to protect the health and safety of the public, these underground utility and overhead electric transmission corridors are severely constrained for human habitation or employment by law. Nevertheless, within these constraints, many of the utility corridors within the City are suitable for use as greenbelts, mini parks, recreation trails, and open space commercial uses such as wholesale nurseries and growing grounds.
- Landfills. The 15 closed landfills in Carson are severely restricted by State and Federal regulations. Of those closed landfills, eight have been remediated to varying degrees (e.g., properly capped, appropriate collection systems installed, etc.). The remaining landfills are either vacant and unremediated or are used as golf courses.
- Flood Control Channels. The primary purpose of flood control channels is the conveyance of water. However, the Dominguez Channel levees can also be used as recreational trails, with suitable improvements and off-levee connections.
- Earthquake Fault Zones. The Avalon-Compton Fault Zone occupies a small area in the northeastern area of the City. A site-specific geotechnical report is required for construction within  $\frac{1}{8}$  mile on either side of the Fault Zone.

*Additional information regarding open space for public health and safety can be found in: Sections 3.4, Geologic Hazards, and 3.7, Hazardous Materials, of the Existing Conditions Report; and Chapters 2, Land Use Element, and 6, Safety Element, of this General Plan.*



## **3.2 CONSERVATION**

### **3.2.1 WATER RESOURCES**

Southern California would not exist as an urbanized region without the importation, careful management, storage, and reuse of its water supply. Water conservation, the use of reclaimed water, and the control and treatment of runoff pollution is critically important to Carson and the entire region.

#### **AGENCIES RESPONSIBLE FOR THE SUPPLY OF WATER**

A number of public and quasi-public agencies act cooperatively with one another to supply, distribute, conserve and maintain water resources for the City of Carson and the Southern California region.

Agencies responsible for delivering wholesale water to the area include the Metropolitan Water District of Southern California (MWD) and the West Basin Municipal Water District (WBMWD). MWD imports water to the region and operates several filtration plants to treat water supplies. WBMWD provides supplemental imported water to local retail water agencies. The MWD and WBMWD act cooperatively to conserve both groundwater and surface water resources.

“Retail” water service in the City is provided by the California Water Company and the Southern California Water Company, Southwest District (SCWD). Approximately 80 percent of the water supply distributed by California Water Company is comprised of imported water, 18 percent is groundwater, and 2 percent desalinated water. Approximately 80 percent of the water supply distributed by the SCWD is comprised of imported water and 20 percent is groundwater.

The Los Angeles Regional Water Quality Control Board regulates water quality in the region.

#### **GROUNDWATER RESOURCES**

##### **Groundwater Basins**

There are two groundwater basins which underlie Carson: the Central Water Basin and the West Coast Basin.

Groundwater in the Central Basin is dependent upon local storm runoff, imported and recycled water for groundwater recharge, and the injection of imported water from the inland side of the Alamitos Seawater Intrusion Barrier. The Central Basin is also replenished through subsurface flows from the San Gabriel Valley into the Basin and precipitation that falls directly on the Montebello Forebay and percolates into the Basin.



Groundwater for the West Coast basin originates from subsurface flow from the Central basin and injection along the sea water barrier system. Virtually all of the major drainage courses 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 the groundwater basins.

### **Aquifers**

Several aquifers exist within the Central and West Coast Basins. In the vicinity of Carson, these include the Gage/Gardena, Lynwood, Silverado, and Sunnyside aquifers. Their depths range from 150 to 600 feet, and they are primarily replenished by area rainfall.

### **GROUNDWATER QUALITY**

The Federal Safe Water Drinking Water Act of 1974 and its 1986 amendments are intended to ensure the quality of water supplies. The quality and safety of drinking water in the United States is regulated by the Federal government through the Environmental Protection Agency (EPA). In California, those standards are enforced by the California Department of Health Services (DOHS).

The State and Regional Water Quality Control Boards currently administer the National Pollutant Discharge Elimination System (NPDES) permit regulations. Due to recent legislation, the scope of NPDES regulations has been greatly expanded to include stormwater runoff. Stormwater discharges consist primarily of non-point source surface runoff from streets, lawns, parks, and upland undeveloped areas.

The City is a permittee under the Los Angeles County Municipal NPDES permit. One of its obligations under the Municipal NPDES permit is to “include watershed and storm water quality and quantity management considerations and policies when updating land use, housing, conservation, and open space elements” of its General Plan.

To that end, any new development or redevelopment situated in an environmentally sensitive area or in a sensitive ecological area, or subject to development planning program requirements specified in the Municipal NPDES permit, shall be evaluated for post-construction runoff pollution mitigation measures including, if necessary, infiltration or mechanical treatment controls (e.g., detention basins, wet ponds, vortex separation systems, catch basin inserts, oil/water separators, vegetative filters, pervious asphalt or pavement, and cisterns). Further, peak flow from any new development or redevelopment that enters a natural drainage system (e.g., an unlined stream, river, or channel) shall not be greater than pre-development levels. The purpose of controlling peak flow is to prevent stream erosion and to protect stream habitat.



### **Water Quality within the Los Angeles Regional Water Quality Control Board Region**

The general quality of groundwater within the Los Angeles Regional Water Quality Control Board (RWQCB) Region 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 (both aboveground and underground) which have leaked or are leaking hazardous substances into the subsurface; and a variety of other sources and/or conditions.

### **West Coast and Central Basins Water Quality**

Seawater intrusion which has historically occurred in the West Coast and Central Basins is now under control in most areas through an artificial recharge system consisting of spreading basins and injection wells that form fresh water barriers along the coast. 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. Furthermore, 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. 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.

*Additional information regarding water conservation and water quality can be found in: Sections 3.5, Hydrology/Drainage, and 3.11, Infrastructure/Utilities, of the Existing Conditions Report; and Chapter 4, Transportation and Infrastructure Element, of this General Plan.*

## **3.2.2 SOLID WASTE**

In 1989, the California Legislature enacted the California Integrated Waste Management Act, in an effort to address solid waste problems and capacities in a comprehensive manner. The law required each city and county to divert 50 percent of its waste from landfills by the year 2000. The law further required every city and county to prepare a Source Reduction and Recycling Element (SRRE). Carson's SRRE was approved in 1996.

Cities are required to meet the requirements of this law while new regulations are being developed. The new regulations are expected to be enacted in 2002.

A private company, provides waste collection services for the City of Carson. Waste Management collects approximately 70,000 tons from residential customers and 153,500 tons from commercial and industrial customers per year. The disposal service uses traditional methods of solid waste collection, with standard trash trucks and crews. The service also includes the pickup of sorted recyclable materials, which are taken directly to a company that separates and sells them.



Solid waste collected by Waste Management is taken to the company's waste transfer station in Carson, where it is sorted. After the materials are sorted, special wastes such as tires, green waste, steel, and wood are sent to special facilities for disposal and recycling. The remaining waste materials are loaded onto trailers and taken to a landfill.

*Additional information regarding solid waste can be found in: Section 3.11, Infrastructure/Utilities, of the Existing Conditions Report; and Chapter 4, Transportation and Infrastructure Element, of this General Plan.*

### **3.2.3 ENERGY**

#### **ENERGY RESOURCES**

Energy resources available to Carson play an important role in determining the type and amount of future development in the community. In recent years, dramatic growth in demand and the restructuring of the energy industry have resulted in shortfalls in the provision of electricity to consumers. New development and higher standards of living will result in increased energy needs in the future. Conservation of energy resources, such as oil, electricity and natural gas, is critical in light of their limited supply and environmental concerns related to their production and distribution.

Most traditional energy resources are imported. Natural gas is imported by the Southern California Gas Company, while electricity is provided by the Southern California Edison Company (SCE). Regional and local distribution facilities for both electricity and natural gas are located within Carson.

Because of past and possible future shortages, alternative energy sources must be developed to supplement conventional sources. Given the area's sunny climate, the most important alternative and renewable energy resource in Carson is solar. This source has considerable potential and can be developed to substitute for oil, gas, and other energy supplies. Because of solar energy's ability to substitute for fossil fuels, it can also be an important tool in the battle against air pollution.

#### **PETROLEUM PRODUCTS**

Portions of the City of Carson are located within the Dominguez and Wilmington Oil Fields. There are also several crude oil and petroleum product pipelines that transect the City.

*Additional information relating to the provision of electricity and natural gas can be found in: Section 3.11, Infrastructure/Utilities, of the Existing Conditions Report; and Chapter 4, Transportation and Infrastructure Element, of this General Plan. More detailed information relating to crude oil, petroleum products and pipelines can be found in Section 3.7, Hazardous Materials, of the Existing Conditions Report, and Chapter 6, Safety Element, of this General Plan.*



## 4.0 PLANNING ISSUES, GOALS, POLICIES AND IMPLEMENTATION

The acronyms listed below are used for the implementation measures:

RA/D: Responsible Agency/Division  
FS: Funding Source  
TF: Time Frame

### ISSUE: ENHANCEMENT OF CITY OPEN SPACE

*Enhanced landscaping and improved maintenance of Carson's public areas is important to the community. Consideration should be given to the promotion of community gardens and/or passive recreational areas, median treatments in strategic locations, and the aesthetic enhancement of existing open space areas.*

**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 existing landscaping along the City's major streets and expand the landscaping program along other arterial streets throughout the community.

OSC-1.3 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, Land Use Element, of this General Plan.*

### Implementation Measures:

OSC-IM-1.1 Work with other South Bay cities and the County to create and implement a plan to: (1) enhance Dominguez Channel with landscaping and walking and bicycle trails, and (2) provide landscaping along Compton Creek. *(Implements OSC-1.1)*

**RA/D:** Parks and Recreation, Public Works, Planning and Environmental Services, Los Angeles County Department of Public Works



**FS:** General Fund, and Regional, State and Federal Funds/Grants  
**TF:** Ongoing

OSC-IM-1.2 Preserve areas of open space which, if developed, could pose a threat to the health, safety and welfare of the community. To this end, work with the County, the Los Angeles Department of Water and Power, and Southern California Edison to conserve and maintain existing flood control facilities and electric transmission corridors within the City. *(Implements OSC-1.1)*

**RA/D:** Public Works, Planning  
**FS:** General Fund  
**TF:** Ongoing

OSC-IM-1.3 Create and implement a plan to secure access to and develop utility corridors for greenbelt, recreational, and agricultural uses. *(Implements OSC-1.1 and OSC-1.5)*

**RA/D:** Parks and Recreation, Planning  
**FS:** General Fund, State and Federal Funds/Grants  
**TF:** Ongoing

OSC-IM-1.4 Require landscaping of graded areas along public rights-of-way concurrent with project development to minimize erosion and enhance the visual aspects of the community. *(Implements OSC-1.1 and OSC-1.2)*

**RA/D:** Planning  
**FS:** Developers  
**TF:** During review of proposed development projects

OSC-IM-1.5 Examine the potential of extending special median treatments along important arterials, including, but not limited to: Central Avenue (between Turmont Street and University Drive), Wilmington Avenue (between University Drive and Del Amo Boulevard), and along Avalon Boulevard (where right-of-way allows and medians do not presently exist). *(Implements OSC-1.2)*

**RA/D:** Public Works, Planning  
**FS:** General Fund, Development Fees  
**TF:** Ongoing

OSC-IM-1.6 Develop a program to provide parkway landscaping along the edges of important arterials in order to buffer land uses and improve the streetscape. Arterials to be



considered include but are not limited to: University Drive and Avalon Boulevard. *(Implements OSC-1.2)*

**RA/D:** Public Works, Planning  
**FS:** General Fund, Development Fees  
**TF:** Before adoption of the next update of the City’s Capital Improvement Program after adoption of this General Plan Element

OSC-IM-1.7 Require street trees and appropriate landscaping in both residential and non-residential areas. To this end, review and amend, as necessary, the landscape standards contained in the City’s Zoning Ordinance. *(Implements OSC-1.2)*

**RA/D:** Planning  
**FS:** General Fund, Property Owners  
**TF:** Ongoing

OSC-IM-1.8 Periodically review Zoning Ordinance provisions to ensure that open space requirements for private development adequate to meet the goals of the City. *(Implements OSC-1.3)*

**RA/D:** Parks and Recreation, Planning  
**FS:** General Fund, Property Owners  
**TF:** Ongoing

OSC-IM-1.9 Through the development review process, ensure that new developments have access to open space and/or recreation areas, where feasible. *(Implements OSC-1.4)*

**RA/D:** Parks and Recreation, Planning  
**FS:** General Fund, Property Owners  
**TF:** Ongoing

OSC-IM-1.10 Update the City’s Bicycle Master Plan to enhance opportunities for access to open space and/or recreation areas. *(Implements OSC-1.4)*

**RA/D:** Parks and Recreation, Public Works, Planning  
**FS:** General Fund, State and Federal Funds/Grants  
**TF:** Within three years after adoption of the General Plan





**ISSUE: WATER QUALITY AND CONSERVATION**

*Measures to conserve water and protect water quality should be employed in Carson, while the use of reclaimed water for landscaping and large industrial uses should be promoted.*

**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-2.2 Minimize soil erosion and siltation from construction activities through monitoring and regulation.
  - OSC-2.3 Conserve the water supply available to the City and promote water conservation in the management of public properties.
  - OSC-2.4 Educate citizens about water conservation, encourage its practice, and monitor its effectiveness.
  - OSC-2.5 Facilitate the completion of the infrastructure of the reclaimed water facility in the City of Carson.
  - OSC-2.6 Encourage the use of reclaimed water in applications for which potable water is not necessary.

**Implementation Measures:**

- OSC-IM-2.1 Facilitate monitoring of all underground storage tanks, and support EPA’s requirements to remove all single walled underground storage tanks. *(Implements OSC-2.1)*
  - RA/D:** Public Works, Planning
  - FS:** General Fund, State and Federal Funds/Grants
  - TF:** Ongoing
- OSC-IM-2.2 Implement the requirements of the National Pollutant Discharge Elimination System (NPDES) to improve the quality of stormwater in the City. *(Implements OSC-2.1)*
  - RA/D:** Public Works, Planning
  - FS:** General Fund, State and Federal Funds/Grants
  - TF:** Ongoing
- OSC-IM-2.3 Monitor land uses discharging into water sources and water recharge areas to prevent potential contamination



from hazardous or toxic substances. (*Implements OSC-2.1*)

**RA/D:** Public Works, Planning  
**FS:** General Fund, State and Federal Funds/Grants  
**TF:** Ongoing

OSC-IM-2.4 Require revegetation of graded areas concurrent with project development to minimize erosion. (*Implements OSC-2.2*)

**RA/D:** Planning  
**FS:** General Fund, Property Owners  
**TF:** Ongoing

OSC-IM-2.5 Require water conservation design and operation in new development, including enforcement of the City ordinance which requires new development to submit a water conservation plan which meets State requirements, incorporating measures such as the use of low flow plumbing fixtures, drought tolerant plantings, reclaimed water, and water efficient irrigation systems. (*Implements OSC-2.3*)

**RA/D:** Public Works, Planning  
**FS:** General Fund, Developers  
**TF:** During review of proposed development projects

OSC-IM-2.6 Encourage drought tolerant landscaping and low flow or 'drip' irrigation systems as replacements for water consumptive landscaping and irrigation systems in existing development. (*Implements OSC-2.3 and OSC-2.4*)

**RA/D:** Public Information, Information Services, Planning  
**FS:** General Fund, Property Owners  
**TF:** Ongoing

OSC-IM-2.7 Require automatic or computerized irrigation control systems for purposes of water conservation in public land. Identify opportunities for future conversion to the computerized system(s). (*Implements OSC-2.3*)

**RA/D:** Public Works  
**FS:** General Fund  
**TF:** Ongoing



OSC-IM-2.8 Use local media (public service radio and cable television announcements), the City’s Newsletter, school programs, advertising materials such as buttons and bumper stickers, distribution of a home water user’s handbook, and water bill enclosures to inform citizens of the importance of water conservation and to teach its practice. *(Implements OSC-2.4)*

**RA/D:** Public Information, Information Services, Public Works, Planning, Local/Regional Water Agencies

**FS:** General Fund, Water Agency Funds

**TF:** Ongoing

OSC-IM-2.9 Coordinate with water agencies to evaluate the potential to establish a rebate program for the replacement of aging, leaking, and/or inefficient plumbing with more efficient water-saving plumbing. *(Implements OSC-2.3 and OSC-2.4)*

**RA/D:** Public Works, Planning, Local/Regional Water Agencies

**FS:** General Fund, Water Agency Funds

**TF:** Ongoing

OSC-IM-2.10 Work with the West Basin Municipal Water District to ensure the completion of the reclaimed water facility infrastructure in the City of Carson. *(Implements OSC-2.5)*

**RA/D:** Public Works, West Basin Municipal Water District

**FS:** General Fund, Water Agency Funds

**TF:** Until the reclaimed water facility is completed

OSC-IM-2.11 Explore the potential for the development of a reclaimed water system within the City in anticipation of the reclaimed water facility infrastructure being completed. *(Implements OSC-2.5)*

**RA/D:** Public Works

**FS:** General Fund, Development Fees, State and Federal Funds/Grants

**TF:** Determine feasibility before the reclaimed water facility is completed

OSC-IM-2.12 Encourage the use of reclaimed water in industry, construction, landscaping, golf courses, and other uses



where potable water is not necessary. (*Implements OSC-2.5 and OSC-2.6*)

- RA/D:** Public Works, Planning
- FS:** Property Owners, Business Owners, Water Agencies
- TF:** Starting before the reclaimed water facility is completed, and ongoing thereafter

OSC-IM-2.13 Require the installation of reclaimed water lines in new projects and redevelopment projects as appropriate (based on location and use) in anticipation of the completion of the reclaimed water facility infrastructure. (*Implements OSC-2.6*)

- RA/D:** Public Works, Planning
- FS:** Property Owners, Water Agencies
- TF:** Ongoing



**ISSUE: ENERGY CONSERVATION**

*Recent history has shown that constraints on energy supplies due to natural, political or economic causes can have drastic impacts on the conduct of business, industry and the daily lives of the residents in a city. Therefore, energy conservation is of the utmost importance to the economic health of Carson and the quality of life of its residents.*

**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, fuel cells or new technology.

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.

**Implementation Measures:**

OSC-IM-3.1 Where feasible, require all new buildings and subdivisions to be designed and oriented in such a way as



to take maximum advantage of the sun and winds for natural heating and cooling. *(Implements OSC-3.1)*

**RA/D:** Planning  
**FS:** Developers  
**TF:** During review of proposed development projects

OSC-IM-3.2 In addition to enforcing the energy efficiency requirements of state law and the Uniform Building Code, encourage the incorporation of additional energy conservation techniques, such as innovation building construction, high-efficiency HVAC systems, etc. in new construction *(Implements OSC-3.1)*

**RA/D:** Planning  
**FS:** Developers, Federal and State Grants/Funds  
**TF:** During review of proposed development projects

OSC-IM-3.3 Encourage and promote the use of alternative energy sources, such as solar installations and co-generation facilities. *(Implements OSC-3.1)*

**RA/D:** Planning  
**FS:** Developers, Federal and State Grants/Funds  
**TF:** During review of proposed development projects

OSC-IM-3.4 Publicize and support energy conservation incentive programs offered by utility companies, such as rebates to consumers who replace appliances with more energy-efficient models. *(Implements OSC-3.1 and OSC 3.3)*

**RA/D:** Public Information, Information Services, Utility Providers  
**FS:** General Fund, Utility Providers  
**TF:** Ongoing

OSC-IM-3.5 Encourage the use of alternative energy sources, such as solar panels, in the design of new swimming pools and the retrofitting of existing pools, as well as pool covers. *(Implements OSC-3.2)*

**RA/D:** Public Information, Information Services, Planning  
**FS:** General Fund, Property Owners, Developers  
**TF:** Ongoing



OSC-IM-3.6 Work with Southern California Edison and the Southern California Gas Company to educate the public in energy conservation. To this end, use local media (public service radio and cable television announcements), the City’s Newsletter, school programs, advertising materials, such as buttons and bumper stickers, and the distribution of an energy conservation handbook to promote energy conservation techniques and teach its practice. *(Implements OSC-3.3)*

**RA/D:** Public Information, Information Services, Utility Providers  
**FS:** General Fund, Utility Providers  
**TF:** Ongoing

OSC-IM-3.7 Update the Bicycle Master Plan and encourage use of bicycle facilities for commuting, school, shopping and business, as well as for recreational purposes. *(Implements OSC-3.4)*

**RA/D:** Parks and Recreation, Public Works, Planning  
**FS:** General Fund, Development Fees  
**TF:** Within one year after General Plan adoption



**ISSUE: SOLID WASTE REDUCTION**

*As landfills rapidly reach their capacities and new landfills become increasingly more difficult to establish, the need for waste reduction becomes critical.*

**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.

**Implementation Measures:**

OSC-IM-4.1 Achieve solid waste source reduction targets as identified in the City’s Source Reduction and Recycling Element (SRRE) and state regulations. For example, promote such measures as landscape recycling into compost for



reuse as fertilizer, and home pick-up of recyclable materials, including green waste. *(Implements OSC-4.1)*

**RA/D:** Public Works, Waste Haulers  
**FS:** General Fund, Waste Haulers  
**TF:** Ongoing

OSC-IM-4.2 Work with the City’s waste haulers to educate the public in source reduction and recycling. To this end, use local media (public service radio and cable television announcements), the City’s Newsletter, school programs, advertising materials such as buttons and bumper stickers, distribution of a source reduction and recycling handbook, and utility bill enclosures promoting source reduction and recycling techniques in order to inform citizens of the importance of source reduction and recycling and to teach their practices. *(Implements OSC-4.2)*

**RA/D:** Public Information, Information Services  
**FS:** General Fund, Waste Haulers  
**TF:** Ongoing

OSC-IM-4.3 Require that new developments include recycling collection facilities as part of their trash collection areas. *(Implements OSC-4.3)*

**RA/D:** Planning and Environmental Services, Public Works  
**FS:** Developers  
**TF:** During review of proposed development projects



## CHAPTER 9

# PARKS, RECREATION AND HUMAN SERVICES ELEMENT



# CHAPTER 9

## PARKS, RECREATION AND HUMAN SERVICES ELEMENT



### **GUIDING PRINCIPLE**

*The City of Carson is committed to expanding the recreational, cultural, and human services facilities and activities within the City by providing commercial recreational uses, affordable recreation opportunities, various services, 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.*

### **1.0 INTRODUCTION**

The Parks, Recreation and Human Services Element is not a mandatory general plan element required by State planning law. This Element is included in the General Plan because the City has determined that there are six important issues relating to community recreation planning which must be addressed, specifically:

- A need for additional recreational facilities in the City;
- A need for enhanced safety and maintenance of the City's parks;
- A need to promote a variety of recreational and educational facilities for the development of the community's youth;
- A need to provide affordable recreational and cultural programs;



- A need for leisure services for seniors in the community, as the number of persons over the age of 50 continues to increase;
- A need for locally based cultural arts programs (i.e., theater, music, art, dance, etc.) to enrich community life; and
- A need to address the recreation and social needs of the community’s emotionally and physically challenged residents.

## **2.0 STATE LAW REQUIREMENTS**

Although this is not a mandatory element required by State planning law, Government Code Section 65560(b)(3) stipulates that the General Plan address “...Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes...and areas which serve as links between major recreation and open space reservations, including utility easements...trails, and scenic highway corridors...”

In addition, Government Code Section 65303 states that local governments may adopt “...any other elements or address any other subjects which...relate to the physical development of the county or city.” Such “other” elements are called “optional” elements. Upon adoption, an optional element becomes an integral part of the general plan. It has the same force and effect as the mandatory elements and must be consistent with the other elements of the plan. In turn, zoning, subdivisions, public works, and specific plans must be consistent with all optional elements.

## **3.0 SUMMARY OF FINDINGS**

### **3.1 EXISTING PARKS**

The City of Carson has 16 public parks, one County park (Victoria), and two public golf courses (Victoria Golf Course and Dominguez Golf Course). The Carson Community Center also provides recreation programs and meeting rooms for all residents. The total amount of recreational open space, listed above, in Carson is 354 acres. The total amount of public parkland, including County facilities but not Dominguez Golf Course, is 315 acres. This acreage also does not include public school athletic fields or commercial recreational facilities.

The City’s new target, for the ratio of public park acres to population, is four acres per 1,000 population. According to the 2000 U.S. Census, the City’s population is 89,730 persons. Therefore, the current ratio of park acres to population is approximately 3.5 acres per 1,000 residents, but only 1.72 acres per 1,000 residents if only City facilities are included.



Table P-1, *City Parks and Recreational Facilities*, and Exhibit P-1, *Existing Parks and Recreation Facilities*, identify the parks within the City; Table P-1 also lists the major recreational facilities provided at each park.

### **CLASSIFICATION OF PARK TYPES**

There are three types of parks in the City of Carson: Regional Parks, Neighborhood Parks, and Mini Parks. In addition, there is a community center. These are described below.

- Regional Parks. A regional park is designed to serve the active and passive recreational needs of the community and surrounding area. These parks are located on or near arterial roadways so as to be easily accessible via automobile, foot, or bicycle. The one regional park in the City, Victoria Park, is a County facility consisting of 36 acres. The park includes ball fields, basketball courts, a swimming pool, a gymnasium, tennis courts, play area, a recreation building, and a picnic area.
- Neighborhood Parks. Neighborhood parks are intended to serve one neighborhood or group of neighborhoods, 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 from 3.4 to 12 acres. Facilities vary at each park, but typically include ball fields, basketball courts, children’s play areas, and picnic areas.
- Mini Parks. Mini parks are small parks serving a limited area, often where land is not available for a neighborhood facility. These parks generally include children’s play areas and picnic areas. The two existing mini parks in Carson include Friendship Mini Park and Walnut Street Mini Park. In addition, improvements to the Perry Street at Perry and 215<sup>th</sup> Streets, were in the planning stage at adoption of this Element and Bonita Street Mini Park is still on the drawing table.
- Community Center. The Carson Community Center is located in the Civic Center complex on twelve acres. It contains a 73,000 square-foot building that is undergoing a 5,400 square-foot expansion. The Center includes facilities for seniors and child care as well as meeting/craft rooms.

## **3.2 OTHER RECREATIONAL FACILITIES**

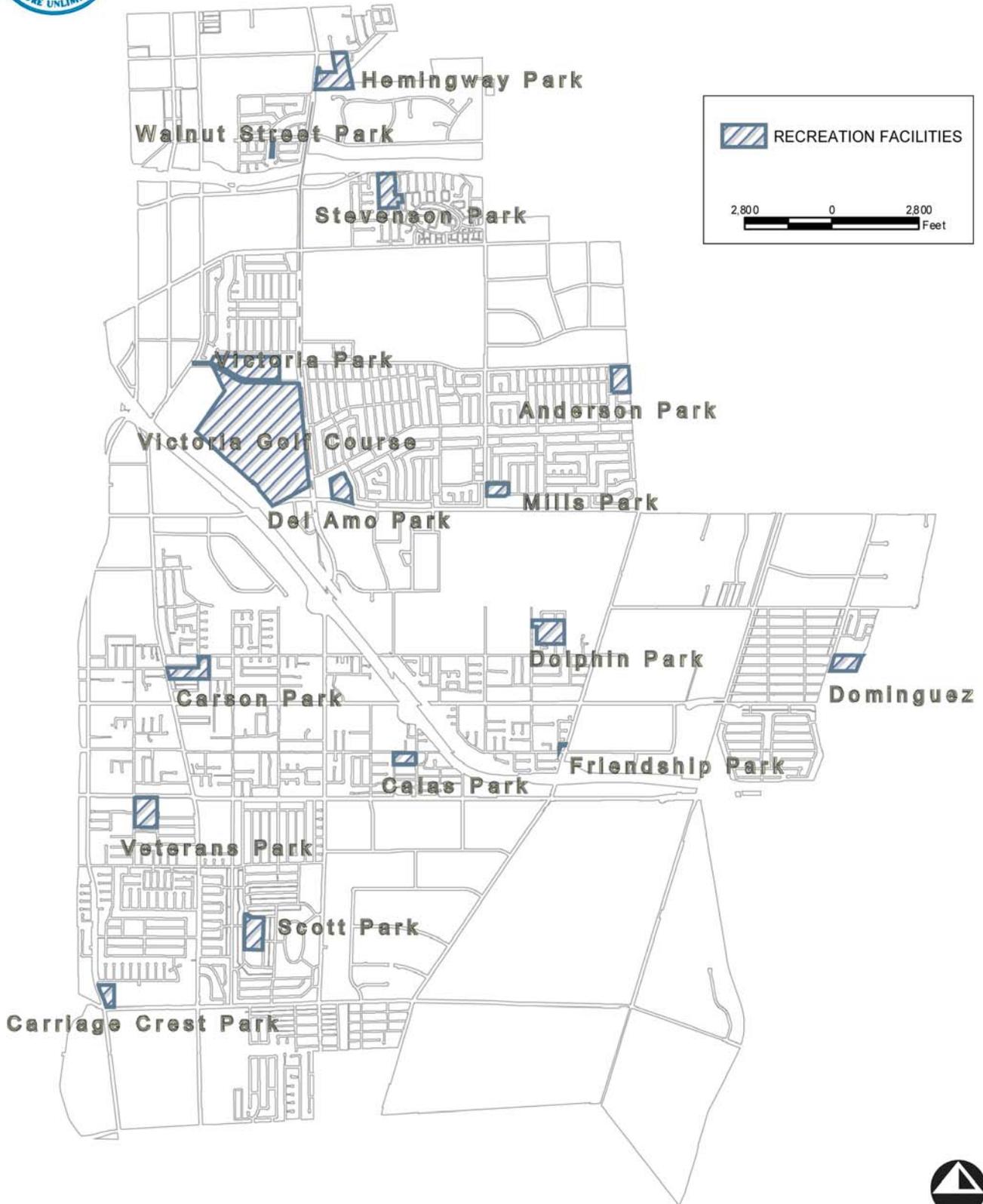
In addition to the parks identified in Table P-1, there are other open space uses in Carson that are suitable for recreational purposes. These include the Dominguez Golf Course and the playfields at the City’s public schools:

- Dominguez Golf Course is a 39.2-acre, privately owned and operated par 3 golf course, which is open to the public. Since this property is privately owned and is designated as General Commercial on the General Plan Land Use Map, it may eventually be replaced by commercial development or recreational open space.



**Table P-1  
City Parks and Recreational Facilities**

<b>Name/Location</b>	<b>Improvements</b>
Anderson Park 19101 S. Wilmington Avenue	8.5 acres: basketball courts, children's play area, Frisbee golf course, meeting/craft rooms, picnic areas, tennis courts.
Bonita Street Mini-Park	1.73 acres; improvements included in Capital Improvement Plan.
Calas Park 1000 W. 220 <sup>th</sup> Street	8.7 acres: ball field, basketball courts, children's play area, meeting/craft rooms, picnic areas, snack bar, tennis courts, wading pools.
Carriage Crest Park 23800 S. Figueroa Street	3.4 acres: ball fields, basketball court, children's play area, meeting/craft room, picnic areas, snack bar 0.25-acre expansion was completed in May 2002.
Carson Community Center 3 Civic Plaza Drive	12.0 acres: 73,000 sq. ft.: 26 meeting/craft rooms. 5400 sq.ft. expansion planned that will include a new senior hall and two new early childhood classrooms.
Carson Park and Pool 21411 S. Orrick Avenue 21436 S. Main Street	10.9 acres: ball fields, basketball courts, children's play area, football field, horse-shoes, meeting/craft rooms, picnic areas, snack bar, soccer field, volleyball courts, swimming pool.
Del Amo Park 703 E. Del Amo Boulevard	9.5 acres: ball fields, basketball courts, children's play area, football field, meeting/craft rooms, picnic areas, snack bar.
Dolphin Park and Pool 21205 Water Street	11.8 acres: ball fields, basketball courts, children's play area, meeting/craft rooms, picnic areas, snack bar, tennis courts, volleyball courts, wading pools.
Dominguez Park and Pool 21330 Santa Fe Avenue	9 acres: ball fields, basketball courts, children's play area, meeting/craft rooms, picnic areas, snack bar, tennis courts, swimming pool. Water feature area is being planned.
Friendship Mini Park 21930 S. Water Street	0.3 acres: children's play area, picnic areas.
Hemingway Park 700 E. Gardena Boulevard	13 acres: ball fields, basketball courts, children's play area, meeting/craft rooms, picnic areas, snack bar, tennis courts.
Mills Park 700 E. Gardena Boulevard	5 acres: ball fields, basketball courts, children's play area, football field, meeting/craft rooms, picnic areas, snack bar, soccer field, tennis courts.
Perry Street Mini-Park	1.16 acres; agreement with owner to transfer property to City.
Scott Park and Pool 23410 Catskill Avenue	11.2 acres: ball fields, basketball courts, boxing equipment, children's play area, gymnasium, horse-shoes, meeting/craft rooms, picnic areas, snack bar, tennis courts, volleyball courts, wading pools, swimming pool, boxing center.
Stevenson Park 17400 Lysander Drive	11.7 acres: ball fields, basketball courts, children's play area, horse-shoes, meeting/craft rooms, picnic areas, snack bar, tennis courts, volleyball courts, wading pools. Gymnasium is planned.
Walnut Street Mini Park 440 E. Walnut Street	1.5 acres: basketball courts, children's play area, picnic areas.
Veterans Sports Complex and Skate Park 22400 Moneta Avenue	12.6 acres; ball fields, basketball courts, children's play area, horse-shoes, meeting/craft rooms, snack bar, tennis courts, wading pools. 25,000 sq. ft. building with basketball courts, gymnasium, volleyball courts, fitness center, racquetball courts. Skate Park is planned.
<b>Non-City Recreational Facilities Located in Carson:</b>	
Victoria Park (County) 419 E. 192 <sup>nd</sup> Street	36 acres: ball fields, basketball courts, swimming pool, gymnasium, tennis courts, play area, recreation building, picnic area.
Victoria Golf Course (County) 340 East 192 <sup>nd</sup> Street	161.6 acres: public regulation golf course.
Dominguez Golf Course 19800 South Main Street	39.2 acres: 18-hole, par 3 golf course with two tier driving range.



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

**Existing Parks and Recreation Facilities**



- There are 546.1 acres of public schools in the Carson with recreational facilities on site. At this time, the City has a Joint Use Agreement with the School District for two of the schools in Carson: Carson High School and Caroldale Elementary School. This agreement provides for joint use of playfields, tennis courts, and other recreational facilities by students and residents during off-school hours.

Of the 546.1 acres of public schools, 349.2 acres are within the Cal State University Dominguez Hills (CSUDH) campus. There are approximately 40 acres on the campus which are currently developed with recreational facilities, including: a large multi-purpose soccer field, 12 tennis courts, track and field facilities, baseball and softball fields, The Toro Dome gymnasium, and an inline roller rink.

### **3.3 PROPOSED RECREATIONAL FACILITIES**

National Training Center at CSUDH. In June of 2001 a major expansion of recreational facilities, the National Training Center, was approved at CSUDH. The National Training Center complex consists of development in two locations -- the project site and the campus improvement area. The project site consists of approximately 85 acres of undeveloped property that will include construction of two adjacent stadiums (a soccer stadium with seating from 20,000 to 27,000 and a tennis stadium with seating from 8,000 to 13,000), along with other support facilities and parking.

The campus improvement area is about 40 acres and includes upgrades to existing campus facilities such as soccer fields, tennis courts, track and field facilities, relocated baseball and softball fields, a relocated velodrome, surface parking and a relocated inline roller hockey rink.

A three-mile jogging trail with fitness stations will be built around the perimeter of the NTC. Some of the proposed facilities may be utilized by various professional or amateur athletes and teams. Others will be programmed for ongoing CSUDH and community programs.

City-Proposed Mini Park. The City is planning a new mini park, to be located south of Sepulveda Blvd. within the utility transmission corridor.

### **3.4 BICYCLE TRAIL SYSTEM**

Bicycle trails are described in three classifications:

- Class I bikeways (bike paths) are off-street facilities with exclusive right-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 facilities with motor vehicles on the street, with bicycle use as a secondary use.

*Information regarding the Bicycle Plan can be found in Chapter 4, Transportation and Infrastructure Element of this General Plan.*

### **3.5 RECREATIONAL PROGRAMS**

In addition to the facilities discussed above, the City of Carson provides a wide variety of recreation and community services, from general services and programs, to children and youth services, senior services and facilities, and special interest services/facilities. These are described below.

#### **GENERAL SERVICES/PROGRAMS**

Classes. The Parks and Recreation Department offers a number of classes to meet the needs and interests of the community, including, but not limited to: computer workshops, languages, child care, 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.

Boxing/Weightlifting. Many levels of boxing and weightlifting classes are offered to children, youth and adults at Scott Park. The City also coordinates annual boxing exhibitions to display the skill of the boxers using the program.

Park Activities. In addition to the facilities and equipment available at Carson's parks, a variety of special activities are also offered including: cultural celebrations like Cinco de Mayo and June tenth; annual holiday parties; and camping trips.

#### **CHILDREN AND YOUTH SERVICES**

Early Childhood. The preschool curriculum for children ages three to five 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 children with working parents, offering both before- and after-school activities. Daily schedules include 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 organizes monthly Teen Summits at City parks, featuring "rap sessions" focusing on positive topics, group games, group sports, skits and refreshments. Teen dances are held regularly, rotating among the City park facilities. A Teen Conference is held annually in order to identify popular teen



topics, and discuss pressures teenagers are facing and provide positive ideas to deal with them.

## **3.6 HUMAN SERVICES PROGRAMS**

### **SENIOR SERVICES AND FACILITIES**

The Senior Social Services Section provides services that protect and improve the socio economic 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 Senior Clubs that are co-sponsored by the City, 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 adult 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, among others. Classes are facilitated by independent contractors, and are offered at convenient locations throughout the City, including Carson Community Center and local parks.

*Additional information relating to recreational programs in Carson can be found in the Existing Conditions Report, Section 3.12, Parks and Recreation.*

## **3.7 FINE ARTS**

There are many opportunities to enjoy or participate in fine arts and performing arts in the City. Through the City's Community Services Section, the City funds many individuals and groups to provide art, dance and music exhibitions and performances to the community. For example, the Carson Dominguez Hills Symphony Orchestra offers professional music performances. The Carson Civic Light Opera performs with school children in the local schools. The Friends of the Art of Dance, the Apollo Players and the Asociacion 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, plays and concerts to promote fine art and the performing arts.

### **3.8 LIBRARY FACILITIES**

The City of Carson is served by the County of Los Angeles Public Library system. Two facilities are located in Carson, the Carson and Victoria Park libraries. The service areas for the two libraries have a population of more than 116,000. The circulation of materials has steadily increased in the Carson Library, and remained stable in the Victoria Park Library.

The planning standard for the Los Angeles County Library system is 3.09 persons per household, 3.0 library materials items per capita, and 0.5 gross square feet per capita. Currently, the community is underserved in terms of facility size and library materials items. There are no plans for library expansion by the County. In addition, during times of budgetary cuts, library operations funding is often reduced.

### **3.9 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 general Carson area. CUSD has one elementary school, one middle school, and one high school serving the northern edge of the City. The schools located within the City boundaries are shown on Exhibit LU-1.

In addition to public schools, the City also contains two parochial schools (Peninsula Christian and St. Philomena Catholic), an adult school, and the California State University Dominguez Hills campus.

School population growth projected to 2020 would be generated by an estimated 2,142 new dwelling units plus natural growth. The Final Environmental Impact Report prepared for this General Plan includes detailed analyses of projections, school capacities, and classroom needs at the various grade levels. Generally, there are three schools serving Carson with enrollment either at or over capacity, and several other facilities are nearing capacity.

The use of school impact fees, collected under the provisions of State law, supply the funding necessary to add classrooms as required, and are deemed to fully mitigate impacts. In addition, LAUSD is currently planning the use of State bond funds to repair aging classrooms and build new neighborhood schools.

## **4.0 PLANNING ISSUES, GOALS, POLICIES AND IMPLEMENTATION**

The acronyms listed below are used for the implementation measures:

- RA/D: Responsible Agency/Division
- FS: Funding Source
- TF: Time Frame



**ISSUE: ADDITIONAL RECREATIONAL FACILITIES**

*There is a need for additional recreational facilities in Carson. Such facilities include theaters, bowling alleys, batting cages, and other forms of family recreation, as well as cultural facilities such as a museum, art gallery, amphitheater, performing arts center, and similar facilities.*

**Goal:** P-1: Increase of and improvements to park, recreational and cultural facilities to meet the needs of existing and future residents and workers in the City.

**Policies:** P-1.1 Acquire additional parkland in accordance with long-term planning efforts, such as this General Plan and the City’s Capital Improvement Program.

P-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.

P-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.

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

P-1.5 Provide access to existing and future recreational facilities in accordance with the Americans with Disabilities Act.

**Implementation Measures:**

P-IM-1.1 Develop a Master Plan of Parks and Recreational Facilities to be periodically reviewed and updated. This Master Plan should at a minimum address facility needs, maintenance, park utilization, potential funding sources, and similar items. *(Implements P-1.1)*

**RA/D:** Parks and Recreation  
**FS:** General Fund  
**TF:** Within two years, to be updated every five years

P-IM-1.2 To facilitate the acquisition of additional parkland: determine the amount of new acreage which should be acquired for parks, the locations of future parks (to include utility transmission corridors and former landfills) and the types of facilities at those locations;



develop a parks acquisition schedule and identify the appropriate sources of financing for land acquisition; and, with the acquisition of new park land, determine the needed level for operations and maintenance funding .  
*(Implements P-1.1)*

**RA/D:** Parks and Recreation  
**FS:** General Fund, Development Fees, State and Federal Funds/Grants  
**TF:** Within two years

P-IM-1.3 Explore opportunities to provide funding through City park bond issues, assessment districts, incremental financing, redevelopment, development agreements, and similar techniques. *(Implements P-1.1)*

**RA/D:** Parks and Recreation  
**FS:** General Fund until such time that other funding sources are identified  
**TF:** Ongoing

P-IM-1.4 Estimate and consider implementing user fees as appropriate at new recreational facilities in order to offset the development of such facilities. *(Implements P-1.1)*

**RA/D:** Parks and Recreation  
**FS:** General Fund, and if deemed appropriate, User Fees  
**TF:** Within two years

P-IM-1.5 Include parkland acquisition in the City’s capital improvement program. *(Implements P-1.1)*

**RA/D:** Parks and Recreation  
**FS:** Capital Improvement Program  
**TF:** Ongoing

P-IM-1.6 Update the City’s Quimby Act implementation provisions requiring the dedication of land and/or the payment of in-lieu fees based on the City’s parks to population ratio. *(Implements P-1.1)*

**RA/D:** Parks and Recreation, Planning and Environmental Services  
**FS:** Development Fees  
**TF:** Ongoing



- P-IM-1.7 Pursue State and Federal funding sources to acquire park facilities in addition to those dedicated to the City. To this end, monitor State and Federal legislation offering funding assistance to local government in the provision of parklands. *(Implements P-1.1)*
- RA/D:** Parks and Recreation  
**FS:** State and Federal Funds/Grants  
**TF:** Ongoing
- P-IM-1.8 Coordinate with County Departments to maintain and, wherever feasible, expand the joint use of facilities within the City. *(Implements P-1.2)*
- RA/D:** Parks and Recreation  
**FS:** General Fund, Regional, State and Federal Funds/Grants  
**TF:** Ongoing
- P-IM-1.9 Pursue the joint use of recreational facilities at the Cal State University Dominguez Hills (CSUDH) campus. *(Implements P-1.2)*
- RA/D:** Parks and Recreation  
**FS:** General Fund, Regional, State and Federal Funds/Grants  
**TF:** Ongoing
- P-IM-1.10 Pursue the joint use of recreational facilities at the public schools in Carson. *(Implements P-1.2)*
- RA/D:** Parks and Recreation  
**FS:** General Fund  
**TF:** Ongoing
- P-IM-1.11 Establish parkland requirements in the City's Five Year Redevelopment Plans. *(Implements P-1.3)*
- RA/D:** Parks and Recreation, Redevelopment  
**FS:** Redevelopment  
**TF:** Ongoing
- P-IM-1.12 Include parkland requirements, on-site, off-site, or in lieu monetary contributions in all development agreements. *(Implements P-1.3)*
- RA/D:** Planning and Environmental  
**FS:** Development Fees  
**TF:** Ongoing



P-IM-1.13 Examine the potential to provide mobile programs, storefront operations, street events, etc. (*Implements P-1.4*)

**RA/D:** Parks and Recreation  
**FS:** General Fund, Development Fees, State and Federal Grants/Programs  
**TF:** Ongoing

P-IM-1.14 Ensure that all new recreation facilities and alterations to existing facilities conform to the accessibility requirements of the Americans with Disabilities Act (*Implements P-1.5*)

**RA/D:** Public Works, Planning and Environmental Services  
**FS:** General Fund, Developer, Property Owner  
**TF:** Ongoing



**ISSUE: COMMUNITY INVOLVEMENT**

*The use of volunteers to implement certain recreational and human services programs may offset increased costs in other areas. The increased participation of volunteers may also serve to better educate the community regarding the cultural diversity of Carson's residents.*

**Goal:** P-2: Active citizen involvement to establish and achieve community goals.

**Policies:** P-2.1 Continue to support the efforts of Carson's civic and social service organizations.

P-2.2 Recognize the individuals, organizations, and agencies who have made a contribution to community life in Carson.

P-2.3 Continue to develop a program by which volunteers are solicited to assist in recreational and human services programs and then recognized.

P-2.4 Encourage volunteerism and create a greater sense of stewardship for parks within each neighborhood and community through active public involvement programs.

**Implementation Measures:**

P-IM-2.1 Provide matching services and space in City publications for charitable organization to advertise the skills and



services needed for volunteer activities. (*Implements PRC-2.1*)

**RA/D:** Public Information, Information Services  
**FS:** General Fund  
**TF:** Ongoing

P-IM-2.2 Work with Cal State University Dominguez Hills (CSUDH) and other nearby colleges and universities to attract student interns to assist in appropriate programs in the community. (*Implements PRC-2.1 and PRC-2.3*)

**RA/D:** Public Information, Information Services  
**FS:** General Fund  
**TF:** Ongoing

P-IM-2.3 Develop a program to honor citizen support. Such a program may include: articles of appreciation in newspapers; recognition on local cable television; an “Appreciation” lunch or dinner; recognition by the City Council at public meetings; invitations to, and recognition at, special events within the community; “Appreciation Month” at City Hall; utilization and/or expansion of existing community recognition programs (e.g., Chamber of Commerce recognition programs); issuance of plaques and certificates, etc. (*Implements PRC-2.1, PRC-2.2 and PRC-2.3*)

**RA/D:** Public Information, Information Services  
**FS:** General Fund  
**TF:** Ongoing, with aspects of program conducted on an annual basis

P-IM-2.4 Further develop the program by which volunteers are solicited to assist in recreational programs and then recognized. To this end, work with private dance companies/studios, athletic clubs, karate studios, restaurants and caterers, music studios, and other appropriate entities to expand existing course offerings and/or offset costs. Also, recruit personnel through seniors organizations, and local colleges and universities, as appropriate. (*Implements PRC-2.3, PRC-2.4*)

**RA/D:** Parks and Recreation, Public Information, Information Services  
**FS:** General Fund  
**TF:** Ongoing



P-IM-2.5 Establish an active partnership with private sector agencies and groups to encourage support for parks and recreational facilities, community service programs, and expand the number of events through joint use public/private sponsorship. *(Implements PRC-2.3 and PRC-2.4)*

**RA/D:** Parks and Recreation, Senior Services, Community Services, Public Information, Information Services

**FS:** General Fund

**TF:** Ongoing

P-IM-2.6 Explore programs such as: “Kids for Parks,” public meetings, “Adopt a Park” programs, booster clubs, and volunteer projects (i.e., community service hours for high school students, scout programs, etc.). And implement these programs as feasible and appropriate. *(Implements PRC-2.4)*

**RA/D:** Parks and Recreation, Public Information, Information Services

**FS:** General Fund

**TF:** Ongoing



**ISSUE: SAFETY AND MAINTENANCE OF CARSON PARKS**

*The safety of the City’s parks is especially important within the community.*

**Goal:** P-3: Improved safety in the City’s parks.

**Policies:** P-3.1 Continue to 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.

P-3.2 Continue to support citizen programs that fight crime and promote citizen involvement, such as “Neighborhood Watch”, DARE, “Adopt-A-Park”, and like programs.

P-3.3 Continue to explore, design, and implement vandalism reduction strategies at park and recreation facilities in the City.



**Implementation Measures:**

P-IM-3.1 Examine the feasibility of sheriff bicycle patrols in the City's parks. *(Implements P-3.1)*

**RA/D:** Parks and Recreation, Public Safety, Los Angeles County Sheriff's Department

**FS:** General Fund

**TF:** Within two years

P-IM-3.2 Incorporate the principles of defensible space design into the City's parks to enhance public safety (e.g., security lighting, visual observation of open spaces, secured areas, unobtrusive landscaping, etc.). *(Implements P-3.1)*

**RA/D:** Parks and Recreation, Public Safety, Los Angeles County Sheriff's Department, Planning and Environmental

**FS:** General Fund

**TF:** Ongoing

P-IM-3.3 Develop a Park Ranger Program. *(Implements P-3.3)*

**RA/D:** Parks and Recreation, Public Safety, Los Angeles County Sheriff's Department

**FS:** General Fund

**TF:** Ongoing

P-IM-3.4 Continue implementation of the graffiti removal program to eliminate all traces of graffiti. Utilize design deterrents to discourage graffiti. *(Implements PRC-3.3)*

**RA/D:** Landscape and Building Maintenance

**FS:** General Fund

**TF:** Ongoing

P-IM-3.5 Schedule after-school and weekend recreational programs in Carson parks in order to offer constructive alternatives in place of undesirable activities. *(Implements PRC-3.3)*

**RA/D:** Parks and Recreation

**FS:** General Fund

**TF:** Ongoing

**Goal:** P-4: Enhanced maintenance and rehabilitation of existing park and recreational facilities.



- Policies:**
- P-4.1 Inventory existing parks and recreational facilities to determine rehabilitation needs through a periodic monitoring program.
  - P-4.2 Plan fiscally responsible rehabilitation and maintenance strategies which enhance the amenity and usability of existing parks.
  - P-4.3 Require park improvements and facilities that are durable and economical to maintain.

*See also Policies PRC-2.1 through PRC-2.4.*

**Implementation Measures:**

- P-IM-4.1 Develop a long-range plan for rehabilitation and upgrade of existing parks, and establish criteria to determine priorities for funding. Incorporate this plan into the overall Master Plan. *(Implements P-4.1 and P-4.2)*

**RA/D:** Parks and Recreation  
**FS:** General Fund  
**TF:** Within two years

- P-IM-4.2 Renovate/redesign existing facilities to accommodate multi-uses, and identify what resources should be allocated to this redesign function and where needed resources will come from to redesign parks. This should include the provision of more night-lighted improvements at existing parks and schools (sited so as not to intrude in residential neighborhoods) and by the management of the use of athletic facilities to ensure an equitable distribution of athletic fields to all users. *(Implements P-4.2)*

**RA/D:** Parks and Recreation  
**FS:** General Fund  
**TF:** Ongoing

- P-IM-4.3 Pursue all possible methods to generate revenue for the maintenance and rehabilitation of parks, such as commercial leasing, user fees, and other available private and public funding sources. *(Implements P-4.2)*

**RA/D:** Parks and Recreation  
**FS:** Commercial leasing, user fees, and other available private and public funding sources  
**TF:** Ongoing



P-IM-4.4 Require maintenance and rehabilitation of all private neighborhood parks by the responsible homeowners association(s) through a recorded agreement requiring the perpetual private ownership and maintenance of these parks. *(Implements P-4.2)*

**RA/D:** Parks and Recreation  
**FS:** Homeowners Association(s)  
**TF:** Ongoing

P-IM-4.5 Emphasize low maintenance and resource conservation in the design and construction of all new and rehabilitated facilities. *(Implements P-4.2 and P-4.3)*

**RA/D:** Parks and Recreation  
**FS:** General Fund, Development Fees  
**TF:** Ongoing



**ISSUE: AFFORDABILITY OF RECREATIONAL AND CULTURAL PROGRAMS**

*It is important that recreational and cultural programs are affordable and that the City is proactive in developing more affordable recreational opportunities.*

**Goal:** P-5: Recreational programs affordable to all income segments of the Carson population.

**Policies:** P-5.1 Pursue innovative methods, such as the use of volunteers (see Issue 4.2 of this Element) grants, and private sponsorship, to improve the affordability of recreational programs for residents of the City.

**Implementation Measures:**

P-IM-5.1 Pursue all potential methods of generating revenues for recreational and cultural programs, such as user fees (based on ability to pay), program underwriters, state and federal grants, and other available private and public funding sources. *(Implements P-5.1)*

**RA/D:** Parks and Recreation, Community Services  
**FS:** General Fund, User Fees, Program Underwriters, State and Federal Grants, and other available private and public funding sources  
**TF:** Ongoing





**ISSUE: OPPORTUNITIES FOR CARSON'S COMMUNITY CHILD CARE FACILITIES**

*Child care facilities are necessary to meet the needs of working families.*

**Goal:** P-6: Quality public and private child care facilities throughout the community.

- Policies:**
- P-6.1 Expand the supply of quality child care in Carson.
  - P-6.2 Explore opportunities for the provision of child care for children of low income families and those with special needs.
  - P-6.3 Provide information to the Carson community on the family care resources offered to City residents.

**Implementation Measures:**

P-IM-6.1 Institute procedures to facilitate permits or entitlements for child care centers and/or projects which include childcare facilities. Also, encourage the provision of daycare centers by major employers in the City and in areas of large concentrations of businesses. *(Implements PRC-6.1)*

- RA/D:** Business Licenses, Planning and Environmental Services
- FS:** General Fund, Development Fees
- TF:** Ongoing

P-IM-6.2 Develop incentive programs to promote the inclusion of childcare facilities within development projects. Incentive programs may include, but are not limited to: fee waivers, density bonuses, and floor-to-area ratio (FAR) bonuses. *(Implements PRC-6.1)*

- RA/D:** Planning and Environmental Services
- FS:** General Fund, Development Fees
- TF:** Ongoing

P-IM-6.3 Explore the feasibility of converting City owned buildings that are underutilized or vacant into privately managed, not-for-profit, childcare facilities. *(Implements PRC-6.1)*

- RA/D:** Planning and Environmental Services
- FS:** General Fund
- TF:** Ongoing



P-IM-6.4 Support public and private organizations in the provision of after school care programs. To this end:

- Encourage the School District to expand its after school care program by offering before and after school programs in both elementary and junior high schools.
- Outreach to family daycare centers to expand child care services for elementary and junior high school children.
- Explore options for transporting children between home, school, and child care centers. *(Implements PRC-6.1)*

**RA/D:** Parks and Recreation, Planning and Environmental Services

**FS:** General Fund, Development Fees

**TF:** Ongoing

P-IM-6.5 Schedule educational programs for child care providers on local cable TV channels, with program taping, coordination and presentations provided by the local network as partial fulfillment of its community service obligation. *(Implements PRC-6.1)*

**RA/D:** Parks and Recreation, Public Information, Information Services, Local Cable Channel

**FS:** General Fund, Development Fees

**TF:** Ongoing

P-IM-6.6 Encourage the School District and the City's childcare providers to expand tutoring programs to benefit the youth of Carson. *(Implements PRC-6.1)*

**RA/D:** Parks and Recreation, School District

**FS:** School District, Childcare Providers

**TF:** Ongoing

P-IM-6.7 Examine the feasibility of allocating funds for the construction of child care facilities in or near areas of low income housing. *(Implements PRC-6.2)*

**RA/D:** Parks and Recreation, Planning and Environmental Services

**FS:** Development Fees, Community Development Block Grant Funds, Bonds, or Other Funding Sources

**TF:** Ongoing



P-IM-6.8 Support childcare programs (e.g., volunteer at child care centers, “Adopt a Grandparent” programs, etc.). Work with senior citizen groups to generate senior citizen participation in these programs. *(Implements PRC-6.2 and PRC-6.3)*

**RA/D:** Parks and Recreation, Public Information, Information Services  
**FS:** General Fund  
**TF:** Ongoing

P-IM-6.9 Support programs such as Head Start and examine the potential to expand these facilities. *(Implements PRC-6.2 and PRC-6.3)*

**RA/D:** Parks and Recreation  
**FS:** Federal Funds/Grants  
**TF:** Ongoing

P-IM-6.10 Prepare a pamphlet, updated annually, which identifies family care resources within the City of Carson. Information in the pamphlet may include: types of programs available, accreditation information, location, hours of operation, etc. Include the information on the City’s website. *(Implements PRC-6.3)*

**RA/D:** Public Information, Information Services  
**FS:** General Fund, State and Federal Funds/Grants  
**TF:** Within one year, and then updated annually



**ISSUE: HUMAN RELATIONS**

*The cultural and socio-economic diversity of Carson’s citizens should be promoted to maintain harmony, promote collaborative understanding, and enhance the richness of the community.*

**Goal:** P-7: Promotion of relationships and understanding between all racial, ethnic, social, and other groups within the community.

- Policies:**
- P-7.1 Encourage and promote a citywide Unity Day.
  - P-7.2 In conjunction with the schools, support and expand activities representative of City residents’ diversity.
  - P-7.3 Support and enhance the Sister City relationships.



P-7.4 Utilize appropriate City recreational and cultural programs to increase cross-cultural experiences among residents.

**Implementation Measures:**

P-IM-7.1 Work with the School District to further the goals of Unity Day, and examine methods by which to enhance and/or expand this important program, such as inclusion of civic organizations, churches and private businesses. *(Implements P-7.1 and P-7.2)*

- RA/D:** Parks and Recreation, Public Information, Information services, School District
- FS:** General Fund, School District, and/or Other Private Funding Sources
- TF:** Ongoing/Annual Event

P-IM-7.2 Offer multi-cultural programs, integrating games, theater, music and other activities representative of City residents' ethnicity. *(Implements P-7.3 and P-7.4)*

- RA/D:** Parks and Recreation, Community Services, Public Information, Information Services, Chambers of Commerce
- FS:** General Fund, Chambers of Commerce, and/or Other Private Funding Sources
- TF:** Ongoing

P-IM-7.3 Support community festivals, parades, fairs, and other events to celebrate the presence of various ethnic groups within the City. Events could include such activities as displays of homeland costumes, dancing, food, games, and music. *(Implements P-7.3 and P-7.4)*

- RA/D:** Parks and Recreation, Community Services, Public Information, Information Services, Chambers of Commerce
- FS:** General Fund, Chambers of Commerce, and/or Other Private Funding Sources
- TF:** Ongoing

P-IM-7.4 Publicize Sister City events, visits and activities. *(Implements P-7.3)*

- RA/D:** Parks and Recreation, Public Information, Information Services
- FS:** General Fund
- TF:** Ongoing





**ISSUE: PROMOTION OF CULTURAL ACTIVITIES**

*There is a desire for theaters, museums, galleries, and similar uses in the City. Emphasis should be placed on the diversity of the community by involving its citizens in a broad spectrum of cultural programs. In addition, the City should promote historic landmarks, resources and activities related to the history of Carson.*

**Goal:** P-8: Support of fine, performing and cultural arts programs in the City.

- Policies:**
- P-8.1 Expand the fine and cultural arts in the City’s K-12 schools.
  - P-8.2 Develop a formal relationship between the City and Cal State University Dominguez Hills to improve relationships, provide enrichment to area residents and businesses, and enhance the identity of the Carson community.
  - P-8.3 Promote local and regional participation in the City’s cultural and social activities such as art exhibitions, and musical and theatrical productions.

**Implementation Measures:**

- P-IM-8.1 Expand fine arts programs. *(Implements P-8.1)*
  - RA/D:** Community Services, City Managers’ Office, Public Information, Information Services, School District
  - FS:** General Fund
  - TF:** Ongoing
- P-IM-8.2 The Fine Arts and Historical Commission should:
  - Prepare an annual report for the City Council on the arts in Carson,
  - Recommend priorities in funding for local cultural arts organizations to City Council, forwarding these recommendations to other service organizations,
  - Diversify cultural programs to include the arts of other lands represented within Carson’s population, and
  - Investigate funding and promotional opportunities for cultural arts in Carson. *(Implements P-8.1)*



**RA/D:** Fine Arts and Historical Commission, Community Services, Public Information, Information Services

**FS:** General Fund

**TF:** Ongoing

P-IM-8.2 Enhance the community’s relationship with the Music and Theater and Arts Departments at Cal State University Dominguez Hills to enrich, and provide mutual benefit to, both the educational community and the Carson community in general. *(Implements P-8.2 and 8.3)*

**RA/D:** Community Services, Parks and Recreation, Public Information, Information Services

**FS:** General Fund

**TF:** Ongoing



**ISSUE: PROTECTION OF HISTORICAL RESOURCES**

*It is important to protect and preserve historical resources in the City.*

**Goal:** P-9: Protection of historic resources within the City.

**Policies:** P-9.1 Promote the preservation of historic resources in the City through the Fine Arts and Historical Commission.

P-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.

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

**Implementation Measures:**

P-IM-9.1 Encourage the Fine Arts and Historical Commission to work with local historic societies and CSUDH to preserve important historic resources. To this end, work with the City’s Public Information Office to promote local and regional historic resources. *(Implements P-9.1, P-9.2 and P-9.3)*

**RA/D:** Fine Arts and Historical Commission, Community Services, CSUDH Departments of



History and Anthropology, Public Information, Information Services

**FS:** General Fund, CSUDH

**TF:** Ongoing

P-IM-9.2 Encourage all development or redevelopment occurring in areas identified as a potential historic archaeological site to be surveyed for historic archaeological resources prior to initiation of site preparation for development. *(Implements P-9.1)*

**RA/D:** Planning and Environmental Services

**FS:** Developers

**TF:** Ongoing

P-IM-9.3 Ensure that documentation of all historic archaeological surveys conducted in the City of Carson be provided to the Planning and Environmental Services Division. *(Implements P-9.1)*

**RA/D:** Planning and Environmental Services

**FS:** Developers

**TF:** Ongoing



**ISSUE: SERVICES FOR SENIOR CITIZENS**

*The number of persons over the age of 50 is increasing significantly in the City. It is important to consider this growing segment of the population in future planning.*

**Goal:** P-10: Enhance services available to the senior citizens of Carson.

**Policies:** P-10.1 Administer and, wherever feasible, expand programs designed to meet the recreational, social, physical and economic needs of the City’s senior citizens.

P-10.2 Review the City’s hiring policies to ensure against age discrimination bias.

P-10.3 Advocate for more senior housing and better transportation options.

**Implementation Measures:**

P-IM-10.1 Complete current assessment and periodically conduct needs assessments for senior citizens and explore opportunities to provide services, such as a mobile library and arts and crafts, at retirement homes, mobile home



parks, and/or seniors housing complexes. *(Implements P-10.1)*

**RA/D:** Senior Social Services, Public Information, Information Services

**FS:** General Fund

**TF:** Annually

P-IM-10.2 Support public programs such as Meals on Wheels, Shared Housing, and other such services. *(Implements P-10.1 and P-10.3)*

**RA/D:** Senior Social Services, Public Information, Information Services

**FS:** General Fund

**TF:** Ongoing

P-IM-10.3 Assist the private sector in providing professional counseling services to senior citizens seeking advice on Social Security, health care, insurance, housing, annuities, pensions, and other private and public programs providing benefits and/or services to seniors. *(Implements P-10.1)*

**RA/D:** Senior Social Services, Public Information, Information Services

**FS:** General Fund, private sector funds

**TF:** Ongoing

P-IM-10.4 Review the City’s hiring policies to ensure against age discrimination bias. *(Implements P-10.2)*

**RA/D:** Employment Services, City Attorney, Senior Social Services

**FS:** General Fund

**TF:** Annually



**ISSUE: LIBRARY FACILITIES**

*The City of Carson is underserved with library facilities and services.*

**Goal:** P-11: Improve library facilities and services for the citizens of Carson.

**Policies:** P-11.1 Determine the projected need for library facilities and services.



- P-11.2 Investigate the most effective way to provide for the needs of the City.
- P-11.3 Implement plans for improved library service.

**Implementation Measures:**

- P-IM-11.1 Work with Los Angeles County or separately to prepare a needs assessment for Carson library use. *(Implements P-11.1)*

**RA/D:** City Manager, Los Angeles County Librarian  
**FS:** General Fund  
**TF:** 2004-05

- P-IM-11.2 Prepare a feasibility study of alternative solutions to providing additional library facilities and services. *(Implements P-11.2)*

**RA/D:** City Manager, Los Angeles County Librarian (if appropriate)  
**FS:** General Fund  
**TF:** 2005-06

- P-IM-11.3 Determine and implement the appropriate solution. *(Implements P-11.3)*

**RA/D:** City Council  
**FS:** Bonds, Grants  
**TF:** 2006-07



**ISSUE: SCHOOL FACILITIES**

*There will be some growth of school populations in the City that need appropriate facilities and current boundaries require adjustment to provide the optimum geographic proximity.*

**Goal:** P-12: Encourage the school districts to provide enhanced school facilities to serve the youth of Carson.

**Policies:** P-12.1 Work with the school districts to determine the projected need for school facilities and services.

P-12.2 Work with the school districts to appropriately alter boundaries as necessary to provide good school facilities in close proximity to the residential population served.



**Implementation Measures:**

P-IM-12.1 Provide staff support and encourage the residents of Carson to be involved in school district planning.  
*(Implements P-12.1 and P-12.2)*

**RA/D:** Planning, Public Information Officer

**FS:** General Fund

**TF:** Ongoing



# CHAPTER 10

## AIR QUALITY ELEMENT



# CHAPTER 10

## AIR QUALITY ELEMENT



### **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.*

### **1.0 INTRODUCTION**

The Air Quality Element is intended 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, that will move toward a sustainable level of air quality. To achieve this goal, the Element sets forth a number of programs to reduce current pollution emissions and to require new development to include measures to comply with air quality standards. In addition, this Element contains provisions to address new air quality requirements.

### **2.0 STATE LAW REQUIREMENTS**

The State of California Government Code Section 65302(d), which provides the statutory requirements for the Conservation Element, also serves as the applicable Government Code section for the Air Quality Element. Other relevant sections of the Government Code that are applicable to the Air Quality Element include Section 65303, which allows cities to include any other element or address any other subjects that may relate to the physical development of the city. Further guidance is



provided in the 1998 General Plan Guidelines regarding the assessment of air quality impacts in General Plans.<sup>1</sup>

## **3.0 SUMMARY OF FINDINGS**

Air quality conditions in Carson are influenced by many factors, including the topography, climate, and number and type of pollution producers. This section examines these issues and historical pollution levels in the community, as compared to State and Federal air quality standards.

### **3.1 CLIMATE**

Carson is located within the South Coast Air Basin (SCAB). This Basin is a 6,600 square mile area that includes all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties. The South Coast Air Basin is topographically bounded by the Pacific Ocean to the west with the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east.

The topography and climate of Southern California combine to make the distinctive climate in the South Coast Air Basin. The City of Carson is located in the southern portion of the Los Angeles Coastal Plain within the semi-marine microclimatic zone of the SCAB. A semi-permanent, subtropical high-pressure zone over the Pacific Ocean primarily controls the climate. Mild winters, warm summers, infrequent rainfall, moderate daytime onshore breezes and moderate humidity characterize local climatic conditions. The mild climate is occasionally disrupted by periods of hot weather, winter storm and Santa Ana winds. Minimum temperatures average around 42 degrees Fahrenheit during the winter, while summer temperatures average in the 70s. Annual precipitation is rather variable in Carson. Rainfall averages between 12 to 14 inches per year, occurring primarily from late October to early April.

Climatic patterns in the City are affected by the Palos Verdes Hills, which split onshore winds unless the marine layer is very deep. The dominant daily wind pattern is a daytime sea breeze and a nighttime land breeze. Thus, the predominant daytime wind comes from westerly and southwesterly directions, while the nighttime wind comes from a northerly direction. Average wind speeds are approximately 3.4 miles per hour. During the summer, the nighttime land breeze is very minimal resulting in light winds from the southwest. The predominant wind patterns are occasionally disrupted by winter storms or Santa Ana winds. The Santa Ana winds are strong northerly or northeasterly which are warm and dry and usually occur between September to March.

During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool

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<sup>1</sup> Source: State of California, Governor's Office of Planning and Research, 1998 General Plan Guidelines, November 1998, page 64.



marine layer and prevents pollutants from dispersing upward and allows pollutants to accumulate within the lower layer. This situation is called a temporary inversion. In addition, light winds during the summer further limit ventilation.

Because of the low average wind speeds in the summer and a persistent daytime temperature inversion, emissions of hydrocarbons and oxides of nitrogen have an opportunity to combine with sunlight in a complex series of reactions producing photochemical oxidant (smog). The smog potential is increased in the basin because the South Coast region experiences more days of sunlight than any other major urban area except Phoenix, Arizona.

During the winter, the greatest pollution problems result from the presence of carbon monoxide and nitrogen oxide concentrations in conjunction with extremely low inversions and air stagnation during the night and early morning hours. Since carbon monoxide is produced almost entirely from automobiles, the highest concentrations are associated with areas of heavy traffic. Thus, due to the City's proximity of three major freeways, the potential for higher concentrations of carbon monoxide levels is enhanced.

However, Carson is rarely affected by the same heat and smog conditions as the Central Los Angeles basin, based on its proximity to the Pacific Ocean. The Ocean plays an important role in affecting local temperatures. As a result of the fairly narrow spread between the warmest and coldest monthly mean sea surface temperature in southern California coastal waters, the relatively warm ocean modifies the climate in Carson in winter and provides cooling sea breezes in summer. The breezes serve to disperse pollutants through the air basin.

## **3.2 AMBIENT 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 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.

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 data do 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<sub>3</sub>),
- Carbon Monoxide (CO),
- Nitrogen Dioxide (NO<sub>2</sub>),
- Sulfur Dioxide (SO<sub>2</sub>),
- Fine Particulate Matter less than 10 microns in diameter (PM<sub>10</sub>), and
- Lead.

For some of these pollutants, notably O<sub>3</sub> and PM<sub>10</sub>, the State standards are more stringent than the Federal standards. The State has also established ambient air quality standards for:

- Sulfates,
- Hydrogen Sulfide,
- Vinyl Chloride, and
- Visibility Reducing Particles.

The above-mentioned pollutants are generally known as “criteria pollutants.”

In 1997, the EPA announced new ambient air quality standards for O<sub>3</sub> and PM<sub>10</sub>. The new standards were intended to provide greater protection of public health. The EPA proposed to phase out the 1-hour O<sub>3</sub> standard and replace it with an 8-hour standard. The EPA also announced new PM<sub>2.5</sub> 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<sub>2.5</sub> standards.<sup>2</sup>

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<sub>10</sub> standard was lowered from 30 micrograms per cubic meter (µg/m<sup>3</sup>) to 20 µg/m<sup>3</sup>. As no ambient annual state standard existed for PM<sub>2.5</sub>, a new annual standard was established at 12 µg/m<sup>3</sup>. A 24-hour average standard for both PM<sub>10</sub> and PM<sub>2.5</sub> 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<sub>10</sub> standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.<sup>3</sup> Particulate matter impacts primarily effect infants, children, the elderly, and those with pre-existing cardiopulmonary disease.

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<sup>2</sup> Environmental Protection Agency Website, <http://www.epa.gov/air/aqtrnd97/brochure/pm10.html>.

<sup>3</sup> 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.



The South Coast Air Basin has the worst air quality problem in the State. Despite implementing many strict controls, the South Coast Air Quality Management District (SCAQMD) portions of the basin still fail to meet the Federal air quality for three of the six criteria pollutants: ozone (O<sub>3</sub>), carbon monoxide (CO) and fine particulate matter (PM<sub>10</sub>). Because Federal pollution standards have not been achieved, the basin is considered a non-attainment area for Federal standards for these pollutants. For State standards, the Orange County portion of the basin is designated as non-attainment for O<sub>3</sub> and PM<sub>10</sub>.<sup>4</sup>

### **3.3 LOCAL AMBIENT AIR QUALITY**

The SCAQMD operates several air quality monitoring stations within the Air Basin. The City of Carson is located within Source Receptor Area (SRA) 4. The communities within an SRA are expected to have similar climatology and subsequently, similar ambient air pollutant concentrations. The nearest air monitoring stations to the City of Carson within SRA 4 is located in the north portion of the City of Long Beach. Air Quality Data from 1997 to 2001 for the North Long Beach Monitoring Station is provided in Table AQ-1, Local Air Quality Levels.

### **3.4 REGULATORY FRAMEWORK**

#### **3.4.1 FEDERAL CLEAN AIR ACT**

The 1970 Clean Air Act (CAA) authorized the establishment of the NAAQS, and set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 made major changes in deadlines for attaining NAAQS and in the actions required of areas of the nation that exceeded these standards. Other changes to the 1990 Clean Air Act occurred in 1997. In 1997, after observing the numerous studies citing the adverse effects of ozone under the then existing standard, the EPA changed 1990 ozone standard to reflect a change in averaging times and levels that are considered more appropriate and stringent. Additionally, in 1997 the EPA changed the particulate matter criteria to provide for more stringent goals for fine air particles.<sup>5</sup>

#### **3.4.2 CALIFORNIA CLEAN AIR ACT**

The 1988 California Clean Air Act (CCAA) requires that all air districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for ozone (O<sub>3</sub>), carbon monoxide (CO), sulfur oxides (SO<sub>2</sub>), and nitrogen oxides (NO<sub>2</sub>) by the earliest practical date. The CCAA specifies that districts focus

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<sup>4</sup> Data from California Air Resources Board web-site [www.arb.ca.gov/degis/adm/sld001.htm](http://www.arb.ca.gov/degis/adm/sld001.htm). Although the site shows 1999 data, it has been verified by RBF Consulting personnel with Ms. Marci Langstrom of the Planning and Technical Support Division of the California Air Resources Board that the 1999 attainment status is valid at the time of this writing.

<sup>5</sup> [www.epa.gov/oar/oaqps/peg-caa/pegcaa03.html](http://www.epa.gov/oar/oaqps/peg-caa/pegcaa03.html) as cited under heading "1997 Changes to the Clean Air Act".



**Table AQ-1  
Local Air Quality Levels for Source Receptor Area 4<sup>1</sup>**

Pollutant	California Standard	Federal Primary Standard	Year	Maximum <sup>2</sup> Concentration	Days (Samples) State/Federal Std. Exceeded
Carbon Monoxide	20 ppm for 1 hour	35 ppm for 1 hour	1997	8.6	0/0
			1998	8.1	0/0
			1999	7.5	0/0
			2000	9.7	0/0
			2001	6.0	0/0
	9 ppm for 8 hour	9 ppm for 8 hour	1997	6.63	0/0
			1998	6.46	0/0
			1999	5.49	0/0
			2000	5.73	0/0
			2001	4.74	0/0
Ozone	0.09 ppm for 1 hour	0.12 ppm for 1 hour	1997	.095	1/0
			1998	.116	2/0
			1999	.131	2/1
			2000	.118	3/0
			2001	.091	1/0
Nitrogen Dioxide	0.25 ppm for 1 hour	0.053 ppm annual average	1997	.200	0/0
			1998	.160	0/0
			1999	.151	0/0
			2000	.140	0/0
			2001	.122	0/0
Sulfur Dioxide	0.25 ppm for 1 hour	0.14 ppm for 24 hours or 80 µg/m <sup>3</sup> (0.03 ppm) annual average	1997	.044	0/0
			1998	.083	0/0
			1999	.050	0/0
			2000	.047	0/0
			2001	.047	0/0
PM <sub>10</sub> <sup>3,4</sup>	50 µg/m <sup>3</sup> for 24 hours	150 µg/m <sup>3</sup> for 24 hours	1997	87.0	10/0
			1998	69.0	6/0
			1999	79.0	13/0
			2000	105.0	13/0
			2001	74.0	11/0
PM <sub>2.5</sub> <sup>4</sup>	N/A	65 µg/m <sup>3</sup> for 24 hours	1997	N/M	N/A
			1998	N/M	N/A
			1999	66.9	N/A/1
			2000	74.5	N/A/3
			2001	72.9	N/A/1

ppm = parts per million      PM<sub>10</sub> = particulate matter 10 microns in diameter or less  
 µg/m<sup>3</sup> = micrograms per cubic meter      PM<sub>2.5</sub> = particulate matter 2.5 microns in diameter or less  
 N/M = not measured

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<sub>10</sub> exceedances are based on state thresholds established prior to amendments adopted on June 20, 2002.  
 4. PM<sub>10</sub> and PM<sub>2.5</sub> 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](http://www.arb.ca.gov/adam/welcome.html).



particular attention on reducing the emissions from transportation and area-wide emission sources. The Act also gives districts 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. Any additional development within the region would impede the “no net” increase prohibition, in that further emissions reductions must be affected from all other airshed sources to fit any project development mobile source emissions increase.

A strict interpretation of the “no net” increase prohibition suggests that any general development within the region, no matter how large or small, would have a significant, project-specific air quality impact unless the development-related emissions are offset by concurrent emissions reduction elsewhere within the airshed. Any planning effort for air quality attainment would thus need to consider both State and Federal planning requirements.

### **1997 AQMP**

The 1997 AQMP was prepared and adopted by the SCAQMD on November 15, 1996. The 1997 AQMP was adopted by the 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.

The most recent amendment to the 1997 AQMP is the 1999 Ozone State Implementation Plan (SIP) Revision. This revision was adopted by the SCAQMD in December 1999 and ratified by the EPA in April 2000. The provisions of the 1999 SIP Revision are intended to: 1) include new short-term control measures that implement and replace portions of the 1997 long-term measures, 2) expedite the implementation schedule of a portion of the short-term measures in the 1997 AQMP and 3) revise the adoption and implementation schedule for those 1997 AQMP control measures with lapsed adoption dates.

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.

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. The SCAQMD will focus its efforts on seven major rules



to reduce volatile organic compounds (VOCs), 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 sufficient to attain the Federal health standards for the two most difficult ingredients in smog, PM<sub>10</sub> and ground level O<sub>3</sub>, by the years 2006 and 2010, respectively. The region already has met the three other Federal health standards for Pb, SO<sub>2</sub> and NO<sub>2</sub>. To help reduce PM<sub>10</sub> pollution, the 1997 Plan outlines seven control measures for directly emitted particulates that will reduce emissions from agricultural areas, livestock waste, 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.

1997 AQMP Control Strategies. The 1997 AQMP's off-road mobile source control measures are based on the EPA's proposed Federal Implementation Plan (FIP) for the SCAB. The FIP's proposed control measures are based on a combination of stringent emission standards, declining caps on emission levels and emission/user fees.

### **3.5 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 toxins 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 centers, and retirement homes. Refer to Exhibit N-1, Sensitive Receptor Location Map, and Table N-5, Noise Sensitive Receptors, in the Noise Element for the location of sensitive receptors in the City.

### **3.6 TOXIC AIR CONTAMINANTS**

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 than the risk associated with any other toxic air pollutant routinely measures in the region.<sup>6</sup>

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.

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<sub>10</sub>, 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.

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<sup>6</sup> BAAQMD CEQA Guidelines, *Assessing the Air Quality Impacts of Projects and Plans*, Bay Area Air Quality Management District, Revised December 1999, page 6.



## 4.0 PLANNING ISSUES, GOALS, POLICIES AND IMPLEMENTATION

The acronyms listed below are used for the implementation measures:

RA/D: Responsible Agency/Division  
FS: Funding Source  
TF: Time Frame

### ISSUE: DUST GENERATION

*Generation of dust not only creates a nuisance, but those temporary and permanent uses which generate substantial amounts of dust can impact the health of residents.*

**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.

### Implementation Measures:

AQ-IM-1.1 Investigate further amending of existing requirements for grading permits and erosion, siltation and dust control procedures. *(Implements AQ-1.1)*

**RA/D:** Planning, Building & Safety, SCAQMD  
**FS:** AB1566 funds, General Funds  
**TF:** 2004-05

AQ-IM-1.2 Investigate the feasibility of requiring planting of undeveloped and abandoned properties. *(Implements AQ-1.2)*

**RA/D:** Planning, Code Enforcement  
**FS:** General Fund  
**TF:** 2005-06

AQ-IM-1.3 Amend contracting requirements for any new street cleaning equipment to require, to the maximum extent



feasible, the most efficient fine particle removal.  
*(Implements AQ-1.3)*

**RA/D:** Public Works  
**FS:** General Fund  
**TF:** 2005-06

AQ-IM-1.4 Study the feasibility of requiring the use of less impactive leaf blowers, such as equipment that will collect particulates rather than blow them around. *(Implements AQ-1.3)*

**RA/D:** Public Works, Planning  
**FS:** General Fund  
**TF:** 2005-06



**ISSUE: REGIONAL AIR QUALITY**

*Stricter enforcement of emission reduction rules; educating the public on pollution control measures; and promoting the use of alternate fuel vehicles will assist in the improvement of air quality in the region.*

**Goal:** AQ-2: Air quality which meets State and Federal standards.

**Policies:** AQ-2.1 Coordinate with other agencies in the region, particularly SCAQMD and SCAG, to implement provisions of the regions' 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.

**Implementation Measures:**

AQ-IM-2.1 Continue to participate, where possible, in committees involved in the development and implementation of air quality implementation plans. *(Implements AQ-2.1)*

**RA/D:** City Council, City Manager, Planning, Public Safety  
**FS:** AB1566, General Fund  
**TF:** Ongoing

AQ-IM-2.2 Continue to encourage and assist employers in developing and implementing work trip reduction plans, employee ride sharing, modified work schedules, preferential carpool and vanpool parking, or any other trip reduction approach that is consistent with the AQMP for the South Coast Air Basin. *(Implements AQ-2.2 and 2.3)*

**RA/D:** Planning, SCAQMD  
**FS:** SB1566, General Fund  
**TF:** Ongoing

AQ-IM-2.3 Continue City employee work trip reduction programs and use of alternative fuel vehicles. *(Implements AQ-2.2 and 2.3)*

**RA/D:** Transportation  
**FS:** General Fund  
**TF:** Ongoing

AQ-IM-2.4 Encourage those companies that ship or receive high volumes of goods by commercial truck to limit operations to non-peak hours. *(Implements AQ-2.4)*

**RA/D:** Planning  
**FS:** General Funds, impact fees  
**TF:** 2003-04+

AQ-IM-2.5 Encourage those companies with high truck volumes to use the Alameda Corridor. *(Implements AQ-2.4)*

**RA/D:** Planning  
**FS:** General Funds, impact fees  
**TF:** 2003-04+



AQ-IM-2.6 Require new developments to provide pedestrian and bicycle trails access to nearby shopping and employment centers, thereby encouraging alternate modes of transportation and reducing vehicle miles traveled. *(Implements AQ-2.5)*

**RA/D:** Planning, Public Works  
**FS:** Development processing fees, General Funds  
**TF:** Ongoing

AQ-IM-2.7 Encourage infill projects to provide convenience to existing facilities and minimize trip generation. *(Implements AQ-2.6)*

**RA/D:** Planning, Redevelopment  
**FS:** Development processing fees, General Funds  
**TF:** Ongoing

AQ-IM-2.8 Prepare potential air quality mitigation measures and thresholds of significance for use in environmental documentation. *(Implements AQ-2.7)*

**RA/D:** Planning  
**FS:** General Funds  
**TF:** 2003-04

**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, fuel cell 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.

**Implementation Measures:**

AQ-IM-3.1 Continue and expand the use of City-owned alternative fueled vehicles. *(Implements AQ-3.1)*

**RA/D:** Public Works  
**FS:** Gas Tax, AB1566  
**TF:** Ongoing



AQ-IM-3.2 Prepare a feasibility study of the use of electric or other alternative fueled vehicles for Carson Circuit buses. *(Implements AQ-3.1)*

**RA/D:** Public Works  
**FS:** AB1566  
**TF:** 2004-05

AQ-IM-3.3 Develop a cooperative program to further increase transit ridership. *(Implements AQ-3.2)*

**RA/D:** Transportation Services  
**FS:** AB 1566  
**TF:** 2004-05



**ISSUE: COMMUNITY AWARENESS AND EMERGENCY RESPONSE ACTIONS**

*The City should coordinate with industries and regional agencies to respond to incidents involving air quality impacts.*

**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, implementation issues, reporting and enforcement.

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.

**Implementation Measures:**

AQ-IM-4.1 Publicize the SCAQMD complaint telephone number.

**RA/D:** Transportation Services, Public Information  
**FS:** General Fund  
**TF:** 2003-04

AQ-IM-4.2 Continue to implement City programs and encourage other employers’ programs to promote ride sharing, alternative work week schedules, and telecommuting. *(Implements AQ-4.2)*



**RA/D:** Transportation  
**FS:** AB 1566, General Fund  
**TF:** Ongoing

AQ-IM-4.3 Coordinate with transportation agencies to establish additional park-and-ride facilities for work and non-work trip reduction. *(Implements AQ-4.2)*

**RA/D:** Transportation, Planning  
**FS:** State funds, grants  
**TF:** Ongoing



**ISSUE: POLLUTING INDUSTRIES**

*There are a number of industries/facilities in Carson which contribute to air pollution in the South Bay region.*

**Goal:** AQ-5: Reduce emissions related to industry to enhance air quality.

**Policies:** AQ-5.1 Through the City’s Planning processes, reduce air pollutant emissions by mitigating air quality impacts associated with facilities/industries in Carson, to the greatest extent possible

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.

AQ-5.3 Discourage PM<sup>10</sup> producers and other polluting industries from locating in the City.

AQ-5.4 Work with the SCAQMD to better monitor emissions.

**Implementation Measures:**

AQ-IM-5.1 Prepare potential air quality mitigation measures and thresholds of significance for use in environmental documentation. *(Implements AQ-5.1)*

**RA/D:** Planning  
**FS:** Development Processing fees, General Funds  
**TF:** 2003-04

AQ-IM-5.2 Reinforce cooperative agreements and informal arrangements to maintain a high level of responsiveness to air quality emergencies. *(Implements AQ-5.2)*



**RA/D:** Public Safety, Fire, Sheriff, SCAQMD  
**FS:** General Fund  
**TF:** Ongoing

AQ-IM-5.3 Request that the SCAQMD locate a monitoring station in Carson.

**RA/D:** Public Safety, Planning  
**FS:** General Fund  
**TF:** Ongoing

AQ-IM-5.4 Cooperate with the SCAQMD by reporting emissions violations.

**RA/D:** Public Safety  
**FS:** General Fund  
**TF:** Ongoing



# CHAPTER 11

## GENERAL PLAN GLOSSARY OF TERMS



# CHAPTER 11

## GENERAL PLAN GLOSSARY OF TERMS



*The terms in this glossary are adapted from the California General Plan Glossary, 1997, published by the California Planning Roundtable, and excerpted from the 1998 General Plan Guidelines, published by the Governor's Office of Planning and Research.*

### 1.0 ABBREVIATIONS

**ADA:** Americans with Disabilities Act  
**ADT:** Average daily trips made by vehicles or persons in a 24-hour period  
**ALUC:** Airport Land Use Commission  
**AQMP:** Air Quality Management Plan  
**BNSF:** Burlington Northern Santa Fe Railroad  
**CAA:** Clean Air Act Board  
**CARB:** California Air Resource Board  
**CCAA:** California Clean Air Act  
**CDBG:** Community Development Block Grant  
**CEQA:** California Environmental Quality Act  
**CHFA:** California Housing Finance Agency  
**CIP:** Capital Improvements Program  
**CMP:** Congestion Management Plan  
**CNEL:** Community Noise Equivalent Level  
**COG:** Council of Governments  
**CSUDH:** Cal State University Dominguez Hills  
**dB:** Decibel  
**DOHS:** Department of Health Services  
**EIR:** Environmental Impact Report (State)  
**EPA:** Environmental Protection Agency



**FAR:** Floor Area Ratio  
**FEMA:** Federal Emergency Management Agency  
**FIRM:** Flood Insurance Rate Map  
**HUD:** U.S. Department of Housing and Urban Development  
**ISO:** Independent System Operator  
**LACDPW:** Los Angeles County Department of Public Works  
**Ldn:** day-night average level  
**LOS:** Level of Service  
**MWD:** Metropolitan Water District  
**NAAQS:** National Ambient Air Quality Standards  
**NPDES:** National Pollutant Discharge Elimination System  
**PPM:** Parts Per Million  
**PUC:** Public Utilities Commission  
**PX:** Power Exchange  
**RWQCB:** Regional Water Quality Control Board  
**SBCCOG:** South Bay Cities Council of Governments  
**SCAB:** South Coast Air Basin  
**SCAG:** Southern California Association of Governments  
**SCAQMD:** South Coast Air Quality Management District  
**SCE:** Southern California Edison  
**SCWD:** Southern California Water Company, Southwest District  
**SRO:** Single Room Occupancy  
**SRRE:** Source Reduction and Recycling Element  
**SWP:** State Water Project  
**TDM:** Transportation Demand Management  
**TDS:** Total Dissolved Solids  
**TSM:** Transportation Systems Management  
**UBC:** Uniform Building Code  
**UPRR:** Union Pacific Railroad  
**VMT:** Vehicle Miles Traveled  
**WBMWD:** West Basin Municipal Water District

## **2.0 TERMS AND DEFINITIONS**

**Acres, Gross:** The total area within the lot lines of a lot of land before public streets, easements or other areas to be dedicated or reserved for public use are deducted from such lot, and not including adjacent lands already dedicated for such purposes.

**Acres, Net:** The portion of a site that can actually be built upon. The following generally are not included in the net acreage of a site: public or private road rights-of-way, public open-space, and flood ways.

**Affordable Housing:** Housing capable of being purchased or rented by a household with very low, low, or moderate income, based on a household's ability to make monthly payments necessary to obtain housing. "Affordable to low-and moderate-income households" means that at least 20 percent of the units in a development will be sold or rented to lower income households, and the remaining units to either lower or moderate income households. Housing units for lower income households



must sell or rent for a monthly cost not greater than 30 percent of 60 percent of area median income as periodically established by Housing and Community Development Department of the State of California (HCD). Housing units for moderate income must sell or rent for a monthly cost not greater than 30 percent of area median income.

**Agriculture:** Use of land for the production of food and fiber, including the growing of crops and/or the grazing of animals on natural prime or improved pasture land.

**Ambient:** Surrounding on all sides; used to describe measurements of existing conditions with respect to traffic, noise, air and other environments.

**Annex, v.:** To incorporate a land area into an existing district or municipality, with a resulting change in the boundaries of the annexing jurisdiction.

**Aquifer:** An underground, water-bearing layer of earth, porous rock, sand, or gravel, through which water can seep or be held in natural storage. Aquifers generally hold sufficient water to be used as a water supply.

**Attainment:** Compliance with State and federal ambient air quality standards within an air basin. (See “Non-attainment.”)

**Base Flood:** In any given year, a 100-year flood that has a one percent likelihood of occurring, and is recognized as a standard for acceptable risk.

**Bicycle Lane (Class II facility):** A corridor expressly reserved for bicycles, existing on a street or roadway in addition to any lanes for use by motorized vehicles.

**Bicycle Trail (Class I facility):** A paved route not on a street or roadway and expressly reserved for bicycles traversing an otherwise unpaved area. Bicycle trails may parallel roads but typically are separated from them by landscaping.

**Bicycle Route (Class III facility):** A facility shared with motorists and identified only by signs, a bicycle route has no pavement markings or lane stripes.

**Bikeways:** A term that encompasses bicycle lanes, bicycle paths, and bicycle routes.

**Biotic Community:** A group of living organisms characterized by a distinctive combination of both animal and plant species in a particular habitat.

**Blight:** A condition of a site, structure, or area that may cause nearby buildings and/or areas to decline in attractiveness and/or utility. The Community Redevelopment Law (Health and Safety Code, Sections 33031 and 33032) contains a definition of blight used to determine eligibility of proposed redevelopment project areas.

**Buffer Zone:** An area of land separating two distinct land uses that acts to soften or mitigate the effects of one land use on the other.



**Buildout:** Development of land to its full potential or theoretical capacity as permitted under current or proposed planning or zoning designations.

**Busway:** A vehicular right-of-way or portion thereof--often an exclusive lane--reserved exclusively for buses.

**California Environmental Quality Act (CEQA):** A State law requiring State and local agencies to regulate activities with consideration for environmental protection. If a proposed activity has the potential for a significant adverse environmental impact, an Environmental Impact Report (EIR) must be prepared and certified as to its adequacy before taking action on the proposed project.

**California Housing Finance Agency (CHFA):** A State agency, established by the Housing and Home Finance Act of 1975, which is authorized to sell revenue bonds and generate funds for the development, rehabilitation, and conservation of low-and moderate-income housing.

**Caltrans:** California Department of Transportation.

**Capital Improvements Program (CIP):** A program established by a city or county government and reviewed by its planning commission, which schedules permanent improvements, usually for a minimum of five years in the future, to fit the projected fiscal capability of the local jurisdiction. The program generally is reviewed annually, for conformance to and consistency with the general plan.

**Community Development Block Grant (CDBG):** A grant program administered by the U.S. Department of Housing and Urban Development (HUD) on a formula basis for entitlement communities, and by the State Department of Housing and Community Development (HCD) for non-entitled jurisdictions. This grant allots money to cities and counties for housing rehabilitation and community development, including public facilities and economic development.

**Community Noise Equivalent Level (CNEL):** A 24-hour energy equivalent level derived from a variety of single-noise events, with weighting factors of 5 and 10 dBA applied to the evening (7 PM to 10 PM) and nighttime (10 PM to 7 AM) periods, respectively, to allow for the greater sensitivity to noise during these hours.

**Community Park:** Land with full public access intended to provide recreation opportunities beyond those supplied by neighborhood parks. Community parks are larger in scale than neighborhood parks but smaller than regional parks.

**Congestion Management Plan (CMP):** A mechanism employing growth management techniques, including traffic level of service requirements, standards for public transit, trip reduction programs involving transportation systems management and jobs/housing balance strategies, and capital improvement programming, for the purpose of controlling and/or reducing the cumulative regional traffic impacts of development.



**Consistency; Consistent With:** Free from significant variation or contradiction. The various diagrams, text, goals, policies, and programs in the general plan must be consistent with each other, not contradictory or preferential. The term “consistent with” is used interchangeably with “conformity with.” The courts have held that the phrase “consistent with” means “agreement with; harmonious with.” Webster defines “conformity with” as meaning harmony, agreement when used with “with.” The term “conformity means in harmony therewith or agreeable to (Sec 58 Ops.Cal.Atty.Gen. 21, 25 [1975]). California State law also requires that a general plan be internally consistent and also requires consistency between a general plan and implementation measures such as the zoning ordinance. As a general rule, an action program or project is consistent with the general plan if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment.

**Cul-de-Sac:** A short street or alley with only a single means of ingress and egress at one end and with a large turnaround at its other end.

**dB:** Decibel; a unit used to express the relative intensity of a sound as it is heard by the human ear.

**dBA:** The “A-weighted” scale for measuring sound in decibels; weighs or reduces the effects of low and high frequencies in order to simulate human hearing. Every increase of 10 dBA doubles the perceived loudness though the noise is actually ten times more intense.

**Density, Residential:** The number of permanent residential dwelling units per acre of land. Densities specified in the General Plan may be expressed in units per gross acre or per net developable acre. (See “Acres, Gross,” and “Developable Acres, Net.”)

**Density, Employment:** A measure of the number of employed persons per specific area (for example, employees/acre).

**Developable Acres, Net:** The portion of a site that can be used for density calculations. Some communities calculate density based on gross acreage. Public or private road rights-of-way are not included in the net developable acreage of a site.

**Developable Land:** Land that is suitable as a location for structures and that can be developed free of hazards to, and without disruption of, or significant impact on, natural resource areas.

**Development Agreement:** A legislatively-approved contract between a jurisdiction and a person having legal or equitable interest in real property within the jurisdiction (California Government Code §65865 et. seq.) that “freezes” certain rules, regulations, and policies applicable to development of a property for a specified period of time, usually in exchange for certain concessions by the owner.

**Dwelling Unit:** A room or group of rooms (including sleeping, eating, cooking, and sanitation facilities, but not more than one kitchen), that constitutes an independent



house-keeping unit, occupied or intended for occupancy by one household on a long-term basis.

**Easement:** Usually the right to use property owned by another for specific purposes or to gain access to another property. For example, utility companies often have easements on the private property of individuals to be able to install and maintain utility facilities.

**Elderly Housing:** Typically one- and two-bedroom apartments or condominiums designed to meet the needs of persons 62 years of age and older.

**Emergency Shelter:** A facility that provides immediate and short-term housing and supplemental services for the homeless. Supplemental services may include food, counseling, and access to other social programs.

**Emission Standard:** The maximum amount of pollutant legally permitted to be discharged from a single source, either mobile or stationary.

**Endangered Species:** A species of animal or plant is considered to be endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes.

**Environment:** CEQA defines environment as “the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, mineral, flora, fauna, noise, and objects of historic or aesthetic significance.”

**Environmental Impact Report (EIR):** A report required pursuant to the California Environmental Quality Act which assesses all the environmental characteristics of an area, determines what effects or impacts will result if the area is altered or disturbed by a proposed action, and identifies alternatives or other measures to avoid or reduce those impacts. (See “California Environmental Quality Act.”)

**Erosion:** (1) The loosening and transportation of rock and soil debris by wind, rain, or running water. (2) The gradual wearing away of the upper layers of earth.

**Expansive Soils:** Soils that swell when they absorb water and shrink as they dry.  
**Family:** One or more persons occupying one dwelling unit and living together as a single housekeeping unit.

**Fault:** A fracture in the earth’s crust forming a boundary between rock masses that have shifted.

**Flood, 100-Year:** The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a 1/100, or one percent, chance of occurring in any given year.

**Flood Insurance Rate Map (FIRM):** For each community, the official map on which the Federal Insurance Administration has delineated areas of special flood hazard and the risk premium zones applicable to that community.



**Floodplain:** The relatively level land area on either side of the banks of a stream regularly subject to flooding. That part of the floodplain subject to a one percent chance of flooding in any given year is designated as an “area of special flood hazard” by the Federal Insurance Administration.

**Floodway:** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the “base flood” without cumulatively increasing the water surface elevation more than one foot. No development is allowed in floodways.

**Floor Area Ratio (FAR):** The gross floor area permitted on a site divided by the total net area of the site, expressed in decimals to one or two places. For example, on a site with 10,000 net sq. ft. of land area, a Floor Area Ratio of 1.0 will allow a maximum of 10,000 gross sq. ft. of building floor area to be built. On the same site, an FAR of 1.5 would allow 15,000 sq. ft. of floor area; an FAR of 2.0 would allow 20,000 sq. ft.; and an FAR of 0.5 would allow only 5,000 sq. ft. Also commonly used in zoning, FARs typically are applied on a parcel-by-parcel basis as opposed to an average FAR for an entire land use or zoning district.

**Freeway:** A high-speed, high-capacity, limited-access road serving regional and county-wide travel. Such roads are free of tolls, as contrasted with “turnpikes” or other “toll roads” now being introduced into Southern California. Freeways generally are used for long trips between major land use generators. At Level of Service “E,” they carry approximately 1,875 vehicles per lane per hour, in both directions. Major streets cross at a different grade level.

**Ground Failure:** Ground movement or rupture caused by strong shaking during an earthquake. Includes landslide, lateral spreading, liquefaction, and subsidence.

**Ground Shaking:** Ground movement resulting from the transmission of seismic waves during an earthquake.

**Groundwater:** Water under the earth’s surface, often confined to aquifers capable of supplying wells and springs.

**Growth Management:** The use by a community of a wide range of techniques in combination to determine the amount, type, and rate of development desired by the community and to channel that growth into designated areas. Growth management policies can be implemented through growth rates, zoning, capital improvement programs, public facilities ordinances, urban limit lines, standards for levels of service, and other programs. (See “Congestion Management Plan.”)

**Habitat:** The physical location or type of environment in which an organism or biological population lives or occurs.

**Hazardous Material:** Any substance that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. The term includes, but is not limited to, hazardous substances and hazardous wastes.



**Historic Preservation:** The preservation of historically significant structures and neighborhoods until such time as, and in order to facilitate, restoration and rehabilitation of the building(s) to a former condition.

**Household:** All those persons--related or unrelated—who occupy a single housing unit. (See “Family.”) **Households, Number of:** The count of all year-round housing units occupied by one or more persons. The concept of *household* is important because the formation of new households generates the demand for housing. Each new household formed creates the need for one additional housing unit or requires that one existing housing unit be shared by two households. Thus, household formation can continue to take place even without an increase in population, thereby increasing the demand for housing.

**Housing and Urban Development, U.S. Department of (HUD):** A cabinet-level department of the federal government that administers housing and community development programs.

**Housing Unit:** The place of permanent or customary abode of a person or family. A housing unit may be a single-family dwelling, a multi-family dwelling, a condominium, a modular home, a mobile home, a cooperative, or any other residential unit considered real property under State law. A housing unit has, at least, cooking facilities, a bathroom, and a place to sleep. It also is a dwelling that cannot be moved without substantial damage or unreasonable cost.

**Impervious Surface:** Surface through which water cannot penetrate, such as roof, road, sidewalk, and paved parking lot. The amount of impervious surface increases with development and establishes the need for drainage facilities to carry the increased runoff.

**Industrial:** The manufacture, production, and processing of consumer goods. Industrial is often divided into “heavy industrial” uses, such as construction yards, quarrying, and factories; and “light industrial” uses, such as research and development and less intensive warehousing and manufacturing.

**Infill Development:** Development of vacant land (usually individual lots or left-over properties) within areas that are already largely developed.

**Infrastructure:** Public services and facilities, such as sewage-disposal systems, water-supply systems, other utility systems, and roads.

**Institutional Uses:** (1) Publicly or privately owned and operated activities such as hospitals, convalescent hospitals, intermediate care facilities, nursing homes, museums, and schools and colleges; (2) churches and other religious organizations; and (3) other non-profit activities of a welfare, educational, or philanthropic nature that cannot be considered residential, commercial, or industrial. (See “Public and Quasi-public Facilities.”)



**Intensity, Building:** For residential uses, the actual number or the allowable range of dwelling units per net or gross acre. For non-residential uses, the actual or the maximum permitted floor area ratios (FARs).

**Issues:** Important unsettled community matters or problems that are identified in a community's general plan and dealt with by the plan's objectives, policies, plan proposals, and implementation programs.

**Jobs/Housing Balance; Jobs/Housing Ratio:** The availability of affordable housing for employees. The jobs/housing ratio divides the number of jobs in an area by the number of employed residents. A ratio of 1.0 indicates a balance. A ratio greater than 1.0 indicates a net in-commute; less than indicates a net out-commute.

**Landmark:** (1) A building, site, object, structure, or significant tree, having historical, architectural, social, or cultural significance and marked for preservation by the local, state, or federal government. (2) A visually prominent or outstanding structure or natural feature that functions as a point of orientation or identification.

**Landslide:** Downslope movement of soil and/or rock, which typically occurs during an earthquake or following heavy rainfall.

**Land Use Classification:** A system for classifying and designating the appropriate use of properties.

**Lateral Spreading:** Lateral movement of soil, often as a result of liquefaction during an earthquake.

**Ldn:** Day-Night Average Sound Level. The A-weighted average sound level for a given area (measured in decibels) during a 24-hour period with a 10 dB weighting applied to night-time sound levels. The Ldn is approximately numerically equal to the CNEL for most environmental settings.

**Level of Service (LOS) Standard:** A standard used by government agencies to measure the quality or effectiveness of a municipal service, such as police, fire, or library, or the performance of a facility, such as a street or highway.

**Level of Service (Traffic):** A scale that measures the amount of traffic that a roadway or intersection can accommodate, based on such factors as maneuverability, driver dissatisfaction, and delay.

*Level of Service A:* Indicates a relatively free flow of traffic, with little or no limitation on vehicle movement or speed.

*Level of Service B:* Describes a steady flow of traffic, with only slight delays in vehicle movement and speed. All queues clear in a single signal cycle.

*Level of Service C:* Denotes a reasonably steady, high-volume flow of traffic, with some limitations on movement and speed, and occasional backups on critical approaches.



**Level of Service D:** Designates the level where traffic nears an unstable flow. Intersections still function, but short queues develop and cars may have to wait through one cycle during short peaks.

**Level of Service E:** Represents traffic characterized by slow movement and frequent (although momentary) stoppages. This type of congestion is considered severe, but is not uncommon at peak traffic hours, with frequent stopping, long-standing queues, and blocked intersections.

**Level of Service F:** Describes unsatisfactory stop-and-go traffic characterized by “traffic jams” and stoppages of long duration. Vehicles at signalized intersections usually have to wait through one or more signal changes, and “upstream” intersections may be blocked by the long queues.

**Liquefaction:** The transformation of loose, wet soil from a solid to a liquid state, often as a result of ground shaking during an earthquake.

**Low-income Household:** A household with an annual income usually no greater than 80 percent of the area median family income adjusted by household size, as determined by a survey of incomes conducted by a city or a county, or in the absence of such a survey, based on the latest available eligibility limits established by the U.S. Department of Housing and Urban Development (HUD) for the Section 8 housing program.

**Low-income Housing Tax Credits:** Tax reductions provided by the federal and State governments for investors in housing for low-income households.

**L10:** A statistical descriptor indicating peak noise levels—the sound level exceeded ten percent of the time. It is a commonly used descriptor of community noise, and has been used in Federal Highway Administration standards and the standards of some cities and counties.

**Mercalli Intensity Scale:** A subjective measure of the observed effects (human reactions, structural damage, geologic effects) of an earthquake. Expressed in Roman numerals from I to XII.

**Mineral Resource:** Land on which known deposits of commercially viable mineral or aggregate deposits exist. This designation is applied to sites determined by the State Division of Mines and Geology as being a resource of regional significance, and is intended to help maintain the quarrying operations and protect them from encroachment of incompatible land uses.

**Mixed-use:** Properties on which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site in an integrated development project with significant functional interrelationships and a coherent physical design. A “single site” may include contiguous properties.

**Moderate-income Household:** A household with an annual income between the lower income eligibility limits and 120 percent of the area median family income



adjusted by household size, usually as established by the U.S. Department of Housing and Urban Development (HUD) for the Section 8 housing program.

**National Ambient Air Quality Standards:** The prescribed level of pollutants in the outside air that cannot be exceeded legally during a specified time in a specified geographical area.

**National Flood Insurance Program:** A federal program that authorizes the sale of federally subsidized flood insurance in communities where such flood insurance is not available privately.

**National Historic Preservation Act:** A 1966 federal law that established a National Register of Historic Places and the Advisory Council on Historic Preservation, and that authorized grants-in-aid for preserving historic properties.

**National Register of Historic Places:** The official list, established by the National Historic Preservation Act, of sites, districts, buildings, structures, and objects significant in the nation's history or whose artistic or architectural value is unique.

**Neighborhood:** A planning area commonly identified as such in a community's planning documents, and by the individuals residing and working within the neighborhood. Documentation may include a map prepared for planning purposes, on which the names and boundaries of the neighborhood are shown.

**Neighborhood Park:** City- or county-owned land intended to serve the recreation needs of people living or working within one-half mile radius of the park.

**Noise:** Any sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. Noise, simply, is "unwanted sound."

**Noise Attenuation:** Reduction of the level of a noise source using a substance, material, or surface, such as earth berms and/or solid concrete walls.

**Noise Contour:** A line connecting points of equal noise level as measured on the same scale. Noise levels greater than the 60 Ldn contour (measured in dBA) require noise attenuation in residential development.

**Non-attainment:** The condition of not achieving a desired or required level of performance. Frequently used in reference to air quality. (See "Attainment.")

**Open Space:** An area that is intended to provide light and air, and is designed for either environmental, scenic or recreational purposes. Open space may include, but is not limited to, lawns, decorative planting, walkways, active and passive recreational areas, playgrounds, fountains, swimming pools, wooded areas; first floor decks; unenclosed patios with solid or lattice roofs; water courses; and surfaces covered by not more than 5 feet in depth by projections which are at least 8 feet above grade.



Open space shall not include the following: driveways; parking lots; other surfaces designed or intended for vehicular travel; and upper floor decks, balconies or areas under projections which are less than 8 feet above grade.

**Ordinance:** A law or regulation set forth and adopted by a governmental authority, usually a city or county.

**Parks:** Open-space lands whose primary purpose is recreation.

**Performance Standards:** Zoning regulations that permit uses based on a particular set of standards of operation rather than on particular type of use. Performance standards provide specific criteria limiting noise, air pollution, emissions, odors, vibration, dust, dirt, glare, heat, fire hazards, wastes, traffic impacts, and visual impact of a use.

**Planning Area:** The area directly addressed by the general plan. A city's planning area typically encompasses the city limits and potentially annexable land within its sphere of influence.

**Pollution, Non-Point:** Sources for pollution that are less definable and usually cover broad areas of land, such as agricultural land with fertilizers that are carried from the land by runoff, or automobiles.

**Pollution, Point:** In reference to water quality, a discrete source from which pollution is generated before it enters receiving waters, such as a sewer outfall, a smokestack, or an industrial waste pipe.

**Public and Quasi-public Facilities:** Institutional, academic, governmental and community service uses, either owned publicly or operated by non-profit organizations, including private hospitals and cemeteries.

**Redevelop:** To demolish existing buildings; or to increase the overall floor area existing on a property; or both; irrespective of whether a change occurs in land use.

**Regional:** Pertaining to activities or economies at a scale greater than that of a single jurisdiction, and affecting a broad geographic area.

**Regional Housing Needs Plan/Share:** A quantification by a COG or by HCD of existing and projected housing need, by household income group, for all localities within a region.

**Regional Park:** A park typically 150-500 acres in size focusing on activities and natural features not included in most other types of parks and often based on a specific scenic or recreational opportunity.

**Rezoning:** An amendment to the map and/or text of a zoning ordinance to effect a change in the nature, density, or intensity of uses allowed in a zoning district and/or on a designated parcel or land area.



**Richter Scale:** A measure of the size or energy release of an earthquake at its source. The scale is logarithmic; the wave amplitude of each number on the scale is 10 times greater than that of the previous whole number.

**Right-of-way:** A strip of lane occupied or intended to be occupied by certain transportation and public use facilities, such as roads, railroads, and utility lines.

**Sanitary Landfill:** The controlled placement of refuse within a limited area, followed by compaction and covering with a suitable thickness of earth and other containment material.

**Sanitary Sewer:** A system of subterranean conduits that carries refuse liquids or waste matter to a plant where the sewage is treated, as contrasted with storm drainage systems (that carry surface water) and septic tanks or leech fields (that hold refuse liquids and waste matter on-site).

**Seiche:** An earthquake-generated wave in an enclosed body of water such as a lake, reservoir, or bay.

**Seismic:** Caused by or subject to earthquakes or earth vibrations.

**Single Room Occupancy (SRO):** A single room, typically with a sink and closet, but which requires the occupant to share a communal bathroom, shower, and kitchen.

**Solid Waste:** Any unwanted or discarded material that is not a liquid or gas. Includes organic wastes, paper products, metals, glass, plastics, cloth, brick, rock, soil, leather, rubber, yard wastes, and wood, but does not include sewage and hazardous materials. Organic wastes and paper products comprise about 75 percent of typical urban solid waste.

**Specific Plan:** A tool authorized by Government Code §65450 *et seq.* for the systematic implementation of the general plan for a defined portion of a community's planning area. A specific plan must specify in detail the land uses, public and private facilities needed to support the land uses, phasing of development, standards for the conservation, development, and use of natural resources, and a program of implementation measures, including financing measures.

**Sphere of Influence:** The probable physical boundaries and service area of a local agency, as determined by the Local Agency Formation Commission of the County.

**Standards:** (1) A rule or measure establishing a level of quality or quantity that must be complied with or satisfied. Government Code §65302 requires that general plans spell out the objectives, principles, "standards," and proposals of the general plan. Examples of standards might include the number of acres of park land per 1,000 population that the community will attempt to acquire and improve, or the "traffic Level of Service" (LOS) that the plan hopes to attain. (2) Requirements in a zoning ordinance that govern building and development as distinguished from use



restrictions--for example, site-design regulations such as lot area, height limit, frontage, landscaping, and floor area ratio.

**Structure:** Anything, including a building, located on the ground in a permanent location or attached to something having a permanent location on the ground.

**Subdivision:** The division of a tract of land into defined lots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed. "Subdivision" includes a condominium project as defined in Section 1350 of the California Civil Code and a community apartment project as defined in Section 11004 of the Business and Professions Code.

**Subregional:** Pertaining to a portion of a region.

**Subsidence:** The sudden sinking or gradual downward settling and compaction of soil and other surface material with little or no horizontal motion. Subsidence may be caused by a variety of human and natural activity, including earthquakes.

**Subsidize:** To assist by payment of a sum of money or by the granting of terms or favors that reduce the need for monetary expenditures. Housing subsidies may take the forms of mortgage interest deductions or tax credits from federal and/or state income taxes, sale or lease at less than market value of land to be used for the construction of housing, payments to supplement a minimum affordable rent, and the like.

**Substandard Housing:** Residential dwellings that, because of their physical condition, do not provide safe and sanitary housing.

**Sustainability:** Community use of natural resources in a way that does not jeopardize the ability of future generations to live and prosper.

**Sustainable Development:** Development that maintains or enhances economic opportunity and community well-being while protecting and restoring the natural environment upon which people and economies depend. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs. (*Source: Minnesota State Legislature*)

**Traffic Model:** A mathematical representation of traffic movement within an area or region based on observed relationships between the kind and intensity of development in specific areas. Many traffic models operate on the theory that trips are produced by persons living in residential areas and are attracted by various non-residential land uses.

**Transit:** The conveyance of persons or goods from one place to another by means of a local, public transportation system.

**Transit, Public:** A system of regularly-scheduled buses and/or trains available to the public on a fee-per-ride basis. Also called "Mass Transit."



**Transportation Demand Management (TDM):** A strategy for reducing demand on the road system by reducing the number of vehicles using the roadways and/or increasing the number of persons per vehicle. TDM attempts to reduce the number of persons who drive alone on the roadway during the commute period and to increase the number in carpools, vanpools, buses and trains, walking, and biking. TDM can be an element of TSM (see below).

**Transportation Systems Management (TSM):** A comprehensive strategy developed to address the problems caused by additional development, increasing trips, and a shortfall in transportation capacity. Transportation Systems Management focuses on more efficiently utilizing existing highway and transit systems rather than expanding them. TSM measures are characterized by their low cost and quick implementation time frame, such as computerized traffic signals, metered freeway ramps, and one-way streets.

**Trip:** A one-way vehicular journey either to or from a site, or totally within the site, i.e., internal trip. Each trip has two trip ends, one at the beginning and the other at the destination.

**Trip Generation:** The dynamics that account for people making trips in automobiles or by means of public transportation. Trip generation is the basis for estimating the level of use for a transportation system and the impact of additional development or transportation facilities on an existing, local transportation system. Trip generations of households are correlated with destinations that attract household members for specific purposes.

**Tsunami:** A large ocean wave generated by an earthquake in or near the ocean.

**Uniform Building Code (UBC):** A national, standard building code that sets forth minimum standards for construction.

**Urban:** Of, relating to, characteristic of, or constituting a city. Urban areas are generally characterized by moderate and higher density residential development (*i.e.*, three or more dwelling units per acre), commercial development, and industrial development, and the availability of public services required for that development, specifically central water and sewer, an extensive road network, public transit, and other such services (*e.g.*, safety and emergency response). Development not providing such services may be “non-urban” or “rural.” (See “Urban Land Use.”) CEQA defines “urbanized area” as an area that has a population density of at least 1,000 persons per square mile - (Public Resources Code 21080.14(b)).

**Urban Design:** The attempt to give form, in terms of both beauty and function, to selected urban areas or to whole cities. Urban design is concerned with the location, mass, and design of various urban components and combines elements of urban planning, architecture, and landscape architecture.

**Vehicle-Miles Traveled (VMT):** A key measure of overall street and highway use. Reducing VMT is often a major objective in efforts to reduce vehicular congestion and achieve regional air quality goals.



**Very-Low Income Household:** A household with an annual income usually no greater than 50 percent of the area median family income adjusted by household size, as determined by a survey of incomes conducted by a city or a county, or in the absence of such a survey, based on the latest available eligibility limits established by the U.S. Department of Housing and Urban Development (HUD) for the Section 8 housing program.

**Volume-to-Capacity Ratio:** A measure of the operating capacity of a roadway or intersection, in terms of the number of vehicles passing through, divided by the number of vehicles that theoretically could pass through when the roadway or intersection is operating at its designed capacity. Abbreviated as “V/C”. At a V/C ratio of 1.0, the roadway or intersection is operating at capacity. If the ratio is less than 1.0, the traffic facility has additional capacity. Although ratios slightly greater than 1.0 are possible, it is more likely that the peak hour will elongate into a “peak period.”

**Wetlands:** Transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water. Under a “unified” methodology now used by all federal agencies, wetlands are defined as “those areas meeting certain criteria for hydrology, vegetation, and soils.”

**Wildlife Refuge:** An area maintained in a natural state for the preservation of both animal and plant life.

**Zoning:** The division of a city or county by legislative regulations into areas, or zones, that specify allowable uses for real property and size restrictions for buildings within these areas; a program that implements policies of the General Plan.