V. SAFETY ELEMENT

INTRODUCTION TO THE SAFETY ELEMENT

The Safety Element is an official guide for the City Council, government agencies, and individuals to identify and understand potential hazards confronting Cypress. The Element examines man-made and natural hazards that could endanger the public safety and welfare. These concerns are subsequently incorporated into goals, policies, and implementation measures to reduce the impacts of hazards.

PURPOSE

The Safety Element helps protect the community from natural and man-made hazards. Natural hazards include flooding, earthquakes, ground rupture, and landslides. Man-made hazards can result from hazardous and toxic materials, fires, crime, and aircraft overflight. Ultimately, the Safety Element concentrates on reducing death, injuries, property damage, and economic and social dislocation resulting from these hazards.

The Safety Element follows guidelines in the State Government Code Sections 65302(g) and 65302.5, as well as Public Resources Code Sections 4102, 4125, 4128.5 and 2699.

RELATIONSHIP WITH OTHER GENERAL PLAN ELEMENTS

The Safety Element is one of eight elements contained within the Cypress General Plan. According to the General Plan Guidelines, all general plan elements have equal legal status. Oftentimes, issues contained within each general plan element partially overlap with another element. The relationships between the Safety Element and Land Use, Housing, Circulation, Conservation/Open Space/Recreation, Noise, Air Quality, and Growth Management Elements are discussed below.

The Safety Element is the primary vehicle for relating local safety planning to city land use decisions. A city should establish land use planning policies, standards, and designations based on the criteria set forth in the safety element.

The land use designation is just one factor that determines where housing will be proposed within a community. The location of housing development is also influenced by the Safety Element which identifies potential hazards in relation to the proposed development. While working within the limitations established by the Land Use and Safety Elements, the City must provide adequate housing opportunities to its residents.

The Circulation Element strives to create an efficient and safe transportation network. The Safety Element includes a discussion of vehicle accidents and other safety/circulation issues.

To ensure the public's safety, the Safety Element, which incorporates the Seismic Hazards Mapping Act, may designate land to be preserved as open space. This, oftentimes, occurs as a result of special studies conducted by other governmental agencies, such as the Federal Insurance Management Agency (FIMA) identifying flood plains along identified earthquake faults. The Conservation/Open Space/Recreation Element discusses land that is preserved for the public health and safety.

The Noise and Air Quality Elements, like the Safety Element, are concerned with the public welfare. The Noise Element identifies contributors to noise pollution such as an airport or busy arterial; whereas, the Safety Element addresses flight patterns and the possibility of an accident so that evacuation policies can be addressed.

The Growth Management Element controls the development of a community. Gradual growth gives decision makers the opportunity to make informed decisions about a city's development. This attempts to prevent growth from occurring in inappropriate places (in areas subject to flooding) because of inadequate review.

SUMMARY OF EXISTING CONDITIONS

Communities can be affected by both natural and manmade hazards. The following discussion explores issues that may confront the City of Cypress, including flooding, seismic, geologic, hazardous materials, urban fires, crime, and aircraft overflight hazards.

NATURAL HAZARDS

FLOODING

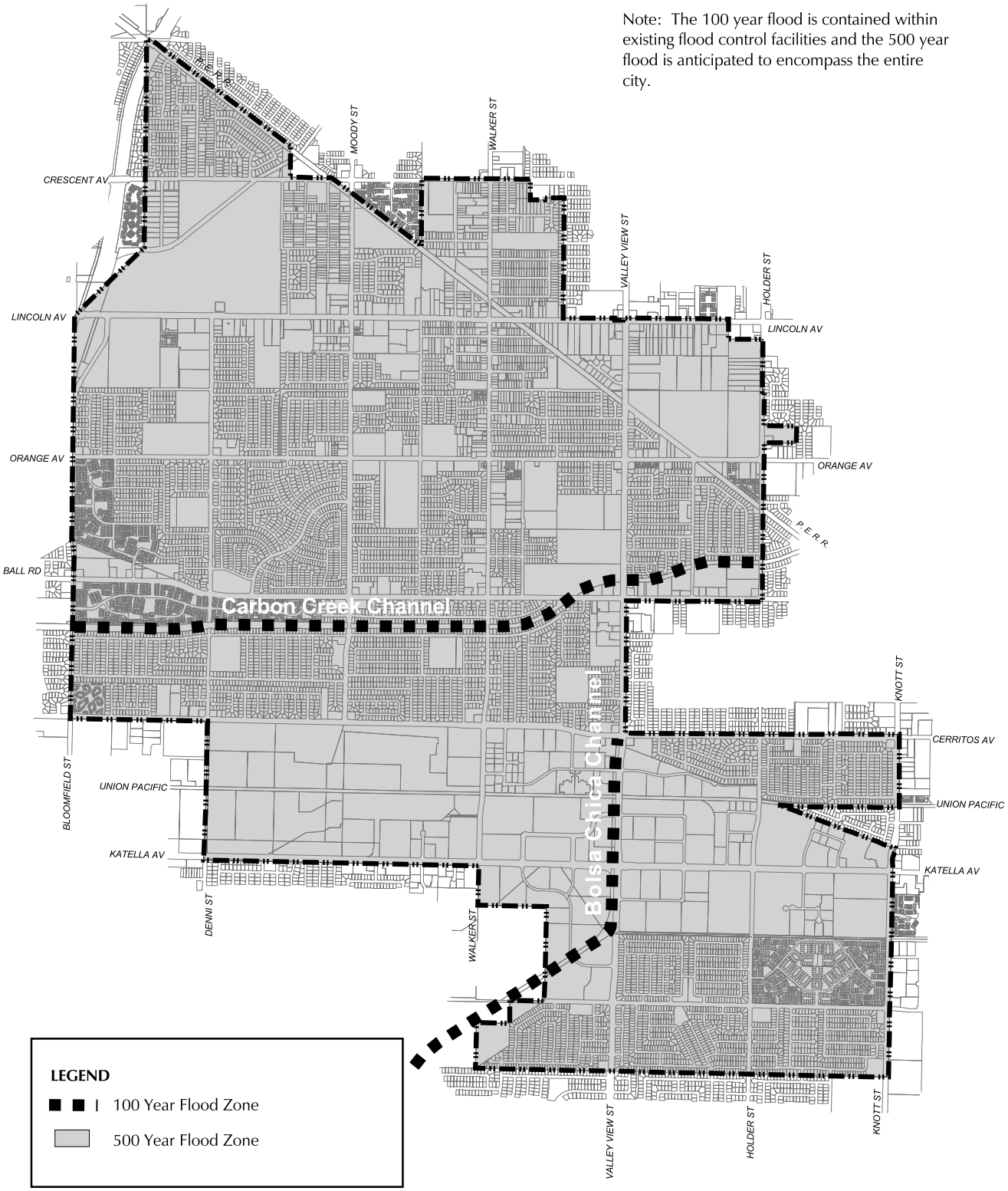
The City of Cypress contains no natural, permanent water features. A number of man-made lakes exist within the Los Alamitos Race Track and the Cypress Golf Course, as well as Willow Park. In addition, six storm drain channels traverse the City and transport water on occasion: Moody Creek, Coyote Creek, 2A, Carbon Creek, Stanton Creek, and Bolsa Chica Creek. The Orange County Safety Element identifies Carbon Creek as a major drainage facility for northern Orange County.

Historically, Orange County has experienced intermittent widespread flooding. Storm drain improvements by the Orange County Flood Control District generally provide relief from the flooding. According to the Flood Insurance Rate Map for Orange County, the projected 100-year flood for Cypress is contained within the Carbon Creek and Bolsa Chica storm drain channels. However, like most of Orange County, the projected 500-year flood may result in widespread flooding throughout the entire City (refer to Exhibit SAF-1, *Flood Zones*).

Outside Orange County, the Los Angeles County Drainage Area's (LACDA) flood control system manages storm waters. According to the United States (U.S.) Army Corps of Engineers, it has become evident that the system does not have sufficient capacity to provide adequate flood protection. In fact, a 100-year flood on the main system would inundate about 82 square miles, and existing drainage facilities only provide a 25-year-level protection in the lower basin, where over 500,000 people reside. According to the Los Angeles County Drainage Area Review, all flood waters will be accommodated in the Coyote Creek Channel and Cypress will not be affected.

Cypress is within the dam inundation area of three dams: Prado, Carbon Canyon and Whittier Narrows (refer to Exhibit SAF-2, *Dam Inundation Areas*). Prado Dam is located approximately 23

Note: The 100 year flood is contained within existing flood control facilities and the 500 year flood is anticipated to encompass the entire city.



LEGEND

100 Year Flood Zone

500 Year Flood Zone

Source: Flood Insurance Rate Map, FEMA, 1989

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CITY OF CYPRESS GENERAL PLAN

Flood Zones

Exhibit SAF-1

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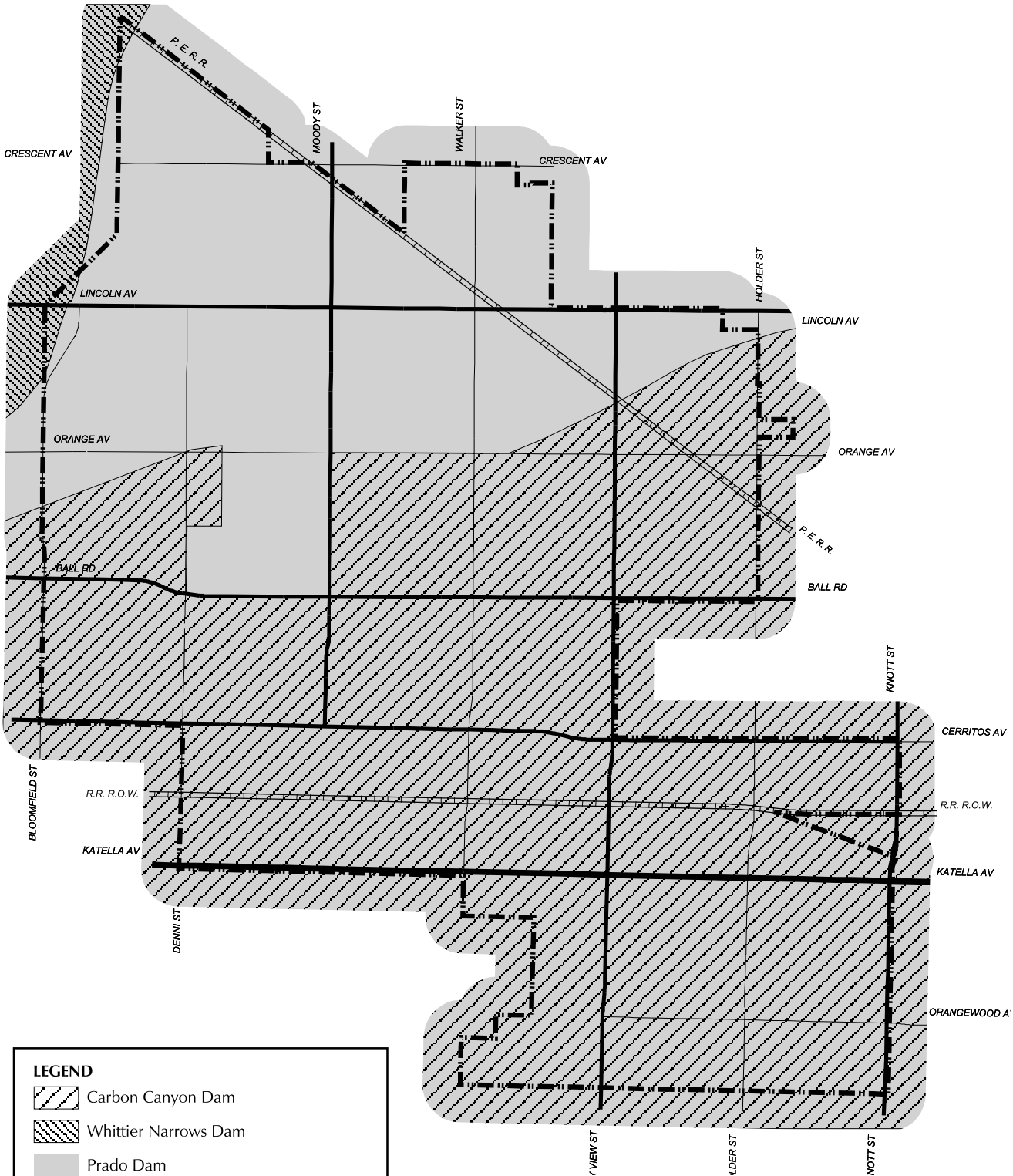

Source: U.S. Army Corps of Engineers

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CITY OF CYPRESS GENERAL PLAN

Dam Inundation Areas

Exhibit SAF-2

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miles northeast of Cypress in Riverside County. The dam was designed in the 1930s, but has recently increased its functioning capability due to the Seven Oaks Dam, which was completed in November 1999 and is located approximately 40 miles upstream on the Santa Ana River. During a flood, Seven Oaks Dam will store water destined for Prado Dam for as long as the reservoir pool at Prado Dam is rising. When the flood threat at Prado Dam has passed, Seven Oaks Dam will begin to release its stored flood water at a rate that does not exceed the downstream channel capacity. Working in tandem, the Prado and Seven Oaks Dams provide increased flood protection to Orange County.

In addition, the Santa Ana River Mainstem project is designed to provide flood protection to Orange, Riverside and San Bernardino Counties. The proposed improvements cover 75 miles from the headwater of the Santa Ana River east of the City of San Bernardino to the mouth of the river at the Pacific Ocean between the Cities of Newport Beach and Huntington Beach. The Mainstem Project will increase flood protection to more than 3.35 million people within the three Counties. The project includes seven independent features: Seven Oaks Dam, Mill Creek Levee, San Timoteo Creek, Oak Street Drain, Prado Dam, Santiago Creek and the lower Santa Ana River.

Carbon Canyon Dam, located in the northeastern portion of the City of Brea, is an earthfill dam that was designed to hold 12,000-acre feet of water. If dam waters were to exceed this capacity, the portion of Cypress below Orange Avenue could be completely covered.

The Whittier Narrows Dam is located in Pico Rivera and is also of earthfill construction. The City has prepared emergency evacuation plans for the Prado, Carbon Canyon, and Whittier Narrows Dams.

SEISMIC HAZARDS

The following section describes the presence and characteristics of seismic hazards in Cypress, including earthquake faults, surface rupture, ground shaking, liquefaction, hazardous buildings, and seismic response.

Earthquake Faults. The City of Cypress is not located in an Alquist-Priolo Earthquake Fault Zone. While no active or potentially active faults are located within the City of Cypress, the entire Southern California region is considered to be seismically active. Table SAF-1, *Major Faults Considered to be Active in Southern California*, presents a listing of active faults in Southern California and the maximum credible earthquake for the fault. The most recent seismic events in Southern California include the 1994 Northridge Earthquake, the 1992 Landers Earthquake, the 1989 Newport Beach Earthquake, and the 1987 Whittier Narrows Earthquake.

Five faults are situated within close proximity to Cypress: Newport-Inglewood, Norwalk, El Modena, Whittier-Elsinore, and Elysian Park. The San Andreas and San Jacinto faults are located some distance from Cypress, but have the potential to deliver larger magnitude earthquakes than the faults previously mentioned (refer to Exhibit SAF-3, *Regional Fault Map*).

Newport-Inglewood Fault: The Newport-Inglewood fault zone is a series of echelon northwest-trending and vertically-dipping faults extending from the southern edge of the Santa Monica Mountains southeastward to the offshore area near Newport Beach. From north to south, the fault segments are:

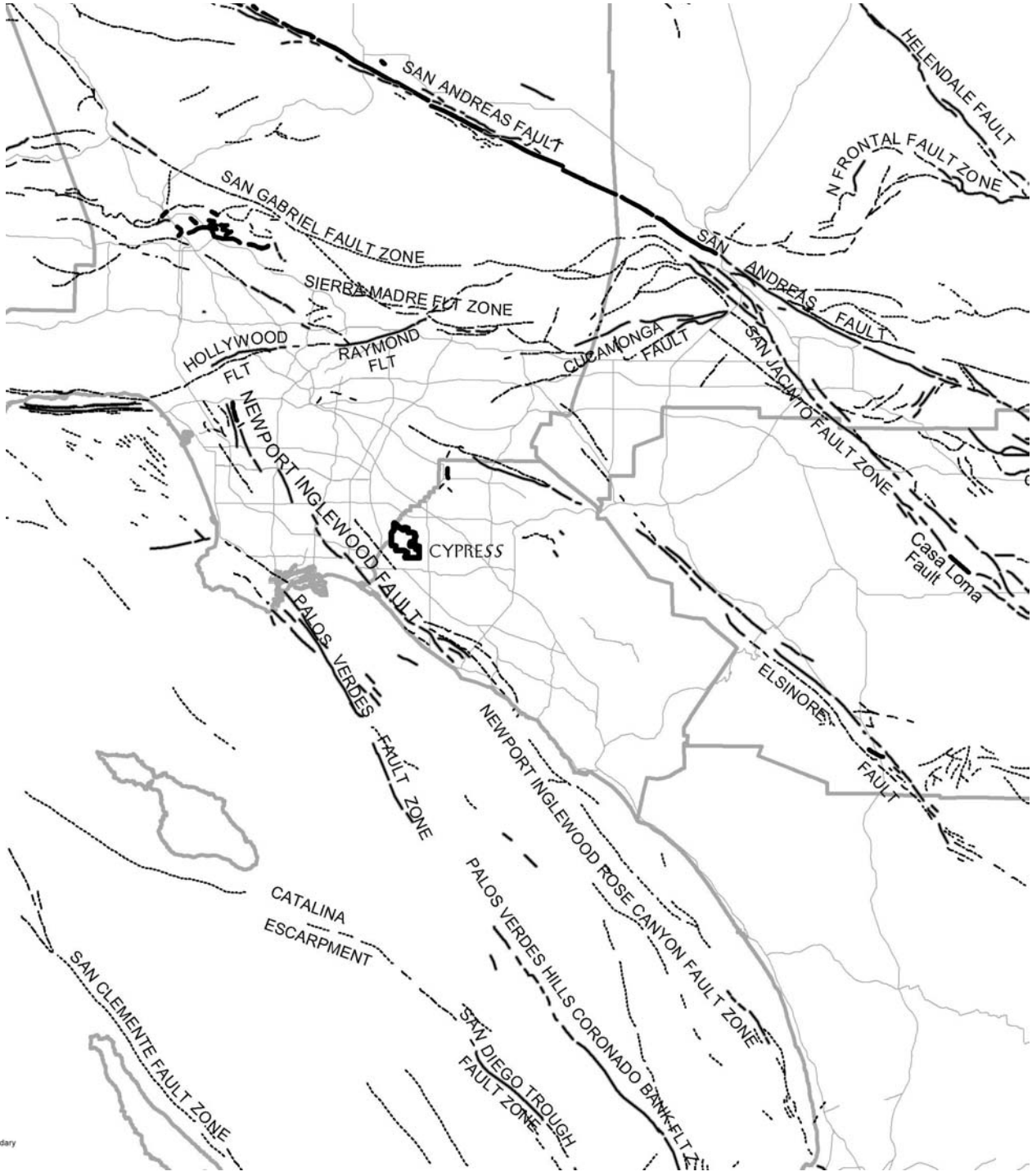
- Charnock Fault
- Overland Avenue Fault
- Inglewood Fault
- Potrero Fault
- Avalon-Compton Fault
- Cherry Hill Fault
- Seal Beach Fault

Table SAF-1
MAJOR FAULTS CONSIDERED TO BE ACTIVE(a)
IN SOUTHERN CALIFORNIA

Fault (in alphabetical order)	Date of Latest Major Activity	Maximum Credible Earthquake
Big Pine	1852	7.5 (b)
Cucamonga	(e)	6.5 (b)
Elsinore	1910	7.5 (b)
Elysian Park Structure	1989	6.75 (c)
Garlock	(d)	7.75 (b)
Helendale	(e)	7.5 (b)
Malibu Coast	1973	7.0 (c)
More Ranch	(d)	7.5 (b)
Newport-Inglewood	1933	7.0 (b)
Oak Ridge	1994	7.5
Palos Verdes	1982	6.6
Pinto Mountain	(e)	7.5 (b)
Raymond	(e)	6.6 (c)
San Andreas Zone	1857	8.25
San Cayetano	(e)	6.75 (c)
San Fernando Zone	1971	6.5 (b)
San Gabriel	(e)	7.5 (c)
San Jacinto Zone	1968	7.5 (b)
White Wolf	1952	7.75
Whittier	1987	7.1 (c)

Source: Law/Crandall And Associates, 1991.

NOTES:
(a) Historic Movement (1769 To Present).
(b) Greensfelder, C.D.M.G. Map Sheet 23, 1974.
(c) Mark (1977) Length-Magnitude Relationship.
(d) Intermittent Creep.
(e) Movement Within The Last 11,000 Years; Zoned By The State Geologist For The Alquist-Priolo Program.



Source: Department of Conservation; Division of Mines and Geology; Fault Activity Map of California and Adjacent Areas with Locations and Ages of Recent Volcanic Eruptions; 1994. Compilation and Interpretation by Charles W. Jennings; with assistance from George J. Saucedo. Most of the data shown on this map were compiled from 1989 to 1992. A Preliminary version was released in 1992. Additional data were added and revisions made in 1993 and 1994; this map supersedes the 1992 version. This compilation was completed before the Preliminary Earthquake Fault Zones Maps of 1994 were completed so there may be minor differences.

CAUTION: This fault map and accompanying report are for use as a guide only and should not be used to replace site specific evaluation.

N

Not to Scale

CITY OF CYPRESS GENERAL PLAN

Regional Fault Map

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Exhibit SAF-3

Numerous shocks of 4.0 magnitude or greater, as well as the historic 6.3 magnitude Long Beach Earthquake in March 1933, have been generated within this fault zone and suggest an active seismic history. Although there has been no observed ground displacement associated with the Newport-Inglewood Fault Zone, there may have been subsurface fault displacement of approximately seven inches associated with the October 21, 1941, and June 18, 1944, earthquakes. This fault zone could generate a 7.6-plus magnitude maximum credible earthquake.

Norwalk Fault: The Norwalk Fault is approximately 16 miles long and lies approximately five miles to the north of Cypress. Seismic activity has occurred along this fault and the fault may have been the cause of a 4.7 magnitude earthquake.

El Modena Fault: The El Modena Fault is a north trending fault that is located approximately 10 miles north of Cypress. Evidence suggests that the fault was active at one time; however, the fault is now thought to be inactive.

Whittier Elsinore Fault: The Whittier-Elsinore Fault is approximately 10 to 12 miles north of the City. There have been several minor earthquakes along the fault. Seismic history reveals that the fault is able to produce a seismic event of magnitude 6.0 or greater.

Elysian Park Fault: The Elysian Park Fault, situated in the Montebello and Monterey Park areas, is 15 to 20 miles north of the City. It produced the 1987 Whittier Narrows earthquake, which had a magnitude of 5.9.

San Andreas Fault: The San Andreas Fault extends over 600 miles, encompassing virtually the entire length of California. The fault is divided into segments that have somewhat distinctive behavior patterns. The southern segment is over 300 miles long and occasionally delivers large earthquakes.

The last great earthquake on this segment was the 1857 Fort Tejon earthquake that is believed to have caused a rupture extending 200 miles. Several other earthquakes have been attributed to the San Andreas Fault; the last one to affect Southern California was a 6.7 magnitude quake in 1899. It is estimated by geologists that this fault may have the potential to generate an earthquake of magnitude 8.5 on the Richter scale, which is designated as the maximum credible earthquake.

San Jacinto Fault: The San Jacinto Fault branches from the San Andreas Fault on the north side of the San Gabriel Mountains and parallels the San Andreas to the Mexico-California border. The San Jacinto fault has been very active, and damaging earthquakes have occurred along its entire length. The last earthquake on this fault exceeding 6.0 occurred in 1968. Ten damaging earthquakes have been attributed to this fault since the 1800s, ranging from 5.4 to 6.8 on the Richter scale.

Surface Rupture and Ground Shaking. Surface rupture resulting from earthquakes is unlikely to occur in Cypress because no faults have been identified within the City boundaries. The nearest active faults, the El Modena and Norwalk Faults, lie approximately five to ten miles north of Cypress. Other faults located outside the Cypress area include the Newport Inglewood, Whittier-Elsinore, Elysian Park, San Jacinto, and San Andreas.

The future impact of earthquakes on Cypress depends on several factors. The particular fault, fault location, distance from the City, and magnitude of the earthquake all determine the degree of shaking that will occur in the City. In addition, the soil and geologic structure underlying Cypress influences the amount of damage that the City may experience. The soils underlying Cypress include alluvium deposits that may become unstable during intense groundshaking.

The Newport-Inglewood Fault is anticipated to generate the most destructive ground shaking in Cypress. The El Modena and Norwalk Faults, though closer to the City, are predicted to generate smaller magnitude earthquakes. The San Jacinto Fault is very active and has historically produced 6.0 to 7.0 earthquakes. However, as Cypress lies approximately 40 miles to the south, the distance between the City and this fault would alleviate the ground shaking impact.

Liquefaction Hazards. Liquefaction is a subsidiary hazard associated with intense ground shaking. When the earth accelerates, the soil can destabilize and if sufficient water is present in the soil, the soil and water can mix. Liquefaction is generally associated with shallow ground water conditions and the presence of loose and sandy soils or alluvial deposits. Exhibit SAF-4, *Seismic Hazards Map*, illustrates locations in the City of Cypress subject to liquefaction.

According to the Cypress Disaster Plan and the Orange County Safety Element, Cypress, like most of Orange County, has granular sandy soil with a high water content. Areas with these conditions may experience liquefaction during extreme ground shaking.

Hazardous Buildings. During a seismic event, Cypress may be subjected to high levels of ground shaking. As a result, buildings within the community could sustain substantial damage. Some structures are particularly susceptible to earthquake damage, including tilt-up structures, unreinforced masonry buildings, older buildings, buildings over four stories, and mobile homes. Concrete tilt-ups built prior to 1974 may especially suffer damage. The Building Department has identified only one unreinforced masonry structure within the City boundaries. There are also two mobile home parks in the City, which accommodate 373 mobile homes.

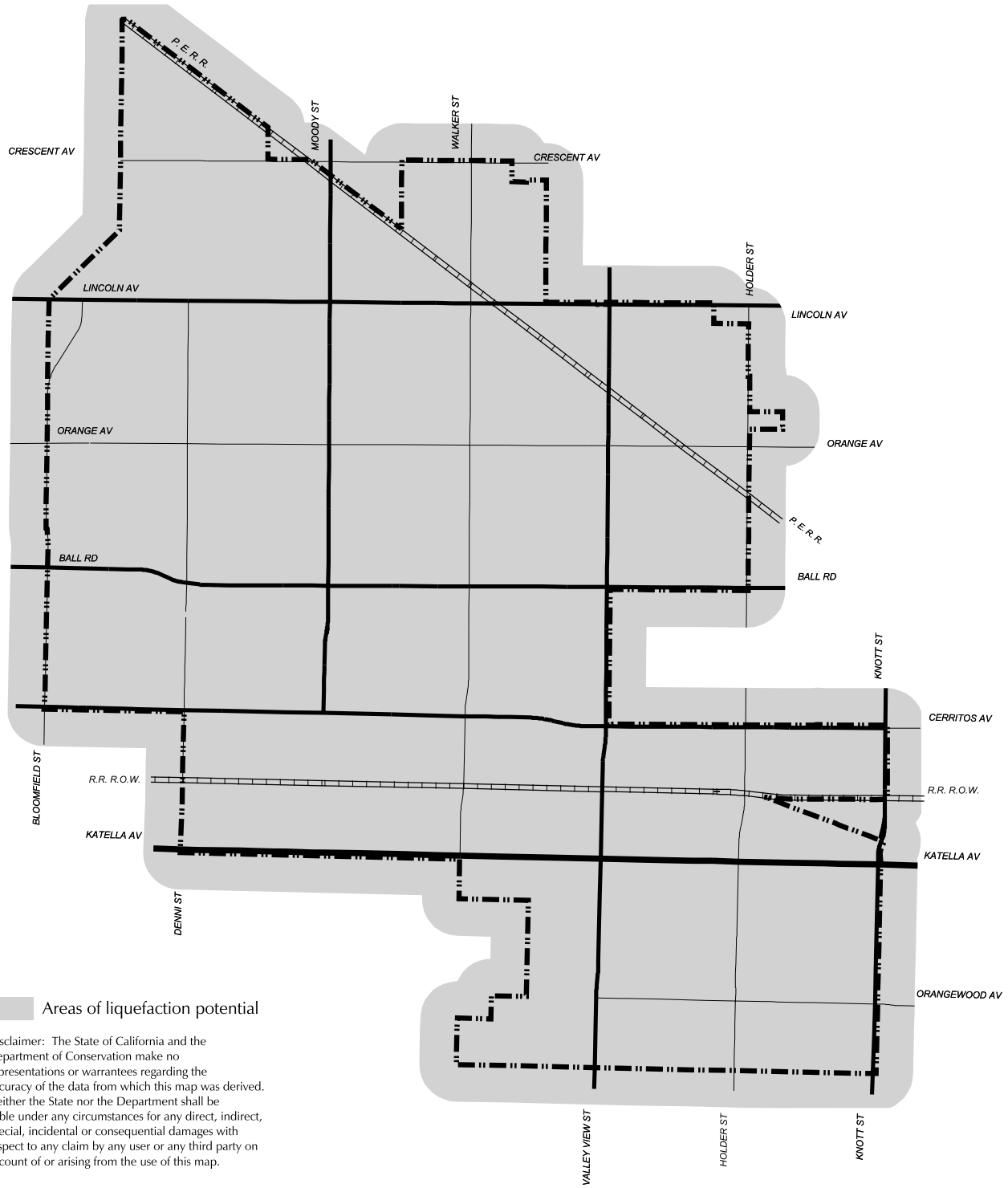
Other structures in Cypress are vulnerable to earthquake damage. The danger increases with the number of individuals that congregate within a specific area. According to the Cypress Disaster Plan, many sidewalks in the community are bordered by six-foot high concrete walls, presenting a potential hazard to pedestrians were the walls to collapse due to groundshaking. Also, the potential for structural failure, capable of injuring large numbers of people in a given area, exists at the Los Alamitos Race Track during the racing season.

Seismic Response. The City of Cypress Disaster Plan serves as the community's Emergency Operations Plan (EOP), which outlines the City's actions during emergency situations such as a seismic event. The Plan specifies operations during an emergency, organization and assignment of responsibilities, coordinating instructions, an explanation of how the plan is to be administered, procedures to identify responsible personnel, and methods to request aid/support from other local communities. These activities involve a number of agencies including the police department, fire department, medical facilities, public health officials, coroner, and care and shelter operations. The City's emergency evacuation routes are shown on Exhibit SAF-5, *Emergency Evacuation Routes*.

All emergency evacuation activities are coordinated by the Evacuation Coordinator, who is the Police Chief. The Police Chief will issue evacuation orders based on information gathered from emergency experts. Evacuation operations will be conducted by law enforcement agencies, highway/road/street departments, and public and private transportation providers.

LANDSLIDES

The City of Cypress lacks any significant topographical features. According to the Division of Mines and Geology, *Seismic Evaluation* (1998), no landslides have been recorded within the city boundaries and none are anticipated based on the area's flat terrain.



Areas of liquefaction potential

Disclaimer: The State of California and the Department of Conservation make no representations or warrantees regarding the accuracy of the data from which this map was derived. Neither the State nor the Department shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

Source: Cypress Department of Conservation, Division of Mines and Geology, Official Maps of Seismic Hazard Zones, Seismic Hazard Zones, Los Alamitos Quadrangle, released March 25, 1999.

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CITY OF CYPRESS GENERAL PLAN

Seismic Hazards Map

Exhibit SAF-4

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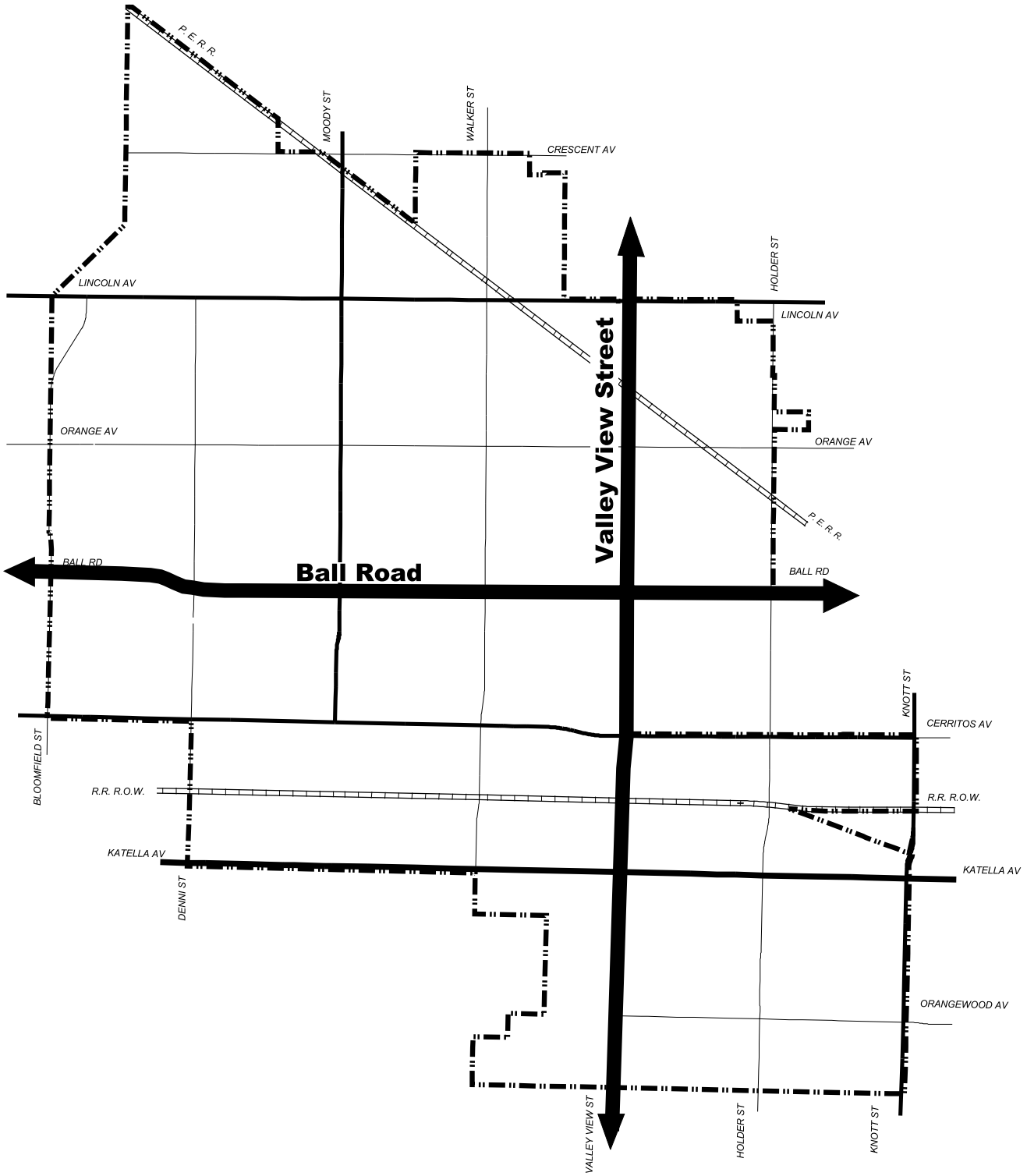

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CITY OF CYPRESS GENERAL PLAN

Emergency Evacuation Routes

Source: City of Cypress Disaster Plan 1988.

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Exhibit SAF-5

MAN-MADE HAZARDS

Some hazards result from man-made facilities or human actions. This section explores hazardous materials, fire, crime, and aircraft overflight.

HAZARDOUS AND TOXIC MATERIALS

In the past few decades, some chemicals commonly used and widely dispersed have been found to be significantly harmful. Federal, state, and county agencies have generally recognized toxic substances as chemicals or mixtures whose manufacture, processing, distribution, use, or disposal may preset an unreasonable risk of injury to human health or the environment. According to the Orange County Health Care Agency, there are approximately 160 businesses[1] that store or utilize hazardous materials above the threshold within Cypress.

Transport of Hazardous Materials. Areas located near major transportation routes are more susceptible to spills of hazardous materials than are other parts of the community. Major transportation arterials in Cypress include Katella Avenue, Valley View Street, and Lincoln Avenue. In addition, the community is within the air approach for the Joint Forces Training Center (JFTC) Los Alamitos.

Pipelines. A number of underground pipelines cross through the City of Cypress. These lines transport natural gas, crude oil, and oil (refer to Exhibit SAF-6, *Oil and Gas Pipelines*). The Transportation Research Board of the National Research Council has published a special report (# 219) entitled *Pipelines and Public Safety* that discusses the dangers associated with natural gas, crude oil, and oil. The following excerpt is from this document:

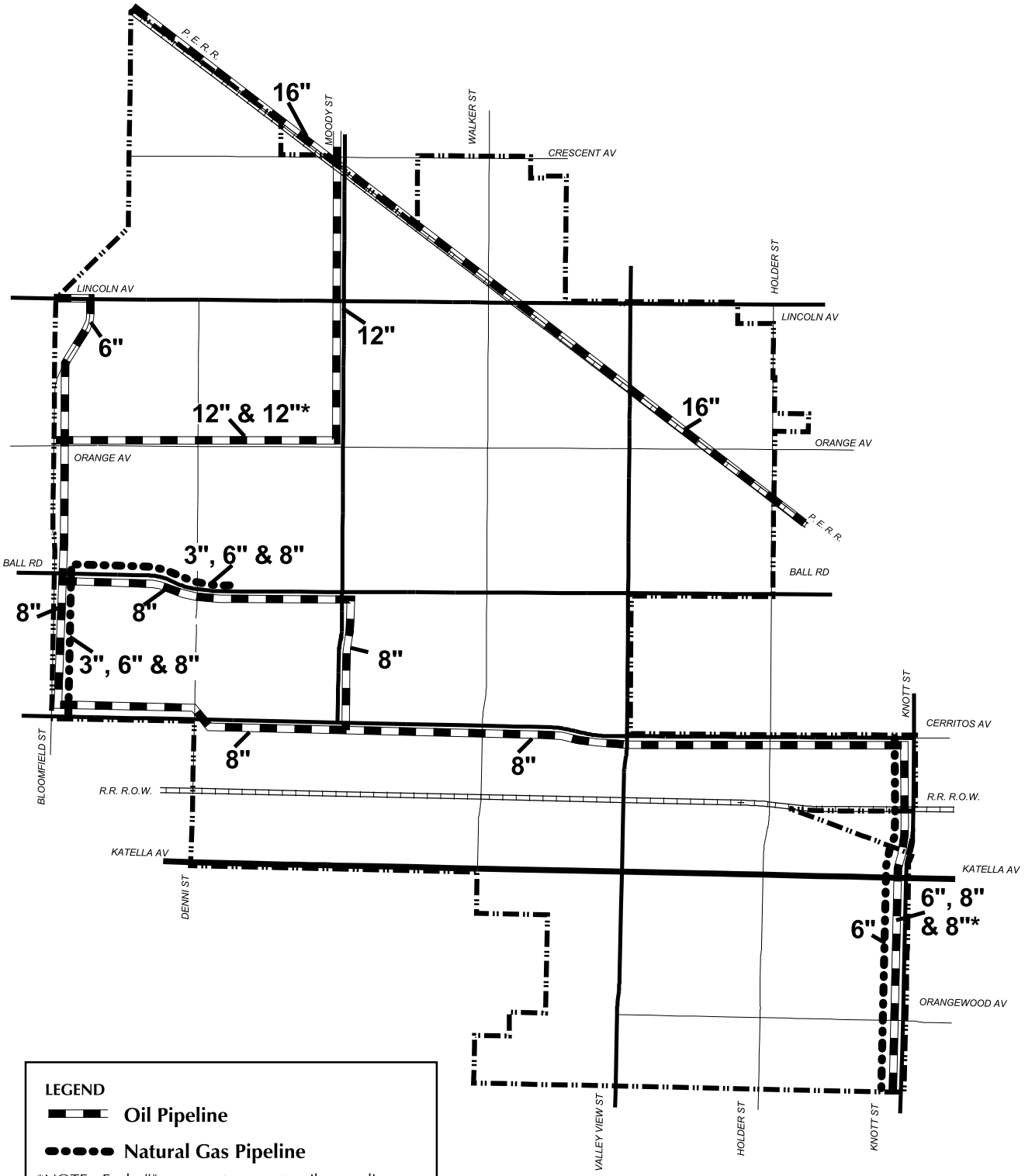
> *"The primary constituent of natural gas, methane, is flammable when mixed with air (Federal Power Commission 1966, 3). Natural gas may leak in relatively small quantities from cracks, flaws, or damaged areas of the pipeline, and not create a serious incident if the operator finds the leak and repairs the line in a timely manner. However, if significant quantities of gas are released into the atmosphere from a rupture of a pipe wall, the gas will burn and can explode if ignited in a confined space (Associated Pullman Kellogg Limited 1981, 7.1).*
>
> *Crude oil and petroleum products are heavier than air. Crude oil may burn with intense heat if ignited and may contaminate the environment. Petroleum fuels such as gasoline and jet fuel, which are transported in their natural liquid state, also pose a fire and pollution hazard."*

FIRE PROTECTION

Fire protection in Cypress is provided by the Orange County Fire Authority (OCFA). The following section describes potential fire hazards in the City and OCFA's staff and equipment resources available to handle a fire or other emergency.

The Orange County Fire Authority provides fire prevention, suppression and emergency services to 20 jurisdictions within Orange County. Known as the Orange County Fire Department from 1980 to 1995, the OCFA has served the City of Cypress since May 16, 1980. In 1998, the OCFA

[1] Per correspondence from the Orange County Health Care Agency dated May 8, 2000. The number of businesses were determined in accordance with California Health and Safety Code Section 6.95.



LEGEND

Oil Pipeline

Natural Gas Pipeline

*NOTE: Each #" represents separate oil or gas lines.

Source: Cypress Department of Public Works

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1000 0 1000 2000 Feet

CITY OF CYPRESS GENERAL PLAN

Oil and Gas Pipelines

Exhibit SAF-6

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responded to 2,092 incidents within Cypress. The OCFA participates in the County Master Mutual Aid Agreement.

Cypress has two fire stations, Station 12 and Station 17, within its jurisdiction. Station 12, located at 8953 S. Walker Street, is equipped with one engine and is staffed by 25 reserve firefighters. Station 17, located at 4991 Cerritos Avenue, is equipped with one engine, one truck, and one medic van. A total of 27 firefighters are assigned to Station 17.

The Department's goal is to maintain a response time (from the time of dispatch) of eight minutes for the first responding company for a fire call and five minutes for a paramedic response, at least 90 percent of the time.

Fire Hazard Potential. Building materials and wind speeds can contribute to the spread of urban fires. According to the Cypress Disaster Plan, the community does not contain any large housing tracts with wood or shake roofs. However, a few apartment complexes in Cypress do have wood roofs and are thereby at greater risk of fire. The City is subject to periodic high winds, including Santa Ana Winds, which will quicken the spread of fire. However, the separation and setback requirements that were in effect when most houses in the City were built assist in minimizing the risk of fire spread.

POLICE PROTECTION

The City of Cypress operates its own police department, located at 5275 Orange Avenue. The City Police force serves Cypress with a staff of 55 sworn employees, 16 civilian employees, and 23 volunteers. Thirty-nine (39) of the sworn officers are assigned to patrol duty. The Police Department is presently divided into two divisions: Operations and Support Services Divisions.

Between the period of May and October 1999, the City of Cypress Police Department had an average response time of 3.5 minutes for priority one calls, seven minutes for priority two calls, and 16 minutes for priority three calls. Priority one calls include those that require emergency medical aid; priority two calls require urgent, but not emergency, response; and priority three calls are situations that can be deemed as non-priority.

The Cypress Police Department takes pride in the level of service provided to the community. Its programs and services include: narcotics team, traffic, canine teams, school resource officer, DARE program, citizen volunteer program, emergency services, reserve police officer program, jail, detective bureau, court liaison, patrol bureau, gang detail, records bureau, citizen police academy, and SWAT team.

Drug Abuse Resistance Education (DARE). DARE is a collaborative effort by the Cypress Police Department, the Cypress Elementary School District, students, parents, and the community to offer an educational program in the classroom to prevent or reduce drug abuse and violence among children.

Citizen Volunteer Program. Through the volunteer program, citizen volunteers learn about law enforcement and work side by side with the officers as an extra set of eyes and ears in the field. After an extensive selection process, volunteers receive a thorough training course. Some of the duties they perform are vacation house checks for residents who are out of town and patrol of neighborhoods, parks, and schools to help promote a safe environment.

Citizen Police Academy. This program offers citizens an in-depth understanding of police strategies, policies and procedures through a ten session curriculum. The purpose of this program is to foster better community relations between the Police Department and the public.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

A major effort to restore public safety revolves around the concept of "defensible space," which encourages residents to assert a psychological and/or physical span of spatial control to reduce the opportunity for unlawful activity. The concept of defensible space is applicable to community and site planning, as well as to building design.

Physical Planning Process. Crime prevention is an important consideration in the physical planning process. Conditions for public safety can be enhanced and property loss reduced by utilizing land use planning and site design techniques to deter criminal activity. Carefully planned development can serve to minimize the opportunity of unlawful activity, and thus lower the actual occurrence of crime.

Crime Prevention Through Physical Planning. The use of physical planning may be one of the least costly and most successful means of crime prevention. The key is to establish design criteria that will affect community control by members of the community. Improving the observational capability of residents to visually survey their residential environment through design considerations is aimed at reducing the workload of law enforcement agencies and enhancing community orientation.

Street, Building and Landscaping Design. The design of streets, buildings and landscaping can influence the way people regard spatial use. Architectural alteration of entrances can change a space once considered public into a semi-private one that is shared by a limited number of people. In large apartment complexes with one or two entrances, people are able to enter the building without notice or challenge. Apartment buildings designed to provide a separate common entrance for six to eight families allow a higher level of surveillance by the occupants. Families soon become acquainted with their neighbors' normal day-to-day activities and are able to recognize their most frequent visitors.

Streets are typically designed and considered as public space allowing free and ready access into any neighborhood by anyone. By siting residential structures in relation to their lots and the street, a degree of neighborhood control or territoriality may be established. The designed use of symbolic or psychological barriers through landscaping can have an apparent differentiation to public versus private space. Typical examples of these symbolic barriers are a small hedge, a long walkway, or a set of steps between the public sidewalk and the house. These design features tend to identify the end of the public space and the beginning of a more selective space use.

Landscaping features can also facilitate neighborhood control by providing observable "barriers" beyond which other residents of the area would take note and potentially challenge. Here landscaping can be used to define space use by visually delineating area for their private space use from public space use. An attractively landscape front yard can be considered the object of the resident's pride of ownership. In turn, the pride can be transferred to other residents in the neighborhood. With neighbors reinforcing this aspect of private domain, they soon develop a sense of identity to and responsibility for others' front yards. Landscaping treatment should be used in a manner that enhances an area's or project's setting without obstructing the visibility of walkways or entrances from the streets or other residences.

Community Identity and Control. The design of physical space can augment community identity and control. Visibility alone is not enough; there must be a reason before a person will challenge inappropriate behavior. If a person feels he/she has a stake in a neighborhood or community, there is ample reason to question the potentially unlawful behavior of others.

The use of design in the physical planning process can encourage residents to assert a psychological identity over their immediate neighborhood; and thus to deter crime by reducing the opportunity for unlawful activity. Strongly defined areas of influence, real and psychological barriers, and improved opportunities for surveillance can assist a community in exerting a meaningful level of crime prevention and control by its residents.

RELATED PLANS AND PROGRAMS

A number of plans and programs contain information that relates to the City of Cypress Safety Element. A brief synopsis of relevant documents is provided below.

CYPRESS DISASTER PLAN

The Cypress Disaster Plan serves as the community's Emergency Operations Plan (EOP), which provides guidance during emergency situations associated with natural disasters, technological incidents, and nuclear defense operations. The Plan does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies. Rather, this EOP analyzes potential large scale disasters that require a coordinated and immediate response.

Aid during these unique emergency situations is available within the local government structure and associated agencies. The EOP identifies key personnel and groups in the Cypress Emergency Management Organization that are organized to protect life and property in the community. The Plan also identifies sources of outside support that might be provided through mutual aid by other jurisdictions, state and federal agencies, and the private sector.

COUNTY OF ORANGE HAZARDOUS WASTE MANAGEMENT PLAN

Current government responsibilities for hazardous waste management are divided among federal, state, and local levels. The Orange County Hazardous Waste Management Plan, adopted in 1989, addresses those issues having local responsibilities and involvement. However, both state and local policies for controlling emergencies are outlined.

The County's Plan sets forth a comprehensive local hazardous waste strategy. Several components comprise this strategy, including:

- Current and future hazardous generation and management needs in Orange County;
- Framework for the development of facilities to manage hazardous waste; and
- Policy direction toward developing county-wide programs for waste-reduction and household and small quantity business hazardous waste collection.

AIRPORT ENVIRONS LAND USE PLAN (AELUP)

The Airport Land Use Commission (ALUC) is the agency charged by the State with the responsibility of formulating a comprehensive airport land use plan for the anticipated growth of each public use airport and its environs. The purpose of the airport land use plan is to safeguard

the general welfare of the inhabitants within the vicinities of airports and to ensure the continued operation of the airports.

The Airport Land Use Commission for Orange County has adopted the Airport Environs Land Use Plan (AELUP), amended November 16, 1995, which includes the Joint Forces Training Center (JFTC) Los Alamitos.

City and County General Plans must be consistent with the AELUP unless specific findings can be made by the local legislative body. State law grants review powers to the Airport Land Use Commission (ALUC) involving the following actions of local agencies within the planning boundaries of the ALUC:

- Amendments of a City's General Plan;
- Amendments of a City's Specific Plan;
- Adoption of Zoning Ordinances; and
- Adoption of Building Regulations.

Prior to amending a General Plan or Specific Plan, the involved locality must submit the proposal to the ALUC for review. ALUC review does not, however, include other applications, including, but not limited to, conditional use permits, variances, subdivision or parcel maps, and site plan approvals.

In terms of assessing consistency between local General Plans and the AELUP, the County focuses on the following three areas: noise, safety and building height. The updated Cypress Noise and Safety Elements address these issues; building height is also examined in the Cypress Zoning Ordinance and Specific Plans. The following building criteria are utilized as part of the County's AELUP consistency review procedures:

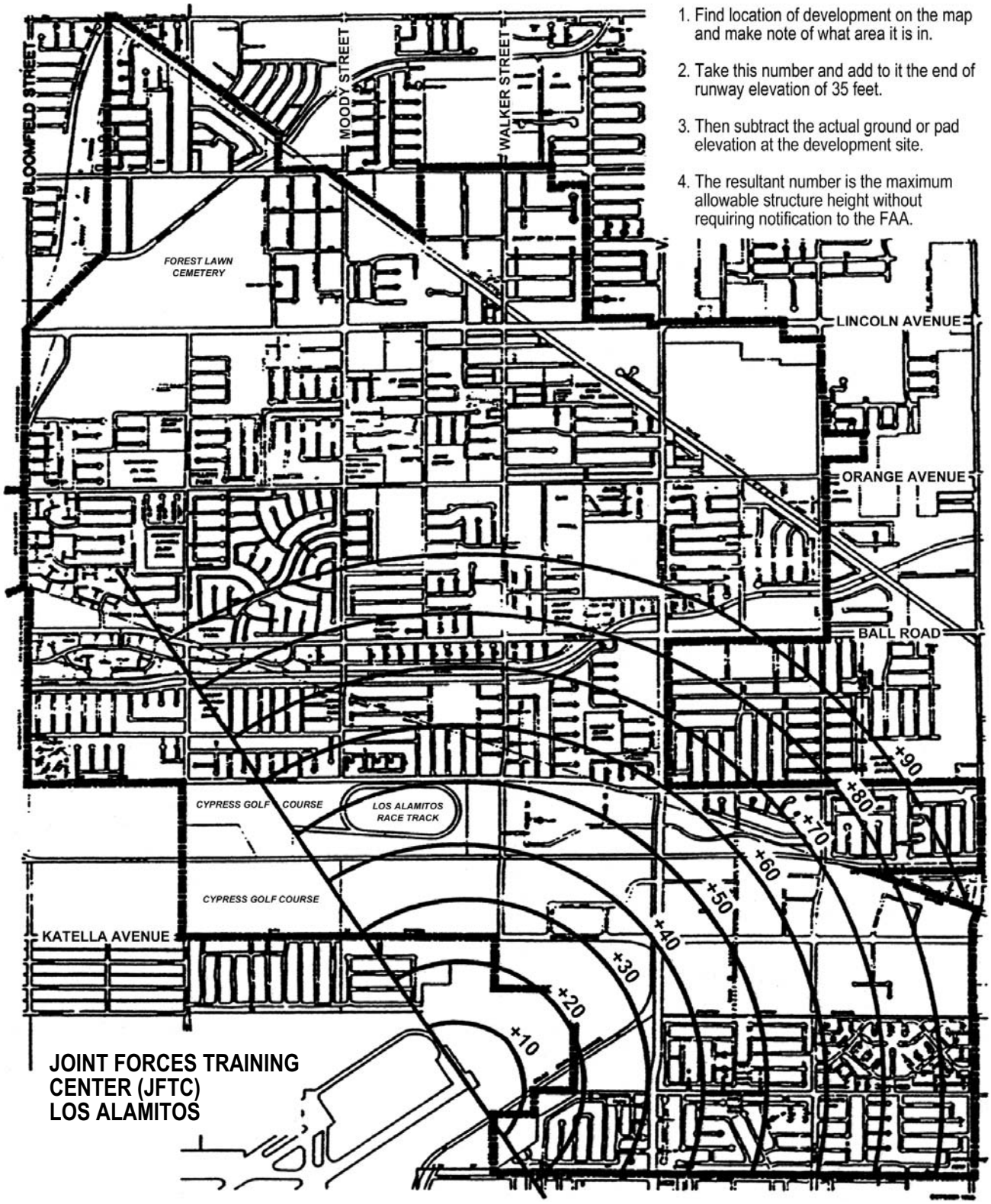
- Does the Agency have a map or other graphic that depicts imaginary surfaces for the airports that impact the City?
- Are there policies in the General Plan which reference FAA studies and clearances?

Aircraft Overflight

The Joint Forces Training Center (JFTC) Los Alamitos is located in western Orange County within the City of Los Alamitos. On-site facilities include two runways and associated taxiways, ramp space, and hangars. The JFTC is primarily utilized for helicopter training missions. A portion of the City of Cypress lies within the prevailing approach path of the Army Airfield located at the JFTC Los Alamitos. This portion of Cypress is primarily composed of business park facilities. Specific land use regulations regarding FAA notification imaginary surfaces, aircraft noise, and building heights have been implemented (refer to Exhibit SAF-7*, FAA 100:1 Notification Imaginary Surfaces*, SAF-8, *Joint Forces Training Center (JFTC) Los Alamitos Impact Zones*, and SAF-9, *Building Height Restrictions, 50 to 1 Clearance Surface*).

SEISMIC HAZARDS MAPPING ACT

The Seismic Hazards Mapping Act requires the Division of Mines and Geology to delineate areas of high potential ground shaking, liquefaction, earthquake-induced landslides, and other ground failures.



Source: City of Cypress 1993 General Plan; Airport Environs Land Use Plan, November 1995, Airport Land Use Commission for Orange County.

N

Not to Scale

CITY OF CYPRESS GENERAL PLAN

FAA 100:1 Notification Imaginary Surfaces

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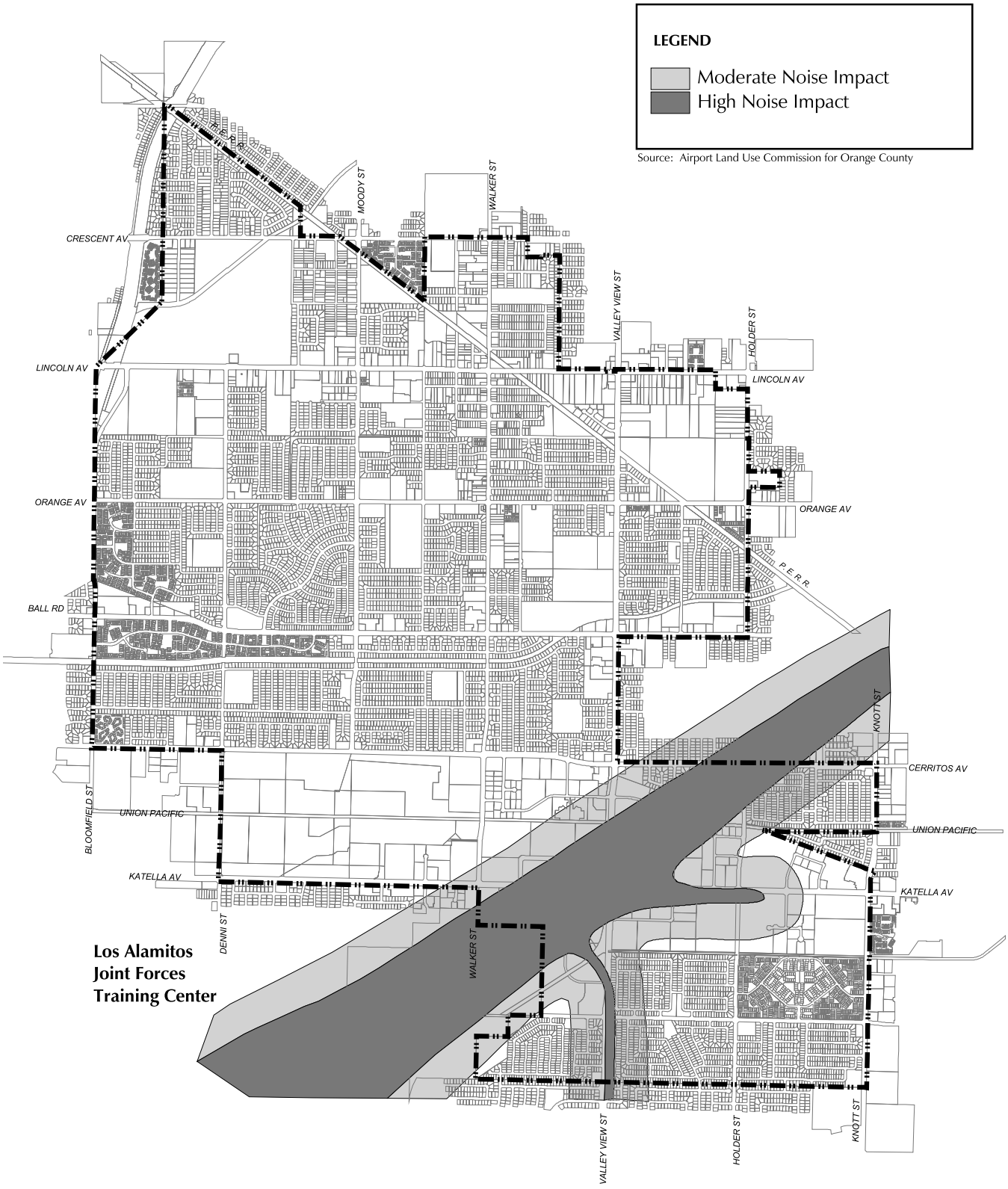
Exhibit SAF-7



CITY OF CYPRESS GENERAL PLAN

Los Alamitos Army Airfield Impact Zone

1000 0 1000 2000 Feet

N

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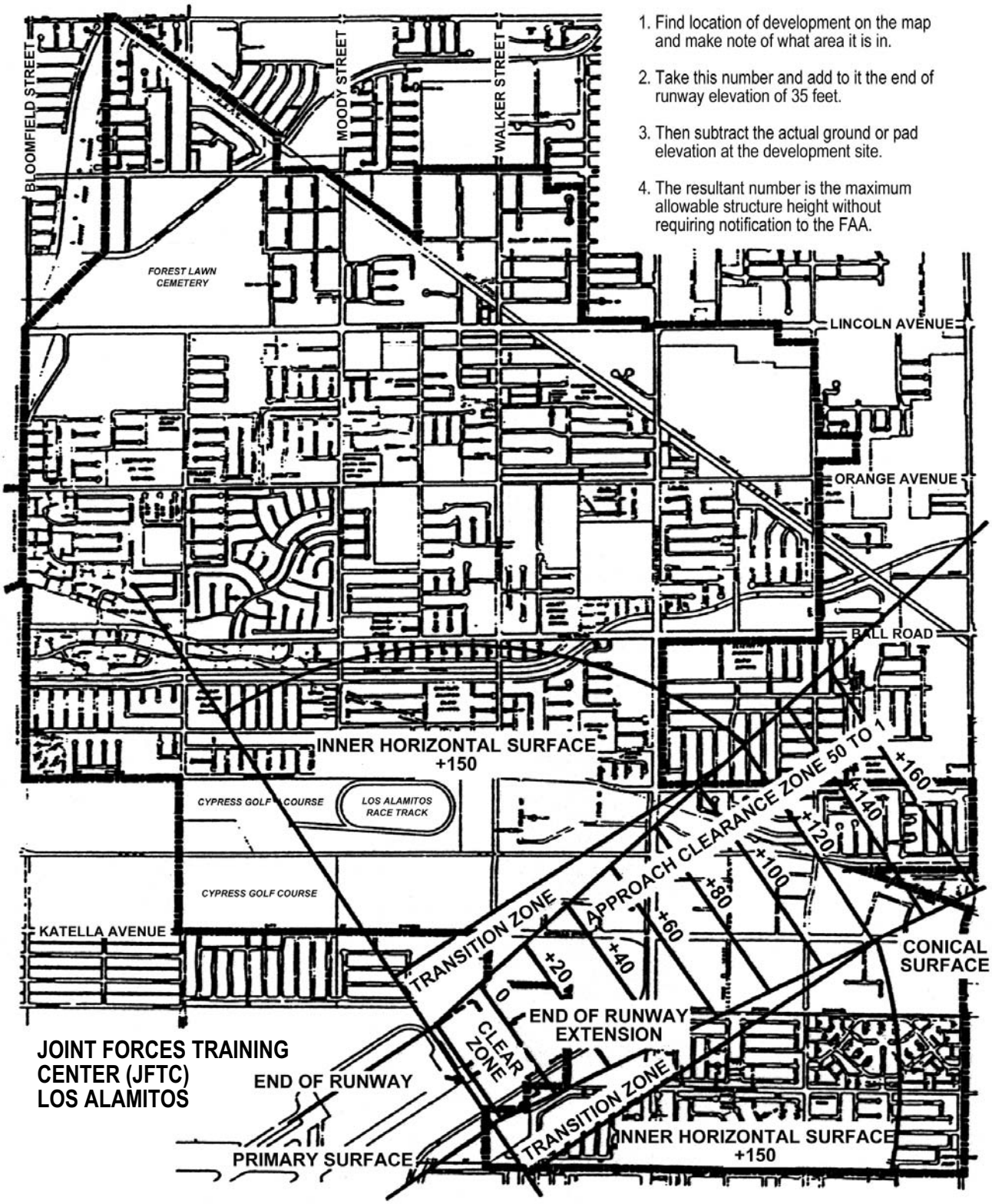
949.472.3505 FAX 949.472.8373 www.RBF.com

JN: 10-100277
October 5, 2001

Exhibit SAF-8



Source: City of Cypress 1993 General Plan; Airport Environs Land Use Plan, November 1995, Airport Land Use Commission for Orange County.

Not to Scale

N

CITY OF CYPRESS GENERAL PLAN

Building Height Restrictions, 50 to 1 Clearance Surface

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Exhibit SAF-9

KEY SAFETY ISSUES

The issues identified below were developed through analysis of background data for the Safety Element. These issues are utilized to formulate the Element's goals and policies and the Safety Plan.

FLOODING

- Flood control facilities in Cypress will contain flows resulting from a 100-year flood, according to the Federal Emergency Management Agency. Similar to the majority of Orange County, Cypress may, however, experience flooding during a 500-year storm or dam failure. Existing flood control facilities in most of Orange County are inadequate to accommodate a 500-year flood.

- Failure of the Prado, Carbon Canyon, or Whittier Narrows dams would result in inundation throughout the City.

SEISMIC

- The Division of Mines and Geology has not identified any active or potentially active faults within the City of Cypress. However, like all of Southern California, the City is situated within a seismically active region. Hazards relating to seismic events, including groundshaking and liquefaction, could endanger structures and people within the area.

- Structures without adequate reinforcement, including masonry and concrete tilt-up buildings constructed prior to 1974, are especially prone to earthquake damage.

HAZARDOUS AND TOXIC MATERIALS

- The majority of future development in the City will occur in the Business Park area. Light industrial and research/development uses in the Business Park may utilize, transport, and/or store chemicals, creating a possible fire hazard.

- A number of businesses utilize or store hazardous materials within Cypress. The accidental release or combustion of these hazardous materials could endanger individuals within the community.

- The transportation of hazardous waste poses special problems. Since there are no freeways within Cypress, accidents involving hazardous waste would most likely occur on the City's major arterials, including Katella Avenue, Valley View Street, and Lincoln Avenue. The City could possibly be subjected to the airborne release of hazardous materials due to its location within the flight pattern of the Joint Forces Training Center (JFTC) Los Alamitos.

PIPELINES

- There are a number of pipelines traversing the City that transport natural gas, crude oil, and oil. Though pipelines have better safety records than many other transportation methods, explosions resulting from pipeline failure may endanger individuals and structures. Pipeline failure most commonly results from excavation and corrosion.

FIRE PROTECTION

- Additional development in the City will place new demands on the Orange County Fire Authority.

- Wood roofs are often a contributing factor to the spread of urban fires. Cypress does not have any large residential tracts with wood roofs. However, the City's Disaster Plan does identify the presence of some apartment buildings and single-family homes with wood roofs.

POLICE PROTECTION

- As Cypress' resident and business population continues to grow, the City Police Department will need to service a larger community. Without adequate increases in staffing and equipment, additional demands may limit the ability of the Police Department to maintain its current high level of service.

AIRCRAFT OVERFLIGHT

- A portion of the City of Cypress lies within the prevailing approach path of the JFTC Los Alamitos. Air operation accidents, including equipment failure or the accidental release of materials, may harm individuals within the City.

DESCRIPTION OF THE SAFETY PLAN

The Public Safety Plan describes the approach to be utilized in implementing the goals and policies of the Safety Element. The goals and policies of the Element provide direction for specific actions by the City. The way in which Cypress achieves those goals and implements those policies is determined by the programs, actions, and cooperative efforts undertaken by the City.

GOALS AND POLICIES

FLOOD

SAF-1: Protect residents, workers, and visitors from flood hazards, including dam inundation.

SAF-1.1: Manage development to ensure that flooding concerns have been considered prior to development.

SAF-1.2: Minimize flood hazards by working with the Orange County Department of Public Works to identify and construct needed local and regional storm drain improvements.

SAF-1.3: Minimize dam inundation hazards through engineering and construction.

SAF-1.4: Review on an annual basis the emergency evacuation plan to ensure its continued effectiveness.

SAF-1.5: Support the U.S. Army Corps of Engineers' improvements to Los Angeles County's flood control system and to the Santa Ana River Mainstem project.

SEISMIC

SAF-2: Protect life and property in Cypress from seismic events and resulting hazards.

SAF-2.1: Identify and evaluate existing structures for structural safety. Encourage building owners to undertake seismic retrofit improvements.

SAF-2.2: Implement the Uniform Building Code's seismic standards for construction of new buildings and maintain seismic safety of existing structures.

SAF-2.3: Require the review of soils and geologic conditions, and if necessary on-site borings, to determine liquefaction susceptibility of a proposed project site.

SAF-2.4: Study the potential for liquefaction within the City and adopt policies that minimize the potential damage of structures and injury of citizens.

HAZARDOUS MATERIALS

SAF-3: Minimize risks to life and property associated with the handling, transporting, treating, generating, and storing of hazardous materials.

SAF-3.1: Locate new and relocate existing land uses that utilize, produce, transport, or store hazardous materials a safe distance from other land uses that may be adversely affected by such activities.

SAF-3.2: Encourage and support the proper disposal of household waste and waste oil. Monitor dry cleaners, film processors, auto service establishments, and other businesses generating hazardous waste materials to ensure compliance with approved disposal procedures.

SAF-3.3: Prosecute unlicensed dumping of toxic or hazardous materials into the ground or water in Cypress. Increase the fines levied for illegal dumping. Encourage citizens to report dumping when they observe it.

SAF-3.4: Support efforts to enforce State "right to know" laws, which outline the public's right to information about local toxics producers.

PIPELINES

SAF-4: Minimize property damage and injury to persons from underground pipeline hazards.

SAF-4.1: Ensure that the Orange County Fire Authority and other disaster response agencies have access to route, depth, and shut-off information about each pipeline.

SAF-4.2: Ensure that the Disaster Response Plan includes procedures to deal with a pipeline accident.

SAF-4.3: Consult with agencies operating these lines, as well as the Public Utilities Commission and the Office of Pipeline Safety of the Department of Transportation, to determine the real potential for explosion or rupture in case of accident or earthquake.

SAF-4.4: For new development, maximize building setback from existing pipelines or new/established pipeline routes to a preferred width of 150 feet where physically feasible, but in no event less than 50 feet. Whenever development is proposed within 150 feet of petroleum pipelines, site plans must clearly show pipeline locations and all measures proposed to mitigate all potential safety hazards.

FIRE PROTECTION

SAF-5: Protect life and property in Cypress from urban fires. Maintain the Orange County Fire Authority's high level of service to community businesses and residents.

SAF-5.1: Maintain a response time of eight minutes for the first responder engine and provide paramedic service within five minutes.

SAF-5.2: Evaluate the effects of new development on the Orange County Fire Authority's response time. Ensure through the development review process that new development will not result in reduced emergency service levels.

SAF-5.3: Maintain and periodically review procedures for dealing with fire emergencies in the City's Disaster Plan.

SAF-5.4: Establish evacuation routes for an urban fire.

SAF-5.5: Maintain mutual aid agreements with surrounding jurisdictions for fire protection.

SAF-5.6: Provide adequate fire equipment access to structures within the community.

SAF-5.7: Maintain an ongoing fire inspection program to reduce fire hazards associated with older buildings, critical facilities, public assembly facilities, and industrial and commercial buildings.

SAF-5.8: Promote the utilization of fire-safe building materials and enforce the City's fire sprinkler ordinance.

POLICE PROTECTION

SAF-6: Maintain the police department's high quality of service to the City.

SAF-6.1: Assess the impacts of incremental increases in development density and the resulting traffic congestion on emergency response time.

Ensure through the development review process that new development will not result in reduced emergency service levels.

SAF-6.2: Maintain a response time of approximately three minutes for emergency calls and six minutes for non-emergency calls.

SAF-6.3: Enhance public awareness and participation in crime prevention. Develop new and expand existing educational programs dealing with personal safety awareness.

SAF-6.4: Continue to support citizen programs that fight crime and promote citizen involvement, such as Citizens Emergency Response Team and DARE.

SAF-7: Use good design as a means to promote human safety.

SAF-7.1 Provide design criteria in the Zoning Ordinance or design guidelines relating to the prevention of crime prevention through appropriate physical design solutions.

SAF-7.2: Use good design to promote safety for residents, employees and visitors to the City.

SAF-7.3: Provide exterior lighting that enhances safety and night use in public spaces, but minimizes impacts on surrounding land uses.

SAF-7.4: Promote the use of defensible space (e.g., site and building lighting, visual observation of open spaces, secured areas) in project design to enhance public safety.

AIRCRAFT OVERFLIGHT

SAF-8: Protect Cypress residents from air operation accidents.

SAF-8.1: Limit development height within the flight approach to the Joint Forces Training Center (JFTC) Los Alamitos to minimize safety hazards to aircraft and protect the airfield.

SAF-8.2: Monitor legislation and regulations established by the Joint Forces Training Center (JFTC) Los Alamitos.

SAF-8.3 Establish an emergency response plan for aircraft incidents.