

BOARD OF FORESTRY AND FIRE PROTECTION

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Anna Pehoushek, AICP
Acting Assistant Community Development Director
City of Orange

via email

June 11, 2015

Dear Ms. Pehoushek:

The State Board of Forestry and Fire Protection (Board) is required to review and provide recommendations to the safety element of county and local government general plans when such plans are being amended. This review is in accordance with Government Code (GC) §65302.5 which requires the Board to review the fire safety elements when the general plans contains State Responsibility Areas or Very High Fire Hazard Severity Zones.

Enclosed is the final review and recommendations for the City of Orange General Plan Safety Element. The Board has prepared this document in cooperation with members of the CAL FIRE Land Use Planning Program.

Government Code §65302.5 also requires the City of Orange Community Development Department to consider and accept the recommendations made by the Board and communicate in writing to the Board its reasons for not accepting any recommendations.

Thank you for the opportunity to participate in your planning process and we look forward to working with you on these recommendations. We hope this input leads to greater protection and reduced cost and losses from wildfires to Calaveras County and adjacent wildlands.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Keith Gilliss", is written over a large, faint watermark of the state of California.

J. Keith Gilliss
Chair, Board of Forestry and Fire Protection

CC: Chief Pete Muñoa, CAL FIRE Land Use Planning

City of Orange

Land Use Planning Program Review General Plan Safety Element Assessment Tier 2

June 16, 2015

Board of Forestry and Fire Protection



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Purpose and Background: The State Board of Forestry and Fire Protection (Board) is required to review and make recommendations for the safety element of general plan updates in accordance with Government Code (GC) 65302.5. The review and recommendations apply to those general plans with State Responsibility Area (SRA) (Public Resources Code (PRC) 4125) or Very High Fire Hazard Severity Zone Local Responsibility Area (VHFHSZ LRA) (GC 51177(i), PRC 4125).

The statutory requirements for the Board review and recommendations pursuant to GC 65302.5 (a)(1) and (2), and (b) are as follows:

- *“The draft elements...to the fire safety element of a county’s or a city’s general plan...shall be submitted to the Board at least 90 days prior to... the adoption or amendment to the safety element of its general plan [for each county or city with SRA or VHFHSZ].”*
- *“The Board shall... review the draft or an existing safety element and report its written recommendations to the planning agency within 60 days of its receipt of the draft or existing safety element....”*
- *“Prior to adoption of the draft element..., the Board of Supervisors... shall consider the recommendations made by the Board... If the Board of Supervisors...determines not to accept all or some of the recommendations..., the Board of Supervisors... shall communicate in writing to the Board its reasons for not accepting the recommendations.”*

Methodology for Review and Recommendations: The Board established a standardized method to review the safety element of general plans. The methodology includes 1) examining the safety element for inclusion of factors that are important for mitigation of wildfire hazard and risks, and 2) making recommendations related to these factors. The evaluation factors and recommendations below were developed using CAL FIRE technical documents and input from local fire departments.

The Tier 2 recommendations below apply to communities with

- Medium amounts of VHFHSZ Zone acreage or 10 to 20% of acreage is VHFHSZ LRA; or
- Medium population densities; or
- VHFHSZ that does not encroach on population centers or does not add significantly to contiguous high fire hazard fuels at a regional level.

The counties assigned Safety Element Assessment Tier 2 are **Colusa, Imperial, Inyo, Kings, Merced, Modoc, and Mono**. There are 48 cities, listed below, evaluated under Tier 2.

As local fuels, boundaries, populations, and other variables change throughout time, Board staff have the discretion to re-assign a jurisdiction into a lower or higher assessment tier. Staff will consider:

- Variations in population and population density; or
- Changes in proportion of land designated VHFHSZ (lower or higher); or
- Firefighting capabilities (paid, volunteer, equipment, etc) and contract changes; or

- Past planning efforts and involvement of organizations such as local Fire Safe Councils and new initiatives or efforts that have emerged over time; or
- Changes to the context of VHFHSZ within the region – does the VHFHSZ in a jurisdiction combine with neighboring fuels to create a continual pattern of very high fire risk in a way that it hadn't previously?

Cities (alphabetical by county)					
Alameda	Monterey	Riverside con't	San Diego	Shasta	
Berkeley	Monterey	Palm Springs	Carlsbad	Anderson	
Piedmont	Orange	Perris	Chula Vista	Siskiyou	
Pleasanton	Fullerton	Riverside	Del Mar	Etna	
Calaveras	Irvine	San Jacinto	El Cajon	Yreka	
Angels Camp	Laguna Woods	Temecula	Solana Beach	Sonoma	
Los Angeles	Mission Viejo	Wildomar	Vista	Santa Rosa	
Arcadia	Orange	San Bernardino	San Luis Obispo	Tehama	
West Covina	Riverside	Chino Hills	San Luis Obispo	Red Bluff	
Marin	Corona	Fontana	Santa Clara	Ventura	
Larkspur	Hemet	Hesperia	Morgan Hill	Camarillo	
Mendocino	Jurupa Valley	Rialto	San Jose	Fillmore	
Ukiah	Menifee	Upland		Ventura	
	Moreno Valley	Yucca Valley			

Review Process and Timeline

The county/local jurisdiction and CAL FIRE Land Use Planning staff will receive and review technical guidance documents, the Board assessment, and relevant information from CAL FIRE and the Governor's Office of Planning and Research.



The county or local jurisdiction will work closely with CAL FIRE Land Use Planning staff during the development of the general plan and the safety element in particular.



At least 90 days prior to the adoption or amendment of the General Plan: The county or local jurisdiction will submit the safety element to the Board of Forestry & Fire Protection for review. Jurisdictions are encouraged to send safety elements to the Board prior to the 90 day statutory requirement for greater collaboration.



No more than 60 days later: The Board will consider staff recommendations and approve as-is or with changes at the next Board meeting. This deadline may be modified upon mutual agreement between Board staff and local jurisdictions.

Standard List of General Plan Safety Element Recommendations

Jurisdiction: City of Orange		CAL FIRE Unit: RRU-ORC	Date Received: 5/11/15
County: Orange	LUPP Reviewer: Neuman	Unit Contact: B. Norton ORC	Date Reviewed: 5/15/15

General Recommendations:

- Incorporate the City Fire Code reference into the Safety Element.
- Provide reference to any Fire Department Mutual Aid and Automatic Aid Agreements
- Provide previous Wildfire History description to reflect the current general plan time lines
- Provide identification and mitigation measures identifying the wildfire threat in the Open Space/Circulation Element of the General Plan to ensure internal consistency with the Safety Element.
- Provide reference and Policy identifying the assets at risk relating to the wildfire threat within the Safety Element as identified in the Infrastructure Element Policy 5.3
- Figure PS-1 is confusing and does not provide helpful information to determine Fire Hazard Areas.
- In the Implementation Appendix (Program IV-3) include goals to promote awareness of the wildland fire threat and major evacuation routes
- **Provide reference to Unit Strategic Fire Plan, Infrastructure Master Plan/Local Hazard Mitigation Plan (LHMPs), and any Community Wildfire Protection Plans (CWPPs) in the planning area.**

1.0 Inter-agency Wildfire Protection Planning

1.1 General Plan references and incorporates County or Unit Fire Plan: Yes Partial No

Recommendation 1: Identify, reference or create (if necessary) a fire plan for the geographic scope of the General Plan. The General Plan should incorporate the general concepts and standards from any county fire plan, fire protection agency (federal or state) fire plan, and local hazard mitigation plan. Identify or reference the local Unit Fire Plan and, if applicable, the Community Wildfire Prevention Plan.

Priority: High Medium Low N/A

Recommendation 2: Ensure fire plans incorporated by reference into the General Plan contain evaluations of fire hazards, assessment of assets at risk, prioritization of hazard mitigation actions, and implementation and monitoring components.

Priority: High Medium Low N/A

1.2 Map or describe existing emergency service facilities and areas lacking services, specifically noting any areas in SRA or VHFHSZs. Yes Partial No

Recommendation 1: Include descriptions of emergency services including available equipment, personnel, and maps of facility locations.

Priority: High Medium Low N/A

Recommendation 2: Initiate studies and analyses to identify appropriate staffing levels and equipment needs commensurate with the current and projected emergency response environment.

Priority: High Medium Low N/A

Recommendation 3: Establish goals and policies for emergency service training that meets or exceeds state or national standards.

Priority: High Medium Low N/A

1.3 Inter-fire service coordination preparedness/mutual aid and multi-jurisdictional fire service agreements. Yes Partial No

Recommendation 1: Adopt the Standardized Emergency Management Systems for responding to large scale disasters requiring a multi-agency response. Ensure and review mutual aid/automatic aid and other cooperative agreements with adjoining emergency service providers.

Priority: High Medium Low N/A

Additional Wildfire Protection Planning Recommendations:

2.0 **Land Use:**

2.1 Disclose wildland urban interface hazards including Fire Hazard Severity Zones designations and other vulnerable areas as determined by CAL FIRE or fire prevention organizations. Describe or map any Firewise Communities or other firesafe communities as determined by the National Fire Protection Association, Fire Safe Council, or other organizations.

Yes Partial No

Recommendation 1: Specify whether the entity has a Very High Fire Hazard Severity Zones (VHFHSZ) designation pursuant GC 51175 and include a map of the zones that clearly indicates any area designated VHFHSZ.

Priority: High Medium Low N/A

Recommendation 2: Adopt CAL FIRE recommended Fire Hazard Severity Zones including model ordinances developed by the Office of the State Fire Marshal for establishing VHFHSZ areas.

Priority: High Medium Low N/A

2.2 Goals and policies include mitigation of fire hazard for future development. Yes Partial No

Recommendation 1: Adopt fire safe development codes to be used as standards for fire protection for new development in Very High Fire Hazard Severity Zones (VHFHSZ) within the entity's jurisdiction that meet or exceed statewide standards in 14 California Code of Regulations Section 1270 et seq and have them certified by the Board of Forestry.

Priority: High Medium Low N/A

Recommendation 2: Establish goals and policies for specific ordinances, or specify the current existing ordinances, code sections, or regulations, that address evacuation and emergency vehicle access; water supplies and fire flow; fuel modification for defensible space; and home addressing and signing.

Priority: High Medium Low N/A

Recommendation 3: Consider mitigation of previously developed areas that do not meet Title 14 California Code of Regulations Section 1270 et seq. or equivalent local ordinance.

Priority: High Medium Low N/A

2.3 The design and location of new development provides for adequate infrastructure for the safe ingress of emergency response vehicles and simultaneously allows civilian egress during an emergency: Yes Partial No

Recommendation 1: Develop pre-plans for fire prone areas that address civilian evacuations to temporary safety locations.

Priority: High Medium Low N/A

Recommendation 2: Develop a policy that approval of parcel maps and tentative maps is conditional based on meeting regulations adopted pursuant to §4290 and 4291 of the Public Resources Code, particularly those regarding road standards for ingress, egress, and fire equipment access.

Priority: High Medium Low N/A

2.4 Fire suppression defense zones. Yes Partial No

Recommendation 1: Establish goals and policies that create wildfire defense zones for emergency services, including fuel breaks or other staging areas where WUI firefighting tactics could be most effectively deployed.

Priority: High Medium Low N/A

2.5 Prioritizing asset protection from fire when faced with a lack of suppression forces.
 Yes Partial No

Recommendation 1: Identify and prioritize protection needs for assets at risk in the absence of response forces.

Priority: High Medium Low N/A

Recommendation 2: Establish fire defense strategies (such as fire ignition resistant areas) that provide adequate fire protection without dependency on fire resources (both air and ground) and could serve as safety zones for the public or emergency support personnel.

Priority: High Medium Low N/A

Additional Land Use Planning Recommendations:

3.0 Housing:

3.1 Incorporation of current fire safe building codes. Yes Partial No

Recommendation 1: Adopt building codes for new development in State Responsibility Areas or incorporated areas with VHFHSZ that are based on those established by the Office of the State Fire Marshal in Title 19 and Title 24 CCR, referred to as the “Wildland Urban Interface Building Codes.”

Priority: High Medium Low N/A

Recommendation 2: Ensure new development proposals contain specific fire protection plans, actions, and codes for fire engineering features for structures in VHFHSZ. Examples include codes requiring automatic sprinklers in VHFHSZ.

Priority: High Medium Low N/A

3.2 Consideration of diverse occupancies and their effects on wildfire protection.

Yes Partial No

Recommendation 1: Ensure risks to uniquely occupied structures, such as seasonally occupied homes, multiple dwelling structures, or other unique structures/owners, are considered for appropriate wildfire protection needs.

Priority: High Medium Low N/A

3.3 Fuel modification around homes. Yes Partial No

Recommendation 1: Establish ordinances in SRA or VHFHSZ for vegetation fire hazard reduction around structures that meet or exceed the Board of Forestry and Fire Protection's Defensible Space Guidelines for SRA and the Very High Fire Hazard severity zones, including vacant lots.

See http://www.bof.fire.ca.gov/pdfs/Copyof4291finalguidelines9_29_06.pdf

Priority: High Medium Low N/A

Recommendation 2: Reduce fuel around communities and subdivisions, considering fuels, topography, weather (prevailing winds and wind event specific to the area), fire ignitions and fire history.

Priority: High Medium Low N/A

Recommendation 3: Include policies and recommendations that incorporate fire safe buffers and greenbelts as part of the development planning. Ensure that land uses designated near high or very fire hazard severity zones are compatible with wildland fire protection strategies/capabilities.

Priority: High Medium Low N/A

3.4 Identification and actions for substandard fire safe housing and neighborhoods relative to fire hazard area. Yes Partial No

Recommendation 1: Identify and map existing housing structures that do not conform to contemporary fire standards in terms of building materials, perimeter access, and vegetative hazards in VHFHSZ or SRA by fire hazard zone designation.

Priority: High Medium Low N/A

Recommendation 2: Identify plans and actions to improve substandard housing structures and neighborhoods. Plans and actions should include structural rehabilitation, occupancy reduction, demolition, reconstruction, neighborhood-wide fuels hazard reduction projects, community education, and other community based solutions.

Priority: High Medium Low N/A

3.5 Assessment and projection of future emergency service needs. Yes Partial No

Recommendation 1: Ensure new development includes appropriate facilities, equipment, personnel and capacity to assist and support wildfire suppression emergency service needs. Future emergency service needs should be:

- Established consistent with state or national standards.
- Developed based on criteria for determining suppression resource allocation that includes elements such as identified values and assets at risk, ignition density, vegetation type and condition, as well as local weather and topography.
- Local Agency Formation municipal services reviews for evaluating level of service, response times, equipment condition levels and other relevant emergency service information.

Priority: High Medium Low N/A

Additional Housing/Structures and Neighborhoods Recommendations:

Provide reference to specific ordinances where City Fire Code and Vegetation Management Guidelines and Fuel Modification guidelines are located.

4.0 Conservation and Open Space:

4.1 Identification of critical natural resource values relative to fire hazard areas. Yes Partial No

Recommendation 1: Identify critical natural resources and other “open space” values within the geographic scope of the General Plan.

Priority: High Medium Low N/A

4.2 Inclusion of resource management activities to enhance protection of open space and natural resource values. Yes Partial No

Recommendation 1: Develop plans and action items for vegetation management that provides fire damage mitigation and protection of open space values.

Priority: High Medium Low N/A

Recommendation 2: Establish goals and policies for reducing the wildland fire hazards within the entity’s boundaries and, with the relevant partners, on adjacent private wildlands, federal lands, vacant residential lots, and greenbelts with fire hazards that threaten the entity’s jurisdiction.

Priority: High Medium Low N/A

4.3 Integration of open space into fire safety effectiveness. Yes Partial No

Recommendation 1: Establish goals and policies for incorporating systematic fire protection improvements for open space. Specifics policies should address fire mitigation planning with agencies/private landowners managing open space adjacent to the General Plan area, water sources for fire suppression, and other fire prevention and suppression needs.

Priority: High Medium Low N/A

Additional Conservation and Open Space Recommendations:

Provide reference any plans that identify hazards and areas at risk; include any state or federal lands and their spheres of influence

5.0 Circulation:

5.1 Adequate access to high hazard wildland/open space areas. Yes Partial No

Recommendation 1: Establish goals and policies for adequate access in Very High Fire Hazard Severity Zones that meet or exceed standards in Title 14 CCR 1270 for lands with no structures, and maintain conditions of access in a suitable fashion for suppression access or public evacuation.

Priority: High Medium Low N/A

5.2 Incorporate a policy that provides for a fuel maintenance program along roadways in the agency having jurisdiction. Yes Partial No

Recommendation 1: Develop an adaptive vegetation management plan that considers fuels, topography, weather (prevailing winds and wind event specific to the area), fire ignitions and fire history.

Priority: High Medium Low N/A

5.3 Emergency response barriers. Yes Partial No

Recommendation 1: Identify goals and policies that address vital access routes that if removed would prevent fire fighter access (bridges, dams, etc.). Develop an alternative emergency access plan for these areas.

Priority: High Medium Low N/A

5.4 Adequacy of existing and future transportation system to incorporate fire infrastructure elements. Yes Partial No

Recommendation 1: Establish goals and policies for proposed and existing transportation systems to facilitate fire infrastructure elements such as turnouts, helispots and safety zones.

Priority: High Medium Low N/A

Additional Circulation and Access Recommendations:

Provide reference to any Fire Department Pre-plans identifying areas at risk

6.0 Post Fire Safety, Recovery and Maintenance:

The post fire recommendations address an opportunity for the community and landowners to re-evaluate land uses and practices that affect future wildfire hazards and risk. They also provide for immediate post-fire life and safety considerations to mitigate potential losses to life, human assets and critical natural resources.

6.1 Develop post-fire priorities and goals for the recovery of the built and natural environments. Yes Partial No

Recommendation 1: Reevaluate hazardous conditions and provide for future fire safe conditions. Evaluate redevelopment in high or very high fire hazard severity zones.

Priority: High Medium Low N/A

Recommendation 2: Restore sustainable landscapes and restore functioning ecosystems. Incorporate wildlife habitat/endangered species considerations.

Priority: High Medium Low N/A

Recommendation 3: Provide polices and goals for maintenance of the post-fire-recovery projects, activities, or infrastructure.

Priority: High Medium Low N/A

6.2 Post fire life and safety assessments. Yes Partial No

Recommendation 1: Develop frameworks for rapid post-fire assessment and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.

Priority: High Medium Low N/A

Additional Post Fire Safety, Recovery and Maintenance Recommendations:



PUBLIC SAFETY

INTRODUCTION AND VISION FOR THE FUTURE

Maintaining a safe living environment is one of the most important challenges cities face. Orange prides itself on being a safe community with high quality emergency services and a high level of emergency preparedness. The Public Safety Element offers possible solutions for proactively addressing threats including natural and human-caused hazards, crime, and homeland security. Future land use decisions must be considered in the context of natural hazards, such as earthquakes and floods. These decisions must also consider provision of public services, such as police, fire, and emergency medical services.

Orange's ***Vision for the Future***, presented in the General Plan Introduction, introduces a variety of objectives describing the desired quality of life of Orange residents in the future, including the following:

- Orange recognizes the importance of managing development in a manner that ensures adequate and timely public services and infrastructure and limits impacts on the natural environment.
- The City will work to improve the quality of life for all residents by providing residential, commercial, industrial, and public uses that exist in harmony with the surrounding urban and natural environments.

Sustaining and continuing to improve community safety is one of the City's most important challenges. By implementing the Public Safety Element, the City will provide timely emergency service delivery and focus on expanding such services throughout the community. Through implementation of these policies, the City can also continue to prepare residents and businesses for disasters and plan for development of a safer community while likely increases in traffic congestion, population growth, and ever-changing needs within the community continue to stretch the use of limited resources.

Purpose of the Public Safety Element

The State General Plan Guidelines direct cities to incorporate a number of required elements into their general plans, including Safety. Orange's Public Safety Element addresses such issues as geologic and seismic activity, flood hazards, fire, hazardous materials, and aircraft operations. Other public safety issues include interjurisdictional cooperation, homeland security, urban design as a crime prevention tool, and issues related to Orange's hillsides and waterways.



Scope and Content of the Public Safety Element

The Public Safety Element is comprised of three sections:

- (1) Introduction;
- (2) Issues, Goals, and Policies; and
- (3) Public Safety Plan.

The *Introduction* defines the purpose, scope, and content of the Public Safety element, and its relationship to other General Plan Elements. The *Issues, Goals, and Policies* section describes the community's desire to address the most relevant public safety issues affecting the City. The *Public Safety Plan* provides hazard maps, and establishes standards and requirements to achieve goals and implement policies. Detailed implementation programs for the Public Safety Element are listed in an Appendix to the General Plan.

Public Safety Considerations

State law requires that the General Plan address the following public safety concerns.

Natural Environmental Hazards

- Earthquakes and their related effects (surface rupture, liquefaction, ground shaking)
- Landslides, mudslides, rock falls, and soil creep
- Flooding due to excessive storm runoff or dam failure
- Wildland fires

Human-Caused Hazards Affecting Land Use Policy

- Hazardous materials
- Urban fires
- Crime
- Homeland Security

Relationship to Other General Plan Elements

Accomplishing the goals and policies of the Public Safety Element requires coordination with other related components of the City's General Plan. Other topics that are affected by the Public Safety Element include the Land Use, Circulation & Mobility, Infrastructure, Urban Design, Housing, and Natural Resources Elements.

Impacts of Public Safety policies and programs on the Land Use Element arise during identification of areas prone to natural hazards. For example, proposed land uses must comply with the land use compatibility standards contained in this element. Recommendations for evacuation and emergency access routes in the Public Safety Element affect the Circulation & Mobility Element. In turn, traffic calming goals and policies within the Circulation & Mobility Element have implications for emergency response. The Infrastructure Element addresses the maintenance of lifeline utility infrastructures, such as flood control facilities, that ensure protection from natural disasters. Streetscape improvements



recommended in the Urban Design Element, including the addition of landscaped medians at some locations, may also affect emergency response, but could reduce the number of accidents along certain arterials. The Public Safety Element provides policies to support housing and neighborhood safety, which contribute to the success of policies in the Housing Element to provide adequate housing. The Natural Resources Element is also linked to Public Safety, because open space zones and allowable uses are often affected by the location of the boundaries of hazard prone zones. For example, areas prone to liquefaction hazards are often coincident with riparian streams and surrounding areas preserved as open space.

ISSUES, GOALS AND POLICIES

The goals, policies, and implementation programs of the Public Safety Element address nine issues identified as important to the City: (1) protecting citizens from seismic hazards and other geologic constraints; (2) protecting the City from flood-related risks and hazards; (3) protecting the lives and property of Orange residents and businesses from urban and wildland fire hazards; (4) minimizing risks to life, property, and the environment associated with producing, using, storing, or transporting hazardous materials; (5) reducing safety hazards associated with civilian, military, and medical air traffic; (6) providing public safety services of the highest quality; (7) improving community safety and reducing opportunities for criminal activity; (8) emphasizing emergency preparedness both within City Hall and throughout the community; and (9) providing safe pedestrian and bicycle environments.

Geologic and Seismic Hazards

The most significant environmental hazards that may affect land use in Orange are seismic and geologic hazards. Earthquakes and their related effects have the greatest potential to affect a large portion of the population. Other geologic hazards such as landslides and ground subsidence could have more localized effects. The combination of sound planning practices and continued public education will minimize risks to the community from seismic and geologic hazards, and will protect the health, safety, and welfare of Orange residents.

GOAL 1.0: Protect residents and businesses from seismic hazards and other geologic constraints.

Policy 1.1: Minimize the potential loss of life and damage to structures that may result from an earthquake.

Policy 1.2: Educate and train individuals and neighborhoods how to respond to emergency situations.

Policy 1.3: Participate in federal, state, and local earthquake preparedness and emergency response programs.

Flood Hazards

Portions of Orange are susceptible to flood events from either a major storm or a dam failure resulting from a significant earthquake. Dams are present along Santiago Creek at two locations: Villa Park Dam and Santiago Dam (Irvine Lake). Both are located in the foothills of east Orange. Peters Canyon Dam is located within Peters Canyon about two miles west of



Irvine Lake. Unlike Santiago Creek, which flows generally northwest, Peters Canyon drains to the south in this area. Prado Dam is located approximately seven miles northeast of the eastern portions of the planning area in Corona. Areas below (downstream from) these dams, including large areas within the City of Orange, have high potential for inundation in the unlikely event of catastrophic dam failure (maps showing dam inundation areas are available for public review at the Community Development Department). These dams and their reservoirs prevent periodic flooding that would be expected to occur in a natural setting. Recognizing and preparing for floods allows the community to avoid associated dangers.

GOAL 2.0: Protect the City from flood-related risks and hazards.

- Policy 2.1: Cooperate and work with the Orange County Flood Control District to ensure District flood control facilities are well maintained and capable of accommodating, at a minimum, 100-year storm flows.
- Policy 2.2: Protect critical public and private facilities located within areas subject to flooding and dam inundation.
- Policy 2.3: Evaluate and monitor water storage facilities to determine which facilities might pose an inundation hazard to downstream properties.
- Policy 2.4: Employ strategies and design features that will reduce the amount of impervious surface (i.e. paved area) within new development projects.

Fire Hazards

Fire and its destructive potential are safety concerns within both the urban areas of the City and the undeveloped hillsides. Wildland fires are most problematic along the developed residential fringes of the hillsides, known as the wildland-urban interface. On a seasonal basis, dry vegetation, little seasonal rain, and Santa Ana wind conditions combine to increase wildfire potential. New development, particularly in the eastern portion of Orange, will result in increased fire hazards due to higher levels of interface between residential development and open grassland and vegetation along hillsides. Keeping neighborhoods buffered from both urban and wildland fire hazards reduces incidents requiring response, and minimizes damage to property when fires do occur. In addition, urban fire hazards are a continuing concern in the City's industrial areas.

GOAL 3.0: Protect lives and property of Orange residents and businesses from urban and wildland fire hazards.

- Policy 3.1: Continue to identify and evaluate new potential fire hazards and fire hazard areas.
- Policy 3.2: Consider non-traditional methods of controlling vegetation in undeveloped areas.
- Policy 3.3: Require planting and maintenance of fire-resistant slope cover to reduce the risk of brush fires within the wildland-urban interface areas located in the northern and eastern portions of the City and in areas adjacent to canyons, and develop and implement stringent site design and maintenance standards



for all areas with high wild land fire potential. To the extent possible, native, non-invasive plant materials are encouraged.

- Policy 3.4: Provide adequate fire equipment access and fire suppression resources to all developed and open space areas.
- Policy 3.5: Establish and maintain optimal emergency response times for fire safety. Require new development to ensure that City response times and service standards are maintained.
- Policy 3.6: Educate the public regarding fire safety.
- Policy 3.7: Continue to adopt and honor agreements with adjacent communities for mutual aid assistance.
- Policy 3.8: Ensure that the Fire Department has sufficient capacity, stations, personnel, [technology](#), and equipment to meet growth needs in the City for fire protection and related emergency services.

Hazardous Materials and Human-Caused Hazards

Manufacturing, transporting, and storing hazardous materials in the urban environment threaten the safety of persons working with such materials, as well as businesses and residences located near the hazards. The City recognizes the importance of identifying users and producers of these materials, and making land use decisions that minimize the risks associated with exposing people to hazardous materials.

GOAL 4.0: Minimize risks to life, property, and the environment associated with producing, using, storing, or transporting hazardous materials.

- Policy 4.1: Assess potential risks of disposing, transporting, manufacturing and storing existing hazardous materials, and develop appropriate mitigation measures in case of accidents.
- Policy 4.2: Prohibit new disposal, transport, manufacture, and storage of hazardous materials within the City without a mitigation plan in case of accidents. Hospitals meeting current state and federal standards are exempt.
- Policy 4.3: Identify hazardous materials dumpsites, and ensure that the sites are cleaned in conformance with applicable federal and state laws prior to the establishment of new uses.
- Policy 4.4: Ensure that the public is protected from fires, noxious fumes, and other hazards within the City's industrial area.
- [Policy 4.5](#) [Continue to adopt and honor agreements with adjacent communities for emergency response mutual aid and assistance.](#)

Aircraft Operations

The John Wayne Airport in Santa Ana, U.S. Army Airfield operations based in Los Alamitos, and helicopters serving various medical institutions in Orange generate high volumes of



commercial and military aircraft traffic above the City. Potential hazards related to aircraft traffic include excessive noise and aircraft accidents.

GOAL 5.0: Reduce safety hazards associated with civilian, military, and medical air traffic.

Policy 5.1: Work with the Federal Aviation Administration, the Orange County Airport Land Use Commission, California Department of Transportation, and other agencies to establish aircraft corridors which minimize the exposure of Orange residents to air traffic hazards.

Policy 5.2: Work with major medical institutions to minimize the impact of helicopter and airplane traffic on Orange residents.

Emergency Services and Safety

The safety and well being of Orange's neighborhoods and businesses is a valued, fundamental component of quality of life in the community. Orange will continue to sustain and improve its commitment to safety through a comprehensive approach to police and fire services, including public outreach and education, proactive preparedness planning, community awareness, and partnerships with public agencies and private businesses. Education will also be provided relative to homeland security issues. Foresight and planning regarding land use decisions represent proactive approaches to enhance safety in the community, especially in areas where future development may be more intense than current conditions. Potential rail hazards must also be recognized and prepared for. Industrial hazards such as noxious fumes, underground fuel lines, and other potential hazards must be evaluated and mitigated. Special attention must be given to industrial projects sited near residential areas to ensure appropriate buffers and screening of industrial sites.

GOAL 6.0: Provide public safety services of the highest quality.

Policy 6.1: Provide the Police Department with adequate personnel, equipment and state-of-the-art technology to effectively combat crime, meet existing and projected service demands, and provide crime prevention programs. These resources should be provided prior to anticipated needs.

Policy 6.2: Provide resources for additional police [and fire](#) services as needed to maintain average response times.

Policy 6.3: Provide and use up-to-date technology to improve crime prevention, fire suppression, and emergency services.

Policy 6.4: Continue to support, develop, and implement programs which improve the City's approach to fighting crime.

Policy 6.5: Provide ongoing public information and education regarding the City's Emergency Preparedness Program, homeland security, and other similar programs.

Policy 6.6: Establish designated evacuation routes throughout the City.



Policy 6.7: Maintain and update the City’s Emergency Operations Plan as needed, and ensure ongoing consistency between the General Plan and the Emergency Operations Plan and Fire Department Strategic Deployment Plan.

Crime Prevention

Preventing crime through public outreach and education and designing new spaces to promote secure streets and public places can both improve the quality of life enjoyed by Orange residents. The Police Department works with the community to promote safety by increasing awareness of personal and property crime risks. Crime prevention also involves educating the public about personal safety, business and neighborhood watch programs, and residential and business security.

Defensible space planning is another crime prevention method. Defensible space planning uses design techniques, building orientation, and features of the built environment to deter criminal activity and positively influence human behavior. Defensible space planning is also a key element in a local comprehensive crime prevention and safety plan. Crime Prevention through Environmental Design (CPTED) techniques incorporate four key considerations into site planning and architectural design: territoriality, natural surveillance, activity support, and access control.

GOAL 7.0: Improve community safety and reduce opportunities for criminal activity.

Policy 7.1: Provide crime prevention, community service, and education programs designed to prevent crime.

Policy 7.2: Promote and integrate crime-preventive characteristics and design features into all phases of the planning and development process.

Policy 7.3: Maximize natural surveillance through physical design features, including, but not limited to, visible entryways from surrounding structures and businesses; well-defined and visible walkways and gates; well-lighted driveways, walkways, and exteriors; and landscaping that preserves or enhances visibility.

Policy 7.4: Ensure that community areas and amenities such as transit stops, sidewalks, plazas, parks, trails, and bike paths are appropriately lighted, free of hiding places, and frequently patrolled.

Policy 7.5: Maximize security of public spaces, recreation facilities, and new development by encouraging complementary uses that support a safe environment.

Policy 7.6: Continue to involve the Orange Police Department in the project design and review process.

Disaster/Emergency Preparedness

The City recognizes that emergency preparedness planning can reduce the impact of hazards resulting from a natural or human-caused disaster.



GOAL 8.0: Emphasize emergency preparedness both within City Hall and throughout the community.

Policy 8.1: Sponsor and support public education programs for emergency preparedness and disaster response.

Policy 8.2: Coordinate disaster preparedness with other public and private agencies.

Policy 8.3: Coordinate emergency response and preparedness planning with other cities and public agencies in the region.

Policy 8.4: Develop and maintain a fully functioning Emergency Operations Center, and adequate and up-to-date emergency preparedness resources and plans.

[Policy 8.5: Establish and maintain a mass communication mechanism for the release of public information during a major event.](#)

Pedestrian and Bicycle Safety

A walkable city is achieved by creating safe streets and travelways. Establishing a feeling of safety is key to encouraging the use of trails, pedestrian paths, sidewalks, and bikeways to move about the community.

GOAL 9.0: Provide safe pedestrian and bicycle environments.

Policy 9.1: Enhance and maintain safe pedestrian and bicycle movement through the integration of traffic control devices, crosswalks, and pedestrian-oriented lighting, into the design of streets, sidewalks, trails, and school routes throughout Orange.

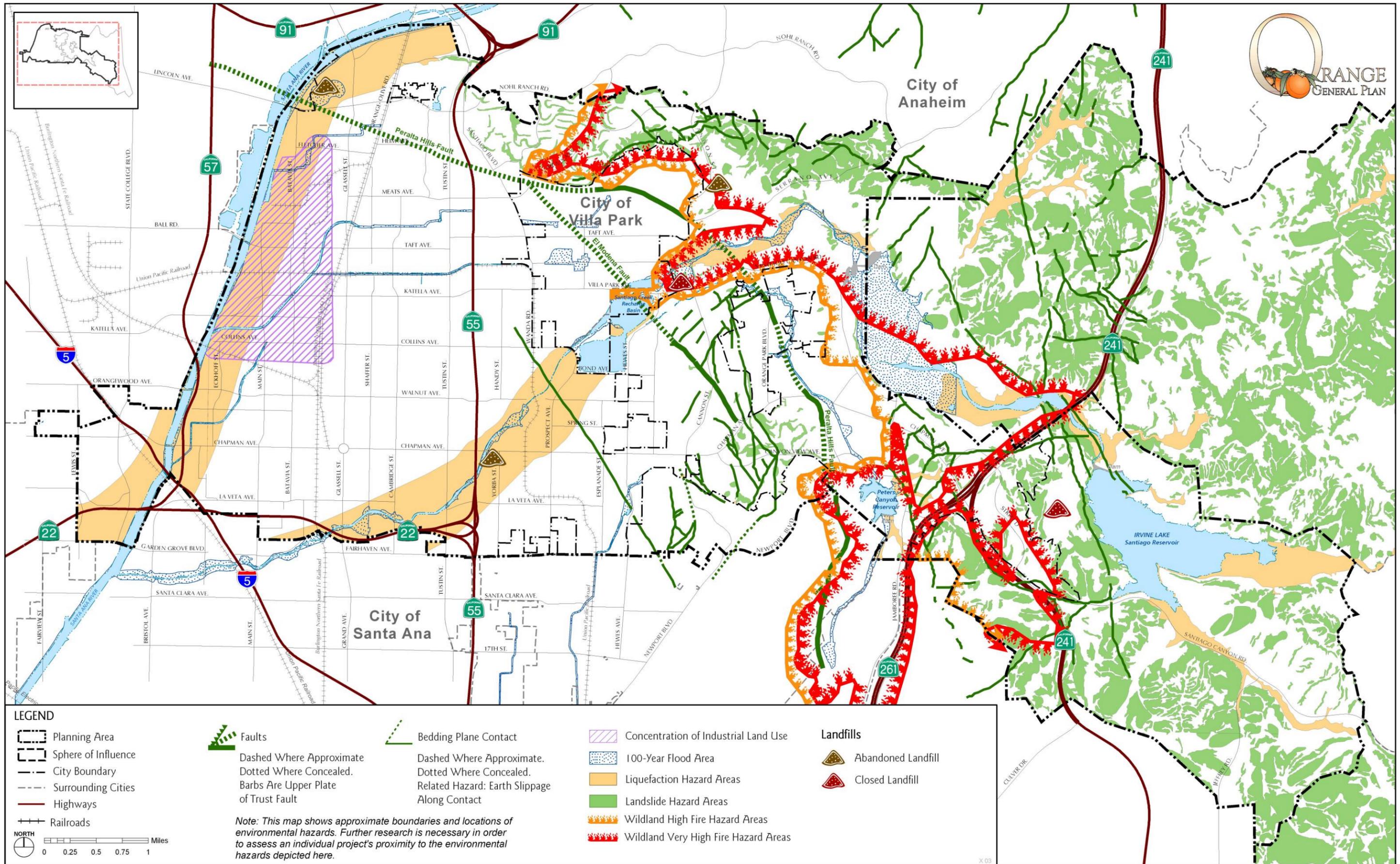
Policy 9.2: Support creation of safe routes that encourage children to walk or bike to schools and recreational facilities.

Policy 9.3: Identify and attempt to remove impediments to pedestrian and bicycle access including those associated with rail, street, freeway, and waterway crossings and poorly marked or maintained pathways and sidewalks.

PUBLIC SAFETY PLAN

As in all communities, human activities and natural conditions occurring in Orange have an effect on residents' quality of life. It is essential not only to provide an environment where businesses and residents can prosper and feel safe, but also to be prepared for emergency situations. The City can minimize hazards and protect public health and private property through a combination of appropriate land use planning and development review, and emergency preparedness planning.

Figure PS-1 presents graphically the City's safety policies and plan related to environmental and natural hazards. The Environmental and Natural Hazard Policy Map presents the locations of known seismic, geologic, flood, landfill, and wildland fire hazards. As applicable, the Public Safety Plan refers to this map for identification of significant locations, conditions, or development requirements.



LEGEND

Planning Area	Faults	Bedding Plane Contact	Concentration of Industrial Land Use	Landfills
Sphere of Influence	Dashed Where Approximate	Dashed Where Approximate.	100-Year Flood Area	Abandoned Landfill
City Boundary	Dotted Where Concealed.	Dotted Where Concealed.	Liquefaction Hazard Areas	Closed Landfill
Surrounding Cities	Barbs Are Upper Plate	Related Hazard: Earth Slippage	Landslide Hazard Areas	
Highways	of Trust Fault	Along Contact	Wildland High Fire Hazard Areas	
Railroads			Wildland Very High Fire Hazard Areas	

Note: This map shows approximate boundaries and locations of environmental hazards. Further research is necessary in order to assess an individual project's proximity to the environmental hazards depicted here.

Note: Large format map available at the Community Development Department / Source: Federal Emergency Management Agency 2000, Source: California Department of Conservation 2007, California Integrated Waste Management and California Energy Commission 2003



Geologic and Seismic Hazards

Like many cities in Southern California, Orange faces geologic and seismic hazards, specifically earthquakes, earthquake-induced landslides, and liquefaction. The planning area encompasses two general types of terrain: an alluvial plain that underlies the central and western parts of the City, and a series of low hills (foothills of the Santa Ana Mountains) characteristic of the east side of the City and the Sphere of Influence. Generally, the alluvial plain is underlain by many thousand feet of fluvial and floodplain sediments, and certain areas of the plain adjacent to major watercourses (the Santa Ana River and Santiago Creek) are susceptible to flooding and seismically-induced liquefaction. However, the potential for landslides is low due to the limited relief of the alluvial plain. Conversely, the hilly section is underlain by bedrock (mostly late Tertiary marine and non-marine sediments); this area is generally less susceptible to liquefaction but certain areas may be prone to earthquake-induced landslides, depending upon the character of the underlying bedrock.

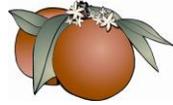
Earthquakes

An earthquake is a manifestation of the constant movement and shifting of the earth's surface. Movement occurs along fractures or faults, which represent the contact point between two or more geologic formations. Earth movement, known as seismic activity, causes pressure to build up along a fault, and the release of pressure results in the ground-shaking effects we call an earthquake.

Earthquake magnitude generally is measured on a logarithmic scale known as the Richter Scale. This scale describes a seismic event in terms of the amount of energy released by fault movement. Because the Richter Scale expresses earthquake magnitude in scientific terms, it is not readily understood by the general public. The Modified Mercalli Scale, on the other hand, describes the magnitude of an earthquake in terms of actual physical effects. Table PS-1 compares Modified Mercalli Scale intensities to Richter Magnitude intensities.

Fault Rupture

The potential for fault rupture would exist along the traces of active faults. No known Alquist-Priolo fault zone is located in the Orange planning area. However, as shown on Figure PS-1, portions of the planning area are traversed by two faults: the Peralta Hills Fault and the El Modena Fault. The Peralta Hills Fault runs from the crossing of Lincoln Avenue over the Santa Ana River on the northwest, easterly along the base of the Peralta Hills and into the City of Villa Park, then southerly into the hills west of Peters Canyon Reservoir. The El Modena Fault runs from its intersection with the Peralta Hills Fault at the base of the Peralta Hills, southeasterly to Chapman Avenue. Both the Peralta Hills Fault and the El Modena Fault are classified as possibly active by the Southern California Earthquake Data Center. Displacements along these two faults are smaller than those along the more prominent regional faults, and the maximum probable earthquake magnitudes would be much less than those along the regional faults. The City will continually update development standards and adopt the latest building construction codes to minimize seismic and related geologic hazards associated with these faults.



**Table PS-1
Earthquake Magnitude and Intensity Comparison**

Descriptor	Richter Magnitude	Modified Mercalli Index Intensity - Description
Not felt	Lower than 3.0	I. Not felt except by very few persons under especially favorable conditions.
Weak	3.0 - 3.9	II. Felt only by a few persons at rest, especially on upper floors of high-rise buildings. Delicately suspended objects may swing. III. Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing automobiles may rock slightly. Vibrations like passing of a truck.
Light	4.0 - 4.9	IV. During the day felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
Moderate		V. Felt by nearly everyone; many awakened. Some dishes and windows broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
Strong	5.0 - 5.9	VI. Felt by all, many frightened and run outdoors. Some heavy furniture moved, few instances of fallen plaster and damaged chimneys. Damage slight.
Very strong		VII. Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars.
Severe	6.0 - 6.9	VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed.
Violent		IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
Extreme	7.0 - 7.9	X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks.
	8.0 and higher	XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly. XII. Damage total. Waves seen on ground surface. Lines of sight and level are distorted. Objects thrown into the air.

Source: United States Geological Survey National Earthquake Information Center, October 2002.

Ground Shaking

Orange is vulnerable to ground shaking caused by seismic events along large regional faults in the area. These faults include the Newport-Inglewood Fault (located approximately 15 miles southwest of Orange along the coast near Newport Beach), the Elsinore Fault (which crosses the Santa Ana River Canyon about five miles northeast of Orange), and the San



Andreas Fault (which is parallel to the Elsinore, located approximately 40 miles northeast of Orange). Each of these faults has numerous branches and associated faults and, therefore, has associated fault zones. Movement along any of these fault zones has the potential to cause widespread upset in Orange. The potential for ground shaking within the City depends on the distance to the fault and the intensity of a specific seismic event along the fault. Also, areas underlain by bedrock at shallow depths (as in the eastern part of the planning area) would tend to be less affected than areas underlain by thick sequences of unconsolidated alluvium.

Figures PS-2 and PS-3 show the effects of two maximum probable events, a magnitude 8.3 earthquake along the San Andreas Fault and a magnitude 7.5 earthquake along the Newport-Inglewood Fault. The ground-shaking effects on areas within Orange are shown in terms of the Modified Mercalli scale (See Table PS-1). The maximum Mercalli intensity, IX, at the southwest corner of the city under a 7.5 magnitude Newport-Inglewood fault scenario, indicates potential for great damage to substantial buildings and damage to underground pipes even in specially designed structures.

Landslides and Liquefaction

Landslides can occur when strong ground movement such as an earthquake shakes loose soil and causes land and debris to lose stability and slide. Liquefaction occurs when moisture-saturated soils lose stability during seismic conditions. Structures built on such soils may collapse and result in damage and loss.

Portions of the planning area most susceptible to liquefaction and landslides are identified on the Environmental and Natural Hazards Policy Map (Figure PS-1). Earthquake-induced landslides are most probable in poorly consolidated or semi-consolidated sedimentary rock, characteristic of the low hills of the northern and eastern parts of the planning area. Portions of the planning area susceptible to seismically-induced liquefaction include areas near the Santa Ana River and Santiago Creek. A smaller area of high liquefaction potential is present in the areas east of Panorama Heights, in Crawford Canyon. These alluvial plains are characterized by fluvial and loose, floodplain sediments.

To further protect the City from injury and structural damage due to geologic and seismic hazards, all new development will be required to abide by the most recently adopted City and state seismic and geotechnical requirements. All older buildings, particularly unreinforced masonry buildings, and buildings located near the Peralta Hills and El Modena Faults should be reinforced and strengthened to prevent damage to structures and loss of life in the event of an earthquake. The City will provide public education programs regarding geologic and seismic hazards and continue to cooperate with surrounding cities, regional, state, and federal government in programs designed to implement the most strategic and efficient actions to mitigate such hazards.

Flood Hazards

In Orange, flooding may result from either the overflow of watercourses due to excessive and unusual storm run-off, or from failure of dams and/or water storage reservoirs.



Natural Flood Hazards

Flood hazards related to storm events generally are described in terms of the “100-year flood.” As its name implies, the 100-year flood is the largest flood event which may be expected to occur within a 100-year period. This flood is considered a severe flood but one which can be reasonably predicted and therefore reasonably mitigated. As shown in Figure PS-1, the 100-year flood plains shown in Federal Emergency Management Agency (FEMA) maps indicate that the stream drainage areas along the Santa Ana River and Santiago Creek are subject to flooding by the largest storm event in 100 years or within 100 to 500 years. The 100 year flood areas also include the western portion of the planning area, bounded by the Santa Ana River and the city boundary, including The [Block Outlets](#) at Orange. The floodplain may be subject to modification by manmade facilities such as flood control basins, levees, and concrete-lined stream channels.

Additionally, according to FEMA maps, a flood area determined for the 100-year storm event (Zone A) is a reservoir water surface elevation of approximately 800 feet mean sea level (msl) as shown. Backwater into Santiago Creek, Limestone Creek, and immediately adjacent to Santiago Reservoir tributary drainage also reaches this elevation. As development in the hillside and basin areas progresses, runoff and absorption rates will be altered. Adequate infrastructure will be needed to ensure that the increased runoff can be handled without increasing the risk of flooding. Appropriate flood control measures will be implemented along Santiago Creek and throughout the planning area, where necessary, to reduce the risks from localized flooding.

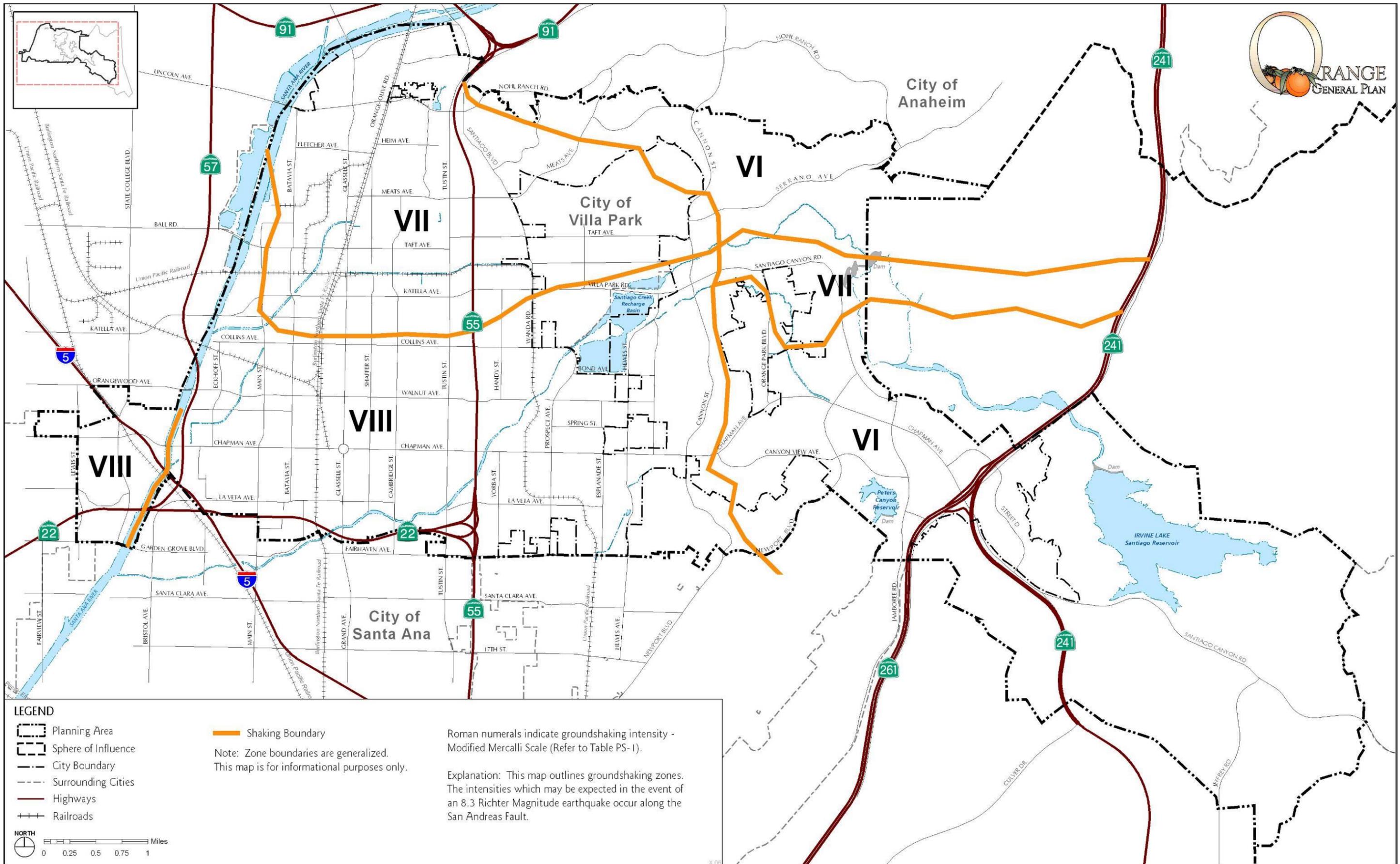
The National Flood Insurance Program, in which Orange participates, covers at a minimum all properties affected by the 100-year flood. To receive insurance benefits in the event of a flood, participating agencies must recognize these official flood boundaries and establish appropriate land use policy for the flood zones.

Additional flood prevention methods such as provision of detention basins and on-site stormwater drainage will be required of developers to reduce runoff into the City’s drainage facilities and to provide adequate drainage for new developments. To minimize runoff, the City will promote developments that incorporate permeable surfaces within site design.

The City will direct development of critical public and private facilities such as medical, educational, and civic facilities to be located outside of flood zones. To mitigate flood hazards to existing structures within flood zones, the City will offer educational programs for the public and City staff regarding flood hazards.

Dam Inundation Hazards

Failure of the Prado Dam in Corona (in Riverside County) could result in extensive flooding along the Santa Ana River. However, ongoing efforts by the Army Corps of Engineers to improve the Prado facility reduce the risk of dam failure to a very low level.

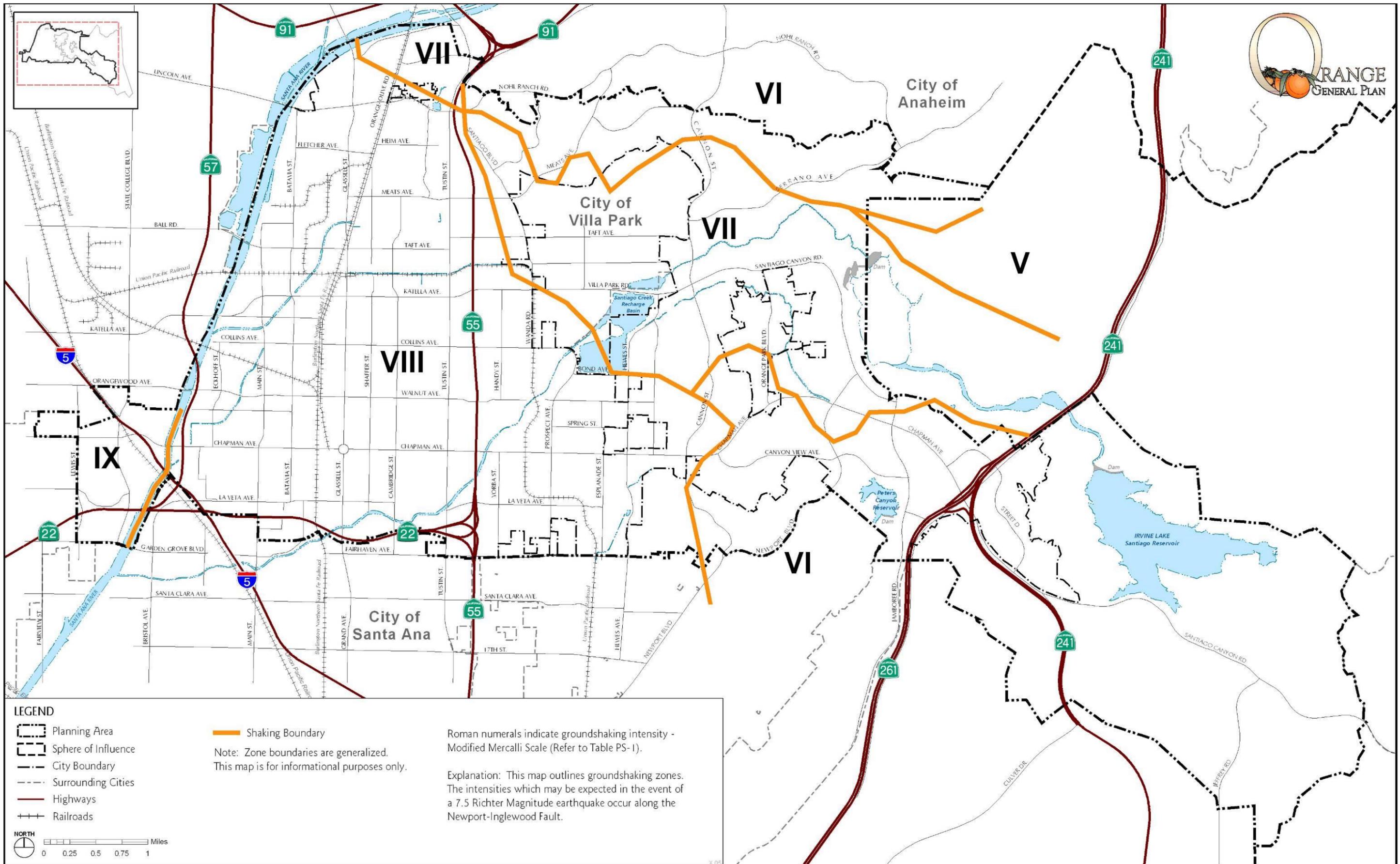


Roman numerals indicate groundshaking intensity - Modified Mercalli Scale (Refer to Table PS-1).

Explanation: This map outlines groundshaking zones. The intensities which may be expected in the event of an 8.3 Richter Magnitude earthquake occur along the San Andreas Fault.

Note: Zone boundaries are generalized. This map is for informational purposes only.

Figure PS-2. Potential Groundshaking Zones – 8.3 San Andreas Earthquake



LEGEND

- Planning Area
- Sphere of Influence
- City Boundary
- Surrounding Cities
- Highways
- Railroads

Shaking Boundary

Note: Zone boundaries are generalized. This map is for informational purposes only.

Roman numerals indicate groundshaking intensity - Modified Mercalli Scale (Refer to Table PS-1).

Explanation: This map outlines groundshaking zones. The intensities which may be expected in the event of a 7.5 Richter Magnitude earthquake occur along the Newport-Inglewood Fault.

Figure PS-3. Potential Groundshaking Zones – 7.5 Newport-Inglewood Earthquake



Two dams are present along Santiago Creek: Villa Park Dam and Santiago Dam (Irvine Lake). Both are located in the foothills section of east Orange. Peters Canyon Dam is located along Peters Canyon about two miles west of Irvine Lake. Like Santiago Creek, which flows generally northwest, Peters Canyon drains in a similar direction, along Handy Creek and ultimately into Santiago Creek. The areas below (downstream from) the dams are areas of potential flood hazard in case of catastrophic dam failure, which presumably could result from a major earthquake. Maps depicting the extent of potential dam inundation within the planning area are available for public review at the Community Development Department. The areas below the dams are also zoned for flood hazard on the FEMA maps, and the areas of potential flooding are similar in width to other areas along Santiago Creek and Peters Canyon (see Figure PS-1). Should one of these facilities fail, properties along Santiago Creek and a large section of Old Towne could be flooded. Flood flows would move at rates which would allow persons to be evacuated, but significant property damage could result. However, as is the case for Prado Dam, these facilities are maintained and safety-inspected to ensure that risks are minimized.

Olive Hills Reservoir is a water tank which sits on a hilltop in Anaheim above residential development in Orange. Reservoir failure would result in the flooding of canyons and residential tracts below the reservoir.

The City will minimize flood-related risks and hazards in the event of dam or reservoir failure, protecting residences and businesses by encouraging the County's Flood Control District to continue proper inspection of storm drains, ensure maintenance of the flood control facilities, and prevent earthquake damage. The City will also monitor water storage facilities to determine potential inundation hazards to surrounding properties.

Fire Hazards

As part of its efforts to prevent injury and loss due to fire hazards in undeveloped hillside and urban areas, the City will continue to educate the public, and provide up-to-date maps delineating areas that could face fire hazards. The City will ensure minimum road widths, clearance areas, and access to adequate fire protection services by enforcing Municipal Code provisions and City specifications, and conducting development review.

Wildfires

The Natural and Environmental Hazard Policy Map (Figure PS-1) shows that wildland fire hazard areas are located generally east of Jamboree Road within the planning area. Risks associated with fire hazards are generally reduced through compliance with municipal codes.

Development located within or adjacent to the identified wildland fire area in Figure PS-1 must prepare and implement a comprehensive fuel modification program in accordance with City regulations. The City will review new developments and fire services to ensure adequate emergency services and facilities to residents and businesses. Coordinating with adjacent local cities, and participating in regional, state, and federal programs will better prepare the City for wildfire emergencies and will reduce fire-related risks.



Urban Fires

Although updated fire code requirements reduce urban fire risks in Orange, structures in older parts of the City, especially in Old Towne, were constructed prior to adoption of modern standards. Structures used for the transport, production, and handling of combustible equipment in the industrial areas (shown in Figure PS-1) also pose a credible urban fire threat. The Fire Department will participate in environmental review procedures to reduce urban fire risks in these areas, and will help educate the public regarding fire prevention.

Hazardous Materials and Human-Caused Hazards

Hazardous materials are often found in solid, liquid, and gas forms that pose potential threats or actual harm to humans and the environment. Mishandled hazardous materials can leak into soils and water sources.

Hazardous Materials

The City follows the County's Hazardous Materials Inspection and Enforcement Plan. To prevent accidents, and ensure proper handling, routine inspections are conducted at businesses within the City that store, use, or handle hazardous materials. The City concentrates production of hazardous materials within its industrial area, separated from residential areas, educational uses, and institutional facilities (see Figure PS-1). The City also identifies businesses transporting, manufacturing, using, and storing hazardous chemicals, and requires such businesses to exercise caution and to mitigate potential negative effects on surrounding land uses prior to obtaining businesses licenses. Periodic assessment and analysis of potential threats related to hazardous materials will result in proper response to hazardous substance emergencies. In addition, plans for residential or for mixed-use projects on industrial or commercial lands will be required to undergo proper site assessment and remediation prior to development.

Residents may dispose of hazardous materials at the Household Hazardous Waste Collection Center in the City of Anaheim. Since the three landfill sites serving Orange (located in Irvine, Brea, and San Juan Capistrano) do not accept hazardous wastes, commercial hazardous wastes must be collected and disposed by private waste disposal companies.

Former Landfills

Areas formerly used as landfills contain wastes that can release toxins into the air or contaminate groundwater. As indicated in Figure PS-1, the planning area includes several abandoned and closed landfills. Three locations show abandoned landfills: Chapman Avenue and Yorba Street (the current site of Yorba Park), Lincoln and Glassell Avenue, and near Cannon and Serrano Avenue to the east of the City of Villa Park. Two locations show closed landfills: Santiago Canyon Road to the east of the City of Villa Park (the former Santiago Canyon Landfill) and in the hillside area west of Irvine Lake. The City will require appropriate site assessment and mitigation of hazardous toxins prior to development. If areas pose hazards that cannot be adequately mitigated, they will be designated as open space.



Pipelines

Several high pressure pipelines pass through Orange, delivering natural gas, liquid petroleum, and other products to Orange and cities beyond. Hazards associated with the pipelines include gas leaks, fire, and seepage of materials into the ground. The City Fire Department maintains maps indicating the location of these facilities, and uses these maps for safety planning, incident response, and development review purposes.

Underground Storage Tanks

The City's Fire Department has primary responsibility for managing risks associated with the presence of underground storage tanks (USTs). In addition to following the County's Inspection and Enforcement Plan, the Fire Department is also a participating agency in the local Certified Unified Program Agency (CUPA) established by the California State Water Resources Control Board. The City's Fire Department implements state requirements for USTs. The overall purpose of the UST Program is to protect public health and safety and the environment from releases of petroleum and other hazardous substances from tanks. The Hazardous Materials Specialists Leak Prevention Program element includes requirements for tank installation, construction, testing, leak detection, spill containment, and overflow protection. CUPAs are the implementing agencies for the Leak Prevention program element.

Cleanup of leaking tanks often involves a soil and groundwater investigation and remediation, under the direction of a regulatory agency. Responsible parties who believe cleanup at their site is complete and are denied case closure by the regulatory agency may consider filing a closure petition.

Aircraft Operations

The planning area is not located within any airport crash zones. However, because aircraft paths cross air space between the Costa Mesa Freeway (SR 55) and Newport Boulevard, the City is vulnerable to mid-air collisions of aircraft headed for John Wayne Airport or the U.S. Army Airfield in Los Alamitos, and of helicopters flying to medical centers. Such accidents could result in injury and structural damage to residents, homes, employees and businesses in Orange. To minimize the chance of such aircraft collisions, the City will work with the Federal Aviation Administration, the Orange County Airport Land Use Commission, California Department of Transportation (Caltrans), major medical institutions, and other agencies to ensure aircraft use flight paths that minimize the City's exposure to potential accidents.

The City will comply with the Airport Land Use Commission for Orange County's Heliports and Airport Environs Land Use Plan to ensure that future land uses located near helipads remain compatible. This plan requires that the construction of a new heliport or helistop complies with FAA and Caltrans permit procedures, as well as all applicable requirements of the City of Orange. Additionally, the plan requires that construction or alteration of structure in excess of 200 feet height complies with federal and state law (FAR Part 77 and PUC 21676(b), respectively) and with the requirements of the Airport Land Use commission for Orange County, as well as all applicable requirements of the City of Orange.



The City will ensure that development proposals including the construction or alteration of a structure more than 200 feet above ground level must fully comply with procedures provided by federal and State law, with the referral requirements of the ALUC, and with all conditions of approval imposed or recommended by the FAA and ALUC including filing a Notice of Landing Area Proposal (Form 7480-1). This requirement will be in addition to all other City development requirements.

Emergency Services and Safety

Achieving ideal law enforcement and emergency services requires coordination between the services provided by the City and the demands of the community. The City will first work with the community to identify the level of services desired. Then, the City will assess existing and future police and fire services, facilities, equipment, and personnel to determine its ability to meet current and future demands. The City's Police and Fire Departments will continue to use public outreach and education to increase community awareness regarding hazards, the City's Emergency Preparedness Program, and homeland security in Orange. In addition, the City will support programs that address crime and fire prevention activities. The Police and Fire Departments will continue proactive training and planning programs, and utilize state-of-the-art technology to improve response and increase public safety.

Fire Services

The main goals of the Fire Department are to prevent and minimize death and injury, environmental damage, and property loss. In addition to fighting fires, the Fire Department works to achieve these goals through public education, fire prevention, hazardous materials management, and fire investigations. Orange's Fire Department provides fire, paramedic, and ambulance services. Paramedic teams are located at eight stations, of which three also provide ambulance service with an average response time of 4 minutes, 47 seconds; and average transport unit response times of 5 minutes, 29 seconds. The Fire Department employs fire fighters who are also trained in paramedic techniques.

Members of the Fire Department are also trained in Urban Search and Rescue (US&R). As part of the Orange County Task Force 5 US&R Team, one of 28 operational FEMA US&R teams in the United States, US&R team members provide trained urban rescue teams for regional and national emergencies. The Department also has a Swift Water Rescue Team that deploys rescue equipment during flood hazards. In addition to training for more common hazards, firefighters also train to handle incidents involving weapons of mass destruction, learning procedures for identification, decontamination, evacuation, and shelter-in-place.

Public Education

Public education provides members of the community with tools to increase the level of safety in their homes and workplaces by preventing fire and other emergencies. It also equips them to minimize injury and property loss in the event that an emergency does occur. The Fire Department provides public education by request, using personnel as available.



New Construction

The Fire Department is actively involved with new development in the City. The Fire Plans Coordinator meets with developers early on in the project planning phase, attends internal project review meetings, and coordinates plan review with a contract plan reviewer. The New Construction Inspector witnesses on-site testing and installation of fire protection systems, and confirms that construction conforms to approved plans.

Annual Inspections

All businesses with fire permits receive annual inspections. Low-hazard, non-permitted businesses must fill out self-inspection worksheets and receive field inspections once every three years. The Office of the State Fire Marshal requires annual inspections for apartments and high-rise buildings. Many of the Fire Department's occupancy inspections are conducted by the Operations Division (firefighting personnel). However, the Prevention Division conducts inspections in institutional and hazardous occupancies, as well as other locations selected for their complexity.

State Fire Clearances

The State of California licenses various educational, institutional, and residential facilities, such as family day care homes, nursing homes, and residential care facilities for the elderly. As part of the licensing requirements, the Fire Department is responsible for issuing fire clearances after all state fire and life safety requirements have been met.

Fuel Modification and Weed Abatement

Wildfire is an ever-present threat in the eastern and northern portions of the planning area. This threat is managed by proactive fuel modification and weed abatement. Fuel modification is the progressive thinning and irrigation of selected vegetation to form increasingly fire resistant vegetation as brush fires approach buildings. It is required for all developments bordering the wildland-urban interface. Compliance with weed abatement standards provides defensible space between structures and dead brush, grasses, and other vegetation. Weed abatement inspections for required clearance are performed twice a year for all vacant City-owned and private lots. Private property owners and homeowners' associations are responsible for the continual maintenance of fuel modification installations and biannual weed abatement.

Police Services

The Orange Police Department responds to emergency situations and patrols neighborhoods and commercial areas within the City to promote a safe environment. The staff maintains official criminal records, investigates crime, and, in an emergency, assesses situations and quickly dispatches appropriate emergency responses. The Police Department also directs proactive crime prevention programs. The Department's headquarters is located on North Batavia Street. The Department operates several substations, including substations located in Santiago Canyon, at the [Block Outlets](#) of Orange.



To maintain the City's ability to serve current residents and businesses, applicants will be required to provide for adequate services and equipment to serve residents and businesses of new developments. Land uses will be evaluated and modified, if necessary, to facilitate access to emergency services, meet service standards, and ensure land use compatibility.

Orange's partnerships with other public agencies and businesses will also improve its emergency services. For example, the City receives fire and emergency medical dispatch services from the Metro Cities Fire Authority Communications Center that serves six other cities in the County. The City participates in the Standardized Emergency Management System (SEMS) for mutual aid and communication with other agencies during regional emergencies. Coordination with other cities and regions, and with state and federal agencies, will help address hazards both within and beyond the City's jurisdiction.

Crime Prevention

Reducing crime in the City enhances the living and business environment. A low crime rate attracts new businesses and gives residents a greater sense of security and community pride.

Public Outreach and Education

The Police Department works with the community to promote safety by increasing awareness of personal and property crime risks. Crime prevention also involves educating the public about personal safety, business and neighborhood watch programs, and residential and business security.

The Police Department's Crime Prevention Bureau coordinates Neighborhood Watch programs that emphasize the importance and effectiveness of crime reporting by neighbors. Neighborhood Watch allows neighbors to report suspicious behavior or incidents to the Police Department. The program encourages neighbors to get to know one another and keep an eye on their community, enabling the City to increase security for its residents. The program also provides public awareness and prevention seminars.

The City's crime prevention efforts include the i-Watch Program, a free Internet-based system that connects the City of Orange Police Department with residents, churches, schools, and businesses in Orange. This service allows the Police Department to e-mail subscribers crime alerts. The system also will let the police e-mail neighborhood-specific messages that alert the public to suspicious activity, and provide information about current crime trends and crime prevention techniques.

The Crime Prevention Bureau also offers several additional free crime prevention programs to the community, including security inspections of homes and businesses within the City, and electronic engraving for personal items and vehicles through the *Operation Identification* program. Educational presentations to community, business, and neighborhood groups are also available on such topics as child safety, identity theft prevention, personal safety, burglary prevention, and senior safety.

The City strongly supports these outreach and education activities, and the Police Department will continue to support community programs and neighborhood-level efforts toward crime prevention and education.



Crime Prevention Through Environmental Design

Orange values environmental design as a tool to help prevent crime. The concepts of CPTED offer non-invasive and permanent measures to prevent crime in the City. CPTED includes the following five concepts: territoriality, natural surveillance, activity support, access control, and maintenance.

- **Territoriality:** Demarcating the boundary of a property or an area through walls and fences can discourage intrusion. People tend to protect territory that they feel is their own and to respect the territory of others. Low decorative fences, artistic pavement treatments, well-designed signs, good property maintenance, and high quality landscaping express pride in ownership and identify personal space.
- **Natural Surveillance:** Arranging populated functions or rooms in homes and businesses to face the street allows easy surveillance by residents and employees. Crime is discouraged through the design and orientation of buildings and public spaces, along with placement of physical features, activity centers, and people in ways that maximize the ability of others to see what's going on. Conversely, barriers such as bushes, sheds, or shadows make it difficult to observe activity. Windows or doors oriented to streets and public areas, in conjunction with landscaping and lighting that promote natural surveillance from inside a home or building and from the outside by neighbors are effective means of passive crime prevention.
- **Access Control:** Circulation and site and building access can be controlled through designating paths and placing bollards or fences to limit access.
- **Activity Support:** Supporting activities on the street attracts people and encourages natural surveillance. Encouraging legitimate activity in public spaces assists in discouraging crime. Improvements such as a basketball court in a public park and community activities such as a clean-up day, block party, or civic or cultural event bring people out, get them involved, and help discourage vagrancy and potential illegal acts. Providing a mix of land uses, types of residential development, and public or quasi-public spaces encourages diverse households and patterns of activity, increasing security due to round-the-clock activity and more eyes on the street.
- **Maintenance:** Maintenance of sidewalks, street trees, lighting, and private property discourages negative behavior such as littering and vandalism.

CPTED concepts enable developers and designers to incorporate crime prevention measures into building design. Territoriality can be achieved by demarcating boundaries with various surface treatments and careful design to make intrusion and suspicious activities easy to identify. Building orientations that face the street, window placements and size, and provision of lighting allow neighbors to survey their neighborhood and discourage intrusion. Pathways and obstructions such as walls and gates allow property owners and the City to control access.

Crime prevention also requires public participation. The City's Neighborhood Watch Program relies on Orange neighbors as its most effective crime prevention tool. The program provides



training to volunteers who maintain neighborhood safety by being watchful and reporting suspicious behavior in their area.

Crime prevention relies upon programs implemented by government agencies. To reduce crime, the City will emphasize the need for well-lighted community areas and the use of extra surveillance in areas susceptible to high crime rates, such as parking lots. Complementary uses within mixed-use areas will be encouraged to reduce crime. Activity support is strengthened by intentionally placing programs and activities in areas that improve the perception of safety and discourage potential offenders.

The success of CPTED depends on maintenance of all these programs. Maintaining streets, lighting, and landscaping facilitate natural surveillance and access control. Maintaining private and public properties requires participation from property owners and City departments. Continuation and monitoring of CPTED programs will promote safety in Orange neighborhoods.

Disaster and Emergency Preparedness

Being prepared and knowing what courses of action to take in case of emergencies reduces the chance of injury and damage. Educating staff and the public regarding hazards prepares them mentally and physically, leading to quick and appropriate response. The City will initiate and support practices of emergency evacuation measures at home, at work and in schools to reduce the effects of emergencies on everyday life.

Emergency Operations Plan

In case of emergencies within Orange or originating from areas outside the municipal boundary, including foreign and domestic terrorist acts, the City will correspond with other jurisdictions, regions, and agencies to take appropriate actions. The City has an emergency plan which establishes emergency preparedness and emergency response procedures for both peacetime and wartime disasters. The plan is termed an “Emergency Operations Plan,” prepared in accordance with the State Office of Emergency Services guidelines for multi-hazard functional planning.

The plan consists of three parts: 1) a basic plan; 2) annexes which address specific functions and duties of response agencies; and 3) a directory of emergency response resources. Rather than focusing on specific responses for specific hazards, as contingency plans have done in the past, the City’s plan concentrates on specific agency response for any type of disaster. For example, in the event of an earthquake, flood, or industrial accident, the Orange Fire Department is responsible for fire suppression, emergency medical care, and rescue operations.

The various annexes in the City’s Emergency Operations Plan outline emergency responsibilities by type of operation, such as “Fire and Rescue” or “Care and Shelter.” Table PS-2 summarizes emergency operation responsibilities of various City departments.



**Table PS-2
Emergency Operations Responsibilities**

	Alerting and Warning	Communications	Situation Analysis	Management	Public Information	Radiological Protection	Fire and Rescue	Assess Control	Law Enforcement	Medical	Public Health	Coroner	Care and Shelter	Movement	Rescue	Const. and Engineering	Supply/Procurement	Personnel	Transportation	Utilities	
City Departments																					
Police	■	■	■	■	■			■	■			■		■	■						
Fire	■	■	■	■	■	■	■			■					■	■					
Public Works	■	■	■	■				■			■			■	■	■				■	■
Community Services													■	■						■	
Community Development			■		■											■					
Finance				■													■				
Personnel																		■			
Library					■								■						■		
City Attorney				■																	
City Clerk					■																
City Manager				■	■																
Outside Agencies																					
County Health											■										
Red Cross													■								

Notes: ■ Supporting Agency/Organization ■ Principal Agency/Organization

Emergency Access and Evacuation

All City arterials are recognized as primary emergency response routes. In addition, non-arterials can be secondary emergency response routes. The City’s Residential Neighborhood Traffic Management Program, which identifies traffic management and traffic calming tools, specifies that emergency vehicle access should be accommodated consistent with response standards with implementation of appropriate traffic management measures. Additionally, if current emergency vehicle access does not meet existing response standards, traffic calming efforts should not further degrade response times.

The City’s Emergency Operations Plan does not indicate evacuation routes for emergency situations. The routes of escape from disaster-stricken areas will depend on the scale and scope of the disaster. For example, a flood occurring along the Santa Ana River would require evacuation of the City’s industrial area east toward the Costa Mesa (SR 55) Freeway. However, if a large fire occurred in the eastern portion of the industrial district, employees would evacuate to the west, toward the Santa Ana River.



Figure PS-4 provides a generalized version of the City’s evacuation corridors. Although emergency egress may vary depending on the type and scale of emergencies, it will most often take place on Chapman Avenue, Katella Avenue, Glassell Street, Lincoln Avenue, Orangewood Avenue, and Hewes Street. Most of these streets are wide, arterial roads with capacity to efficiently move residents in and out of the City. The City will continue to evaluate the viability of each of these routes to serve as evacuation corridors.

Emergency Shelters

In the event of either a natural or human-caused disaster, homes may be destroyed or be inaccessible for extended periods of time. Orange residents will require some form of temporary shelter. As Table PS-2 indicates, the Red Cross bears primary responsibility for providing emergency shelter to displaced residents. The Red Cross maintains a list of emergency shelters within and immediately adjacent to the planning area. Most of these emergency shelters, listed in Table PS-3, are public or private schools.

Table PS-3 Emergency Shelters/Assembly Points	
Primary Sites	
El Modena High School	3920 Spring, Orange
Orange High School	525 N. Shaffer, Orange
Villa Park High School	10842 Taft, Villa Park
McPherson Middle School	333 S. Prospect, Orange
Peralta Middle School	2190 Canal, Orange
Santiago Middle School	515 N. Rancho Santiago, Orange
Yorba Middle School	935 N. Cambridge, Orange
Cerro Villa Middle School	17852 Serrano, Villa Park
The Block Outlets at Orange Shopping Center	One City Boulevard
Secondary Sites	
All Elementary Schools	City-wide

Homeland Security

In the aftermath of the terrorist attacks on September 11, 2001, the City of Orange’s emergency preparedness and response services have become an even more critical function. Since the events of 9/11, a considerable amount of information has been generated on potential vulnerabilities, protective measures, and anti-terrorism and security technologies. The Police and Fire Departments recognize the need not only to learn from the lessons of 9/11, but also to collectively address the anti-terrorism planning and policy issues that most affect Orange residents. The goals, policies, and implementation programs associated with emergency preparedness also apply to readiness and response to terrorist acts.

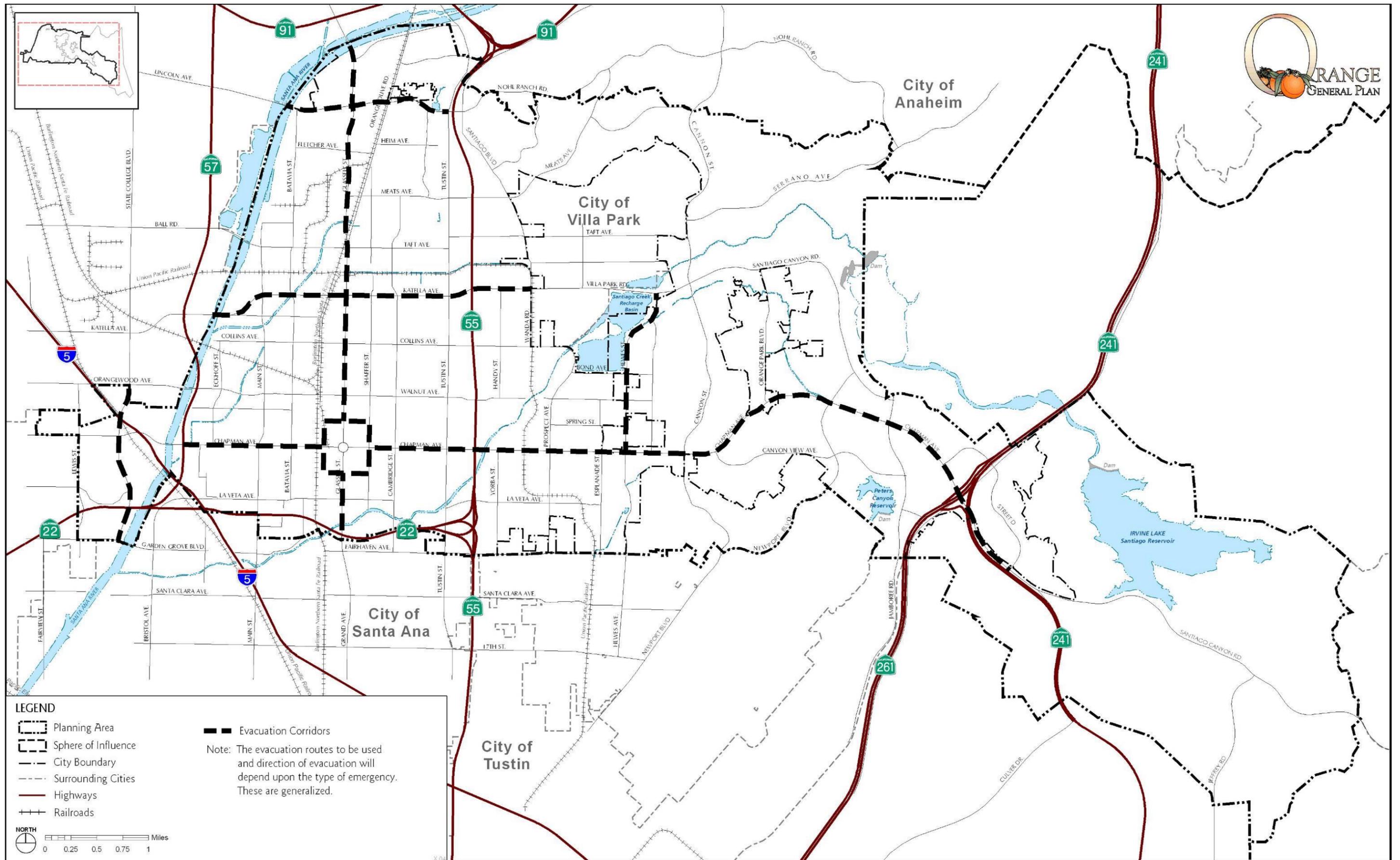


Figure PS-4. Generalized Evacuation Corridors



Pedestrian and Bicycle Safety

Providing a safe environment for pedestrians and bicyclists means designing streets that can carry vehicles, but that are also scaled for walkers and bikers. Furnishing streets with bike racks, benches, lighting, and landscaping; repairing missing or dangerous sidewalks; and designating bike paths are all techniques the City can employ to reduce pedestrian and bicycle accidents. A desirable pedestrian and bicycle environment also requires circulation improvements such as placing clear signs for bikers and pedestrians, and providing buffers and traffic calming to tame automobile traffic around pedestrians and cyclists.

Implementation of the City's goals and policies for pedestrian and bicycle safety will require an assessment of existing streets and of the City's ability to expand or add improvements to accommodate the needs of pedestrians and bicyclists in addition to automobiles. These policies are closely related to Circulation & Mobility Element policies that encourage vehicle safety. The City will also pay special attention to high-risk areas such as parking lots and areas surrounding schools and recreational facilities.

PUBLIC SAFETY IMPLEMENTATION

The goals, policies, and plans identified in this Element are implemented through a variety of City plans, ordinances, development requirements, capital improvements, and ongoing collaboration with regional agencies and neighboring jurisdictions. Specific implementation measures for this Element are contained in the General Plan Appendix.



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APPENDIX

IMPLEMENTATION

INTRODUCTION

This Implementation Plan will guide City elected officials, commission and committee members, staff, and the public in the overall effort to put into practice the adopted General Plan goals and policies. The purpose of the implementation programs is to ensure that the overall direction set forth in the General Plan is translated from general ideas to actions.

Each implementation program is a procedure, program, or technique that requires City action, either alone or in collaboration with non-City organizations or with federal and state agencies. Some of the implementation programs are processes or procedures the City currently administers on a day-to-day basis (such as review of development projects). Other implementation programs require new programs or projects. Completion of each of the identified programs is subject to funding availability.

CITY DEPARTMENTS AND DIVISIONS IMPLEMENTING THE GENERAL PLAN

Implementing and maintaining the overall General Plan is the primary responsibility of the Planning Division of the Community Development Department. However, because General Plan policies affect nearly every aspect of City government and of City services provided in Orange, other departments also play key roles in ensuring that General Plan policies and programs are carried out to achieve the community's vision. Each of the City's departments has taken part in the preparation of the General Plan, and many have implementation responsibilities described in this section. In some cases, elements of the implementation programs may carry through to individual departments' work plans or the City's Capital Improvement Program. The implementation programs are also intended to be consistent with, and supportive of, the City's Strategic Plan.

The following section summarizes the Mission Statements of the departments most responsible for implementing the General Plan. These statements provide a broad overview of the types of programs each department is likely to be responsible for implementing.

City Council

The City of Orange is committed to excellent service for our residents, businesses, and visitors.



City Manager

To manage the City's resources with leadership and vision.

Community Development

To work with the community in achieving and maintaining a better quality of life by providing professional guidance and coordination of all land planning and development activities, and by fairly and consistently implementing the City's regulations and policies.

Community Services

To enhance the quality of life and a safe community by providing lifelong learning opportunities, leisure activities, and recreational experiences.

Economic Development

To promote economic growth and housing opportunities to enhance the quality of life throughout the community.

Fire

To prevent or minimize the loss of life, damage to the environment, and property from the adverse effects of fire, medical emergencies, and hazardous conditions.

Library Services

To welcome and support all people in their enjoyment of reading and pursuit of lifelong learning, to preserve local history, and to provide equal access to information, ideas, and knowledge through books, programs, and technology.

Police

To perform law enforcement duties with innovative leadership; accountable to the people we serve, in order to ensure their safety and improve the quality of life in our diverse community.

Public Works

To provide and preserve our City's infrastructure, facilities, and programs, and to promote public health, safety, and welfare through courteous and timely customer service and efficient use of available resources.



CITY OF ORANGE STRATEGIC PLAN

The *City of Orange Strategic Plan* establishes a vision for how the City as an organization delivers services to its residents, businesses, and visitors. The intent of the plan is to define the purpose of the organization, establish realistic goals and objectives, present a vision of success that will guide the ongoing direction of the organization, and help to ensure the most effective use of City resources by focusing the resources on key priorities. The 2008-2013 Strategic Plan establishes the following goals:

- (1) Provide for a safe community.
- (2) Be a fiscally healthy community.
- (3) Enhance and promote the quality of life in the community.
- (4) Provide outstanding customer service.
- (5) Recognize, promote, and preserve Orange's rich heritage.

These Strategic Plan goals are integrated throughout the General Plan policies, and are reflected in the Implementation Plan programs and specifications. Therefore, the Strategic Plan goals are also reflected in the individual department work plans and the City Budget.

IMPLEMENTATION PROGRAMS

General Plan implementation programs are organized into the following five subsections corresponding to various areas and levels of City responsibility:

- I. Plans, Permits, Procedures, Agreements, and Ordinances Administered by the City
- II. Physical Improvements and Capital Projects
- III. Conditions or Requirements Placed Upon Applicants during Development Review
- IV. Planning and Outreach Initiatives
- V. Coordination with Other Agencies and Organizations

Each implementation program relates directly to one or more of the General Plan policies, drawn from various elements. For each program, the related General Plan policies are listed, along with the responsible agencies or City departments, the recommended time frame, and the likely funding source.

The implementation programs are intended for use as the basis for preparing the *Annual Report to the City Council* on the status of the City's progress in implementing the General Plan, as described in Section 65400 of the Government Code. Because many of the individual actions and programs also act as mitigation for environmental impacts resulting from planned development in accordance with the General Plan, the Annual Report can also provide a means of monitoring application of the mitigation measures as required by Public Resources Code Section 21081.6. To ensure continued consistency and usefulness, the programs should be updated concurrent with the City's annual budget process and whenever the General Plan is amended or updated.

Implementation programs corresponding to the goals and policies set forth in the Housing Element are listed within the Housing Element, rather than within this Appendix.



I. Plans, Permits, Procedures, Agreements, and Ordinances Administered by the City

Program I-1 Zoning Code Update

~~Upon adoption of the General Plan, the City will initiate an update to the Zoning Code. The City will update, will~~ revise and/or establish new zoning standards to implement policies in the Land Use, Noise, Urban Design, and Cultural Resources & Historic Preservation Elements. ~~This and a~~All future updates to the Zoning Code will include an active public participation process. Until such time as the City adopts the Zoning Ordinance [amendments](#), all new development shall comply with ~~the lighting, design, viewshed, and related~~ [the](#) standards set forth in the current Zoning Code, or the standards established through a development agreement or specific plan for a particular development project.

The City ~~is currently working on creating mixed-use zoning standards. Upon completion of these standards, the City will update Table LU-3 in the Land Use Element to identify corresponding land use designations for each mixed-use zone district. Specific Zoning Code revisions related to mixed-use land use designations will be covered in~~ updated design standards [for Old Towne and the Southwest Redevelopment Project Area, and develop](#) new streetscape standards, ~~and the Old Towne Design Standards update to implement its mixed-use land use objectives.~~ The zoning code revisions will designate buffer zones and transitional areas to minimize land use incompatibilities between single-family residential areas and intensified commercial operations and mixed-use development. The Zoning Code revisions do not specify changes regarding noise in mixed-use areas; however, Implementation Program I-~~3130~~[330](#), “Noise Ordinance,” seeks to minimize the effect of noise generated from industrial land uses on adjacent land uses.

Specific revisions to the Zoning Code will be completed to address:

- Maximizing the amount of pervious surfaces in new and infill developments;
- Integration of crime prevention through environmental design (CPTED) principles into site plan and building design, including adequate safety lighting;
- Integration of complementary uses in support of a safe community environment;
- A designation process for cultural resources to be listed on the city’s ~~Local~~ [Register of Historic Resources](#), to include a broad range of historic resources including separate or individual buildings, structures, objects, and sites, as well as districts and archaeological resources;
- [A process for review of projects related to historic resources outside of the Old Towne Historic District.](#)
- Adaptive reuse of potential and listed historic resources—the city will consider provisions for including neighborhood character areas (NCAs) as a zoning overlay, and the following



planning areas may be considered for this zoning revision: El Modena, Cypress Street Barrio, and the railroad/packinghouse corridor;

- Development interface with Santiago Creek, the Santa Ana River, and other open space areas;
- Incorporation of sustainable development principles, such as the adoption of resource conservation measures for building codes and standards, and specifications for multi-modal transportation;
- Maintenance of the building security ordinance and addition of a CPTED element to those standards; and
- Preparation of development standards that address National Pollutant Discharge Elimination System (NPDES) requirements.

Agency/Department: Community Development Department, Police Department, Public Works Department
 Funding Source: General Fund, redevelopment funds
 Time Frame: Updated by December 2013 2016
 Related Policies:
 Land Use: 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8, 2.9, 4.1, 4.2, 4.4, 4.5, 5.1, 5.2, 5.3, 6.1, 6.2, 6.4, 6.7, 6.8, 6.9, 8.1
 Cultural Resources & Historic Preservation: 1.3, 1.4, 1.5, 2.1, 2.3, 3.2, 4.5
 Public Safety: 2.3, 2.4, 3.3, 7.2, 7.5, 7.6, 9.1
 Noise: 1.1, 1.2, 1.3, 2.1, 2.2, 3.1, 4.3, 5.1, 5.2, 5.3, 6.1, 6.2, 7.3
 Urban Design: 1.1, 1.4, 1.7, 4.1, 5.1, 5.2, 5.3, 6.1, 6.3, 6.6
 Economic Development: 1.1, 1.3, 1.4, 4.5, 5.3, 5.5

Program I-2 Land Use Policy Map and Focus Area Development Objectives

Ensure that City land use decisions are consistent with the policies of the Land Use Element and the land uses shown on the Land Use Policy Map. Using the development review process and other tools outlined throughout the General Plan, ensure that the development objectives specified for each of the eight focus areas described in the Land Use Element are achieved for new development and infill projects located in the focus areas.

Agency/Department: Community Development Department
 Funding Source: General Fund
 Time Frame: Ongoing
 Related Policies:
 Land Use: All
 Economic Development: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 3.1, 3.2, 3.3, 3.4, 7.1, 7.2



Program I-3 Specific Plans and Neighborhood Plans

Prepare, adopt, and implement specific plans and neighborhood plans consistent with state law to establish permitted densities, intensities, and uses within Orange for the systematic implementation of the General Plan.

Continue to implement and update, as needed, the following adopted specific plans and neighborhood plans:

- Archstone Gateway
- Chapman University
- East Orange General Plan (1975)
- Immanuel Lutheran Church
- Orange Park Acres
- Pinnacle at Uptown Orange
- St. John’s Lutheran Church and School
- Santa Fe Depot Area
- Serrano Heights
- Upper Peters Canyon

New specific plans may be permitted elsewhere within the planning area in the future. Through the specific plan process, encourage developers to include or provide:

- Context sensitivity and connectivity to surroundings,
- Complementary mix of uses,
- Pedestrian-oriented places,
- Transit-oriented design,
- Public spaces,
- Green spaces, and
- CPTED design features.

Agency/Department:	Community Development Department
Funding Source:	General Fund, redevelopment funds , private property owners
Time Frame:	As needed
Related Policies:	
Land Use:	2.1, 2.4, 3.4, 5.1, 5.2, 5.3, 5.5, 5.8, 5.9, 6.7, 6.10, 6.11, 7.1, 7.2
Circulation & Mobility:	3.2, 3.3
Public Safety:	7.2
Urban Design:	1.1, 5.1, 5.3, 6.1, 6.2, 6.4

Program I-4 Plans, Standards, and Guidelines

Adopt, review, implement, and update as necessary the following master plans, standards, and guidelines:

- *Bikeways Master Plan*



- Residential Neighborhood Traffic Management Program
- Recreational Trails Master Plan
- Park Facilities, Recreation, and Community Services Master Plan
- Grading Ordinance and hillside development regulations
- Scenic highway standards for Santiago Canyon Road, Jamboree Road, and Newport Boulevard
- Historic Preservation Design Standards ~~for Old Towne~~
- Design guidelines and/or standards for large complexes ~~or districts of potential or listed historic resources~~
- [Historic preservation design standards for other historic districts and for individually listed historic resources.](#)
- Infill Residential Guidelines
- Street Tree Master Plan
- Master Utility Undergrounding Plan
- Tustin Street Design Standards
- Design standards for areas where the General Plan is changing land uses, including the Southwest Project Area, Chapman Avenue, Katella Avenue, and South Main Street
- Emergency Operations Plan and evacuation routes
- Water Master Plan
- Urban Water Management Plan
- Sewer Master Plan
- Storm Drain Master Plan
- NPDES Local Implementation Plan ~~and Drainage Area Management Plan~~
- Public Library Facilities Master Plan
- ~~Redevelopment Plan~~
- Noise standards and guidelines for new construction in mixed-use districts
- Santiago Creek Vision Plan

Agency/Department: Community Development Department, Public Works Department, Community Services Department, Police



<p>Funding Source:</p> <p>Time Frame:</p> <p>Related Policies:</p> <p style="padding-left: 20px;">Land Use:</p> <p style="padding-left: 20px;">Circulation & Mobility:</p> <p style="padding-left: 20px;">Natural Resources:</p> <p style="padding-left: 20px;">Cultural Resources & Historic Preservation:</p> <p style="padding-left: 20px;">Public Safety:</p> <p style="padding-left: 20px;">Urban Design:</p> <p style="padding-left: 20px;">Economic Development:</p> <p style="padding-left: 20px;">Infrastructure:</p>	<p>Department, Fire Department, Library Services Department, Economic Development Department</p> <p>General Fund, redevelopment funds, development fees, private contributions</p> <p>Ongoing</p> <p>1.5, 1.7, 2.6, 2.7, 5.5, 5.6, 6.3, 6.4, 6.5, 7.1, 7.2</p> <p>1.4, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 6.1, 6.2</p> <p>1.1, 1.2, 2.13, 2.14, 2.15, 2.16, 5.1, 5.3, 5.5, 5.6, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 7.1</p> <p>1.1, 1.3, 1.6, 5.1, 5.2, 5.3, 5.4, 5.5</p> <p>6.6, 6.7, 8.4</p> <p>1.1, 1.2, 2.5, 5.3, 6.1, 6.2, 6.3, 6.6</p> <p>2.4, 5.1, 5.2, 5.3, 6.1, 6.2</p> <p>1.1, 1.2, 4.2</p>
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Program I-5 Transfer of Development Rights Ordinance

Adopt a Transfer of Development Rights (TDR) ordinance to allow TDRs for the following purposes:

- To increase levels of residential densities at appropriate sites in areas designated Urban Mixed-Use, as described in Table LU-3 in the Land Use Element;
- To encourage well-designed high-rise development consisting of buildings 10 stories or higher at identified locations, as described in Table LU-4 and shown on Figure LU-8 in the Land Use Element;
- To expand and preserve open space in the Urban, Old Towne, and Neighborhood mixed-use land use designations, as described in Table LU-4 in the Land Use Element; and
- To provide incentives for preservation of listed historic resources or contributors to listed historic districts.

In each case, a Development Agreement between the property owner and City of Orange will be required.

<p>Agency/Department:</p> <p>Funding Source:</p> <p>Time Frame:</p> <p>Related Policies:</p> <p style="padding-left: 20px;">Land Use:</p> <p style="padding-left: 20px;">Natural Resources:</p> <p style="padding-left: 20px;">Cultural Resources & Historic Preservation:</p>	<p>Community Development Department</p> <p>General Fund, redevelopment funds</p> <p>Complete by 2013</p> <p>2.2, 2.3, 2.8, 5.5</p> <p>4.7</p> <p>3.2</p>
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Program I-6 Prepare Design Guidelines

Prepare new design criteria for public gathering spaces, commercial areas, rural development character, viewshed protection and preservation, and additional policies for mixed-use development and transit-oriented development as needed. New design criteria should also include landscape standards that provide open space buffers and other appropriate transitions between lower density, single-family neighborhoods and higher density development. Design criteria should also address standards for the provision of community gathering spaces within private development, incentives to provide accessible open spaces in commercial and mixed-use corridors, and guidelines for the preservation of visual points of interest throughout the community.

Agency/ Department:	Community Development Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Update complete by 2013
Related Policies:	
Land Use:	2.7, 2.8, 2.10, 8.1
Natural Resources:	1.3, 2.8, 7.5
Urban Design:	2.1, 2.4, 2.6, 2.7, 3.1, 3.2, 3.3, 3.4, 4.1, 4.2, 4.5, 6.1, 6.2, 6.6

~~**Program I-7 Redevelopment**~~

~~Continue to implement and update the Redevelopment Agency’s Five-Year Implementation Plan in accordance with the requirements of the Health and Safety Code.~~

~~Use redevelopment resources to attract desired businesses and land uses to the designated focus areas consistent with the recommendations of the Land Use and Economic Development Elements. Pursue lot consolidation of irregular or small lots to assemble development sites to accommodate desired uses as needed.~~

~~Evaluate the potential for adding new areas to the Redevelopment Project Area, and update and/or amend the Redevelopment Plan(s) accordingly.~~

Agency/Department:	Economic Development Department
Funding Source:	Redevelopment funds
Time Frame:	Ongoing
Related Policies:	
 Land Use:	3.1, 3.2, 4.1, 4.4, 4.5, 5.2, 5.3, 8.2
 Economic Development:	1.7, 3.1, 3.2, 4.3, 5.1, 5.4, 7.1



Program I-8 Code Enforcement

Continue to enforce property maintenance standards, adopted City Building Code, the Zoning Ordinance, the Noise Ordinance, and other provisions of the Orange Municipal Code.

Agency/Department:	Community Development Department, Police Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	5.5, 6.1, 7.5
Urban Design:	5.2, 6.2
Noise:	1.2, 1.4, 7.2, 7.3
Public Safety:	3.3, 9.1
Economic Development:	4.1, 4.2

Program I-9 Building and Fire Codes

Continually update building and fire codes to:

- Ensure that new development and retrofitted development reduce potential damage from earthquakes, floods, fire, wind, liquefaction, and other natural hazards; and
- Incorporate increased energy efficiency and green building and sustainable development strategies.

Agency/Department:	Community Development Department, Fire Department, Economic Development Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Public Safety:	1.1
Noise:	5.1, 6.1

Program I-10 City Master Plan of Streets and Highways

Use the established Capital Improvement Program process to implement the circulation system shown on the City Master Plan of Streets and Highways (Figure CM-2), the City will secure funding for roadway improvements, will design and build new roadways, and will complete roadway repairs and improvements. Future roadways must meet roadway classification design specifications and performance criteria. To reduce the impacts of traffic



on residential areas, encourage through traffic to use higher classification arterials as designated within the City’s Master Plan of Streets and Highways.

Agency/Department: Public Works Department
 Funding Source: General Fund, **redevelopment funds**, development fees, and [Renewed Measure M funds](#)
 Time Frame: Ongoing
 Related Policies:
 Circulation & Mobility: 1.1, 1.3, 2.1, 2.2, 2.5
 Growth Management: 1.2, 1.11, 2.2
 Economic Development: 2.4, 6.1, 6.2

Program I-11 Critical Intersection Program

To ensure that traffic flows meet the level of service (LOS) standards established in the Circulation & Mobility Element, roadway capacity in areas with excess traffic will be improved by restricting on-street parking, improving signal timing, widening intersections, adding through and turn lanes, and using other transportation systems management measures. Monitor the performance of Critical Intersections identified on Figure CM-2 in the Circulation & Mobility Element on an ongoing basis. Ensure that Critical Intersections approaching LOS D are prioritized for improvement within the City’s Capital Improvement Plan.

Agency/Department: Public Works Department
 Funding Source: General Fund, **redevelopment funds** [Renewed Measure M funds](#), [development fees](#), [gas tax funds](#)
 Time Frame: Ongoing
 Related Policies:
 Circulation & Mobility: 1.2, 1.3
 Growth Management: 1.1, 1.11
 Economic Development: 2.4, 6.1, 6.2

Program I-12 Old Towne Parking District

Study the benefits of creating a parking district and the feasibility of expanding available public parking in areas surrounding the Plaza. Shared parking, consolidated parking facilities, parking structures, or underground parking should all be considered as potential strategies to provide additional off-street parking to meet future demands related to adaptive re-use and infill development in Old Towne.

Agency/Department: Public Works Department, Community Development Department, Economic Development Department
 Funding Source: General Fund, **redevelopment funds**
 Time Frame: Feasibility study completed by 2013
 Related Policies:
 Land Use: 2.5, 5.4
 Circulation & Mobility: 5.1, 5.2, 5.3, 5.4



Urban Design: 6.2
Economic Development: 4.1, 4.2, 6.2

Program I-13 Pedestrian-Oriented Streetscape Master Plan

Prepare, adopt, and implement a pedestrian-oriented streetscape master plan as part of the City’s decision to enhance the walkability of public spaces, with the goal of promoting multi-modal transportation options. This plan will include the City’s key commercial corridors, such as Tustin Street, Chapman Avenue, Main Street, and Katella Avenue. The master plan should integrate concepts discussed for these corridors throughout the General Plan related to pedestrian facilities, streetscapes, urban green zones, façade improvements, and signage, including:

- Identifying pedestrian links that need improvement and strengthening;
- Determining new pedestrian links to underserved areas;
- Ensuring adequate sidewalk widths to accommodate lighting, street trees, benches, and trash cans;
- Establishing design character, standards, and guidelines for proposed outdoor spaces, paseos, and pedestrian paths;
- Incorporating more functional and appealing outdoor spaces, paseos, and pedestrian paths within retrofits of current streetscapes as well as within new development;
- Integrating public open space (e.g., plazas, neighborhood parks, pocket parks) in commercial and mixed-use corridors;
- Providing transit amenities such as bus stops, shelters, and lighting;
- Helping to reduce conflicts between land uses;
- Determining entry or gateway street design elements and standards;
- Minimizing barriers to pedestrian and bicycle access; and
- Incorporating CPTED concepts.

The Plan should include sidewalk, transit, open space, and landscape design and standards. The planning process will include an active public participation component.

Agency/Department: Community Development Department, Public Works Department, Economic Development Department

Funding Source: General Fund, development fees, **redevelopment funds**

Time Frame: Adopt by ~~2015~~ [2018](#)

Related Policies:

Land Use: 2.6, 2.7, 2.8, 3.3, 5.7, 5.9, 6.3, 6.6, 6.8, 8.1, 8.3

Circulation & Mobility: 1.1, 4.7, 6.1, 6.2, 6.3

Natural Resources: 2.2, 7.3



Urban Design:	1.1, 1.2, 1.3, 3.4, 3.5, 4.7, 6.6
Public Safety:	7.4, 9.1, 9.2, 9.3

Program I-14 Streetscape Improvement Program and City Scenic Highways

Develop a Streetscape Improvement Program for major and minor streetscapes, bikeways, and trails that includes standard plans and design criteria for unified lighting, paving materials, and patterns, and landscaping such as street trees, median and slope planting, and landscaped parkways.

The Streetscape Improvement Program also includes development of specific standards to define and designate the following City Scenic Highways:

- Jamboree Road
- Santiago Canyon Road
- Newport Boulevard

Agency/Department:	Community Development Department, Public Works Department, Community Services Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Circulation & Mobility:	6.1, 6.2, 6.3
Natural Resources:	7.2, 7.3, 7.4, 7.5
Urban Design:	1.1, 1.2, 1.3, 1.4, 1.5, 1.7, 1.8, 3.4
Economic Development:	5.2

Program I-15 Operating Budget

Continue to adopt and update the City’s Operating Budget to maintain current levels of City services, public facilities and infrastructure, and coordinate development of community facilities and amenities and capital projects.

Agency/Department:	City Manager
Funding Source:	General Fund. Secondary sources include special revenue funds (such as Proposition 172, Renewed Measure M funds), gas tax funds, enterprise funds, capital improvement funds, and redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	1.2, 1.7
Natural Resources:	5.1, 5.2
Cultural Resources & Historic Preservation:	3.3, 3.4, 3.5, 5.2



Public Safety: 2.4
Economic Development: 2.2, 2.3

Program I-16 Certified Local Government Status

Apply to the Office of Historic Preservation (OHP) for inclusion in the Certified Local Government (CLG) program. Successful application includes meeting several requirements:

- Enact appropriate historic preservation regulations through an adopted historic preservation ordinance.
- Establish ~~an adequate and~~ a qualified historic preservation review commission.
- Maintain a system for the survey and inventory of historic properties.
- Provide for adequate public participation in the historic preservation program.
- Satisfactorily perform the responsibilities delegated to the Certified Local Government.

Agency/Department: Community Development Department
 Funding Source: General Fund
 Time Frame: Application ~~completed~~ submitted by ~~2012~~ 2016
 Related Policies:
 Cultural Resources &
 Historic Preservation: 1.1, 1.2, 1.3, 2.2, 3.1, 3.3, 3.4

Program I-17 Local Historic Register

Create the City of Orange Register of Historic Resources (Historic Register), which will serve as the local register of historical resources under the California Environmental Quality Act (CEQA). Automatically include all resources previously designated, listed, or determined eligible for listing within the National Register of Historic Places or California Register.

- Establish a process for handling voluntary requests for listing in the Historic Register. Support coordination with property owners of potential historic resources identified on the Orange Inventory, so that such potential historic resources can more readily be listed in the Historic Register.
- Establish a process for listing in the Historic Register those buildings, structures, objects, sites, or districts that meet the criteria.
- Establish procedures to remove historic resources from the Historic Register.
- Establish procedures for listing archaeological resources in the Historic Register. Employ appropriate criteria for evaluating potential significance of such archaeological resources



as historical resources or unique archaeological resources under CEQA. Encourage voluntary listing of eligible archaeological resources.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Register established by 2012 2015, maintenance ongoing
Related Policies:	
Land Use:	5.5
Cultural Resources & Historic Preservation:	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 3.1, 3.2, 3.3, 3.4, 3.5

Program I-18 Eichler ~~Homes~~ ~~Landmark~~ Historic Districts

Pursue historic landmark district designation for three Eichler ~~Homes~~ tracts. Notify property owners in three Eichler tracts—Fairhaven, Fairhills, and Fairmeadow—of the intent to list each of the three tracts separately as local historic districts. Follow established procedures for Historic Register listing of each. [Develop design standards and project review processed for Eichler Historic Districts.](#)

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Landmark Districts established by 2014 2015
Related Policies:	
Cultural Resources & Historic Preservation:	1.4

Program I-19 Historic, Cultural, and Archaeological Resources Survey

Continue to maintain an accessible and periodically updated inventory of potential historic resources. All surveyed properties will be included in the City’s Inventory of Historic Resources (Orange Inventory), and the Orange Inventory will be a valuable planning tool to be used in evaluating possible impacts a proposed project might have on previously evaluated potential and identified historic resources. Surveys and survey updates may be conducted by City staff, historic preservation professionals, and/or representatives of local preservation organizations.

Properties that have attained 45 years of age and are located within a designated historic district or Neighborhood Character Area (NCA) shall be subject to survey [and assessment by a qualified architectural historian](#) prior to issuance of any permit for alteration or demolition.

Survey other areas where potential for historic resources may exist.

Identify smaller character areas that contain concentrations of potential or listed historic resources that reflect a unique sense of time and place.



Use the Orange Inventory to identify potential historic resources for purposes of CEQA, National Historic Preservation Act (NHPA), and National Environmental Protection Act (NEPA) review of proposed projects. Only if potential historic resources in the Orange Inventory are listed in or eligible for listing in the California Register for CEQA or the National Register for the NHPA and NEPA shall they have a presumption of significance pursuant to CEQA Section 21084.1 and be treated as historical resources under CEQA.

Potential historic resources identified in the Orange Inventory may be listed in the Historic Register if they meet criteria for listing in the California Register. The City’s Historic Resources Inventory may be regularly updated by the Planning Division to reflect corrections and modifications to the associated database and survey forms without the need to bring those changes to the Planning Commission for adoption.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Cultural Resources &	
Historic Preservation:	1.1, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 4.1, 4.6
Urban Design:	5.4

Program I-20 Historic Preservation Incentives

Actively pursue grants, loans, and other incentives to encourage historic preservation. Consider implementing conservation easements.

Develop a revolving loan program for maintenance and rehabilitation work, consistent with design standards, on listed historic resources and on resources that are contributors to listed historic districts.

Develop a voluntary conservation easement program to preserve listed historic resources and contributors to listed historic districts. Provide a potential tax benefit to property owners. Establish a partnership with local preservation organizations to accept, hold, and manage conservation easements on historic resources. [Enable Mills Act contracts for additional designated historic districts.](#)

Agency/Department:	Community Development Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Cultural Resources &	
Historic Preservation:	1.4, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5
Urban Design:	5.4
Economic Development:	1.2, 5.3



Program I-21 Commemorative Plaque Program

Explore establishing a commemorative plaque program to allow public recognition of properties listed on the Historic Register. Develop and administer standards and guidelines for properties eligible for the commemorative plaque program.

Agency/Department:	Community organizations in coordination with the Community Development Department
Funding Source:	Private contributions
Time Frame:	Ongoing
Related Policies:	
Cultural Resources & Historic Preservation:	2.2, 3.1

Program I-22 Historic Context Statement and Survey

Officially recognize the Historic Context Statement prepared in tandem with the General Plan Update. Periodically update the Statement to add recent historical events.

Officially recognize the recently completed historical and archaeological resources survey prepared in tandem with the updated General Plan. Update and maintain the inventory using the City’s Geographic Information System (GIS).

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Cultural Resources & Historic Preservation:	1.1, 1.3, 1.6, 3.1

Program I-23 Neighborhood Character Areas

Designate El Modena, Cypress Street Barrio, the Railroad/Packinghouse Corridor, and Orange Park Acres as Neighborhood Character Areas (NCAs) by establishing an NCA overlay zone and appropriate standards and regulations in the Zoning Code.

Develop and administer design guidelines appropriate to each designated NCA.

Agency/Department:	Community Development Department, City Council
Funding Source:	General Fund
Time Frame:	Complete by 2016 2017
Related Policies:	
Cultural Resources & Historic Preservation:	1.1, 2.1, 2.2, 2.3



Program I-24 Community Character Design Elements

Update design guidelines to incorporate the elements of community design character that reflect Orange’s historic and cultural background. Require new development to incorporate the elements of the community’s character and design into its projects. Determine how to retrofit the existing commercial, industrial, institutional, and mixed-use areas to include the community character elements. Community character elements can include but are not limited to architectural style, landscape style, streetscape, and signage.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Urban Design:	3.2, 3.3, 4.5, 5.1, 5.2, 5.3, 6.6

Program I-25 Green Space Incentives

Seek and develop appropriate incentives for project applicants and developers that provide public access to private green spaces in new, infill, and existing development projects. Work to establish neighborhood identity through the use of green spaces.

Establish a program to transfer to the City, through land exchanges, purchases, or long-term no-fee leases, land that is not currently in productive use, such as derelict land, tax delinquent land, surplus road and highway rights-of-way, and other land located adjacent to existing open spaces, waterways, or trails.

Agency/Department:	Community Development Department, Community Services Department
Funding Source:	General Fund, grants, bond funding
Time Frame:	Complete by 2016
Related Policies:	
Land Use:	2.3, 2.8, 6.3, 6.4
Natural Resources:	1.1, 1.2, 1.3, 6.6, 7.1, 7.5
Urban Design:	3.5, 4.5

Program I-26 Joint-Use Agreements for Parks and Open Space

Continue to implement and expand the use of joint-use agreements to increase the parks and open space resources available to Orange residents. Specifically, seek to expand joint-use agreements with the Orange Unified School District, Chapman University, Southern California Edison, and the Orange County Flood Control District. Investigate conversion or joint use of surplus or otherwise underutilized lands, including railroad and public utility rights-of-way, for open space use.



Agency/Department: City Manager’s Office, Community Services Department,
Public Works Department

Funding Source: General Fund

Time Frame: Ongoing

Related Policies:

Land Use: 7.6

Natural Resources: 1.2, 5.3

Program I-27 Fire Hazard Information and Suppression

Continue to evaluate and update information available to the City regarding potential fire hazards and hazard areas. Provide public information regarding defensible space surrounding residences and businesses. Use Wildland Fuel Modification guidelines for controlling vegetation in undeveloped areas, and Wildland Urban Interface Code and weed abatement standards.

Agency/Department: Fire Department

Funding Source: General Fund

Time Frame: Ongoing

Related Policies:

Public Safety: 3.1, 3.2, 3.3, 3.4

~~Program I-28 Quiet Zones~~

~~Establish train horn “quiet zones” consistent with the federal Train Horn Rule along the Burlington Northern Santa Fe rail line. Coordinate with rail agencies and operators including the Orange County Transportation Authority (OCTA), Southern California Regional Railway Authority (SCRRA), and Federal Railroad Administration (FRA) in the planning of noise abatement along rail corridors.~~

~~Agency/Department: Public Works Department~~

~~Funding Source: General Fund, redevelopment funds, Measure M funds~~

~~Time Frame: Complete by 2012~~

~~Related Policies:~~

~~Circulation & Mobility: 1.5~~

~~Noise: 3.2~~

~~Economic Development: 6.1, 6.2~~



Program I-29 Hazardous Materials Monitoring

Continue to assess risks associated with hazardous materials and develop mitigation measures accordingly. Identify hazardous material release sites and ensure that the sites are appropriately remediated.

Agency/Department:	Fire Department, Public Works Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Public Safety:	4.1, 4.2, 4.3

Program I-30 Noise ~~Ordinance~~ Regulations

Continue to enforce the City’s Noise Ordinance limits ~~for industrial uses~~ to limit the effect of noise on ~~adjacent residential~~ land uses. ~~Update the Noise Ordinance to incorporate the new noise standards presented in the Noise Element and to ensure effectiveness in controlling noise sources.~~ Revise the ~~Noise~~ Zoning Ordinance to achieve the following:

- Limit the hours of deliveries to commercial, mixed use, and industrial uses adjacent to residential and other noise sensitive land uses;
- Limit the hours of operation for commercial/retail/entertainment uses to limit noise intrusion into nearby residential and other noise sensitive land uses;
- ~~Limit noise levels generated by commercial and industrial uses;~~
- ~~Limit outdoor industrial activities or operations to control excessive noise at adjacent residential properties;~~
- Limit the hours of operation of high noise-generating industrial equipment;
- Limit the hours of operation for refuse vehicles and parking lot sweepers if their activity results in an excessive noise level that adversely affects adjacent residential uses;
- Require the placement of loading and unloading areas so that commercial buildings shield nearby residential land uses from noise generated by loading dock and delivery activities. If necessary, additional sound barriers shall be constructed on the commercial sites to protect nearby noise sensitive uses;
- Require the placement of all commercial HVAC machinery to be placed within mechanical equipment rooms wherever possible. (Equipment manufacturer’s specifications for venting and access to outside air shall be maintained); and
- Require the provision of localized noise barriers or rooftop parapets around HVAC, cooling towers, and mechanical equipment so that line-of-sight to the noise source from the property line of the noise sensitive receptors is blocked. (Equipment manufacturer’s specifications for venting and access to outside air shall be maintained).



Agency/Department: Community Development Department, Police Department
 Funding Source: General Fund
 Time Frame: ~~Ordinance revisions complete by 2013~~ Ongoing
 Related Policies:
 Noise: 1.4, 1.5, 5.1, 5.2, 5.3, 6.2, 7.2, 7.3, 7.4

Program I-31 Orange Public Library Programs

Continue to implement the City’s *Public Library Facilities Master Plan (2002-2020)*. Continue to work to ensure that the California State Library–recommended standard of four volumes and 0.7 square foot per capita is maintained and that the City’s library services needs are met as future development occurs.

Continue to promote and provide additional resources for the Orange Public Library Local History Collection.

Maintain and enhance the Preservation Resource Center within the Orange Public Library & Local History Center that provides access to information about historic preservation regulations and benefits, technical assistance materials, and information about research methods and collections.

Agency/Department: Library Services Department
 Funding Source: General Fund, private contributions
 Time Frame: Ongoing
 Related Policies:
 Cultural Resources & Historic Preservation: 2.2, 3.1, 4.5, 4.6, 5.1, 5.2, 5.3, 5.4, 5.5

Program I-32 Flood Control and Storm Drain Facilities

Continue to inspect storm drains, remove debris from catch basins as needed, and evaluate and monitor water storage facilities to determine if they pose a water inundation hazard.

Agency/Department: Public Works Department
 Funding Source: General Fund
 Time Frame: Ongoing
 Related Policies:
 Natural Resources: 2.13, 2.14, 2.15, 2.17
 Public Safety: 2.3
 Infrastructure: 1.3, 1.6



Program I-33 Solid Waste and Recycling Services

Continue to contract for provision of solid waste and recycling services. Ensure that community needs for solid waste disposal and recycling are being met. Expand community outreach and education regarding residential recycling opportunities and household hazardous wastes.

Agency/Department:	Public Works Department
Funding Source:	General Fund, user fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	7.4
Infrastructure:	2.1, 2.2, 2.3

Program I-34 Noise Standards and Acoustical Studies

Review development proposals to ensure that the noise standards and compatibility criteria set forth in the Noise Element are met. Consult Noise Element guidelines and standards for noise compatible land uses to determine the suitability of proposed developments relative to existing and forecasted noise levels. Enforce the California Noise Insulation Standards to ensure an acceptable interior noise level of 45 A-weighted decibels (dBA) community noise equivalent level (CNEL) in habitable rooms. ~~Amend the Noise Ordinance to implement the noise standards presented in the Noise Element.~~

Develop noise impact analysis guidelines that describe the City’s desired procedure and format for acoustical studies. Acoustical studies will be required for all discretionary projects where any of the following apply:

- The project includes a noise-sensitive land use that is located within the existing or future 65 dBA CNEL contour for transportation noise sources.
- The project will cause future traffic volumes to increase by 25 percent or more on any roadway that fronts residential, institutional, or open space land uses.
- The project will expose a noise-sensitive land use to a stationary noise source or vibration source exceeding the standards outlined in the Noise Element. Such stationary sources may include mechanical equipment operations, entertainment venues, industrial facilities, and property maintenance.
- The project includes a noise-sensitive land use in the vicinity of existing or proposed commercial and industrial areas.
- The project is a mixed-use development that includes a residential component. The focus of this type of acoustical study is to determine likely interior and exterior noise levels and to recommend appropriate design features to reduce noise.



An acoustical analysis prepared in accordance with the Noise Element shall:

- Be the financial responsibility of the applicant seeking City approval of a project;
- Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
- Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and predominant noise sources;
- Estimate existing and projected cumulative (20 years) noise in terms of CNEL or L_{eq} , and compare those noise levels to the adopted standards and policies of the Noise Element;
- Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance;
- Estimate noise exposure after the prescribed mitigation measures have been implemented; and
- Describe a post-project assessment program that could be used to evaluate the effectiveness of the proposed mitigation measures.

Agency/Department:	Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	3.4, 6.10
Noise:	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 2.5, 3.1, 5.1, 6.1

Program I-35 Climate Action Plan

The City of Orange shall develop and adopt a Climate Action Plan (CAP). The CAP will have two primary objectives: (1) reduce total greenhouse gas (GHG) emissions in the City by at least 15 percent from current levels by 2020, and (2) create adaptation strategies to address the likely impacts of climate change on the City, such as increased risk of flooding, diminished water supplies, increased risks of wildfire, and risks to public health. The CAP will contain the following chapters:

Climate Change and Orange—The first chapter of the CAP will outline the City’s rationale and motivation for addressing climate change by developing and implementing the CAP. The chapter will provide a brief overview of the science behind climate change, will describe the potential impacts that climate change may create in Orange, and will outline state policy mandates to reduce GHG emissions.

Baseline GHG Emissions Inventory and Forecast— In this chapter, the City will calculate GHG emissions for the base year, forecast emissions in 2020 under a business-as-usual scenario,



and describe the GHG reductions necessary to achieve the City's adopted target. The City will make best efforts to evaluate all reasonable sources of GHG emissions. The chapter will identify GHG emissions and target levels per sector. Sectors to be described in the inventory will include municipal operations, residential, commercial, industrial buildings, motor vehicles, and waste. This inventory and forecast shall provide a benchmark for planning and monitoring progress in government operations and the community. The GHG inventory shall be conducted using a methodology consistent with that used by other local governments and will be completed within 1 year after the effective date of adoption of the General Plan.

GHG Emissions Policies and Measures— This chapter will describe the policies and measures that are necessary to reduce GHG emissions in the City and achieve the reduction target. Policies and measures will be created with public input from all stakeholders. Each measure will be enforceable, include a timeline, describe financing mechanisms, and assign responsibility to relevant agencies and departments. In addition to direct GHG reduction measures, the chapter will incorporate public education efforts to raise awareness on the importance of minimizing GHG emissions and methods for reducing emissions from individual lifestyles. These policies and measures will be developed within two years after the effective date of adoption of the General Plan. The effectiveness of policies and measures will be evaluated annually and will be modified as necessary to achieve the City's reduction goals.

Because the CAP is to be implemented over a period of several years, it is likely that the scientific, federal, and state policy frameworks surrounding climate change measures will evolve. The CAP will adapt its policies, measures, and programs to ensure successful reduction of GHG emissions, protection of the City, and compliance with regulations.

Protection and Adaptation Strategies—The fourth chapter of the CAP will describe strategies that will be used to protect the City from and facilitate adaptation to the potential effects of climate change. Potential effects to be evaluated include but are not limited to sea level rise, increased frequency and magnitude of flooding, diminished water supply, habitat loss, and possible effects on public health and the local economy. Each measure will include a timeline, describe financing mechanisms, and assign responsibility to relevant agencies and departments.

Benchmarks and Next Steps—In conclusion, the CAP will identify benchmarks, monitoring procedures, and other steps needed to ensure the City achieves its GHG reduction, protection, and adaptation goals. Monitoring and verifying progress on the GHG emissions reduction measures will be conducted on an annual basis. Monitoring will provide important feedback that can be used to demonstrate overall progress toward emissions reduction targets and improve measures over time. Benchmarks will be established to serve as intermediate goals and to motivate compliance with City and private-sector reduction targets. Benchmarks for strategic responses to climate change impacts should be based on the expected time scale of the specific impact and will be established during the development of individual strategic plans.

CAP Relationship to the General Plan—Implementation strategies identified in the CAP will be incorporated as implementation measures of the General Plan through amendment within one year of completion. Revisions to CAP policies and measures and subordinate strategic programs may require further General Plan amendments.



Agency/Department: Community Development Department
 Funding Source: General Fund, grants and state assistance (if available)
 Time Frame: To be developed and adopted by December 31, 2012
 Related Policies: See those policies identified in Table NR-1

Program I-36 Park Dedication Ordinance

Adopt a parkland dedication ordinance that requires dedication of parkland at a ratio of 3.0 acres per 1,000 population or payment of in-lieu fees, pursuant to Quimby Act requirements.

Agency/Department: Community Development Department, Community Services Department
 Funding Source: General Fund
 Time Frame: Complete by 2013
 Related Policies:
 Natural Resources: 5.6, 5.7

Program I-37 Vehicle Noise Reduction

Implement the following strategies to reduce vehicular traffic noise throughout the City:

- Review and designate local truck routes to reduce truck traffic in noise sensitive land uses areas.
- Consider the use of traffic calming devices, to reduce traffic speed in residential zones.
- Consider the use of alternative paving materials, such as open graded asphalt, to reduce traffic noise where determined feasible and cost efficient.

Agency/Department: Public Works Department, Community Services Department
 Funding Source: State and federal grants, Development fees
 Time Frame: Ongoing
 Related Policies:
 Noise: 2.1, 2.2, 2.3, 2.4, 2.5



II. Physical Improvements and Capital Projects

Program II-1 Capital Improvement Program

Continue to implement and update the City’s *Capital Improvement Program* (CIP) to:

- Address phasing, construction, and maintenance of improvements to roadways, infrastructure, streetscapes, signage, and City-owned parks throughout the City;
- Acquire and expend funds from available transportation financing and other programs to assist in financing new roadways and trails;
- Manage construction of new parks and improvements to current parklands and park facilities;
- Facilitate construction of a network of multi-use trails that connects the City’s parks and open spaces;
- Improve and expand Orange Public Library facilities;
- Ensure timely completion of required roadway infrastructure associated with new and infill development;
- Maintain City-owned and operated facilities; and
- Maintain publicly owned potential and listed historic resources.

Use the 7-year CIP process to prioritize, finance, and complete roadway, infrastructure, and parks projects identified in the CIP. Update the CIP on an annual basis to respond to changes in local priorities and available funding sources. Require future CIP update processes to include a public outreach component.

Agency/Department:	All departments
Funding Source:	General Fund, redevelopment—funds , transportation funds, and grants, as identified in the CIP. Secondary sources include special revenue funds (such as Proposition 172, <u>Renewed</u> Measure “M” Funds), gas tax funds, enterprise funds, <u>and</u> capital improvement funds, and redevelopment funds .
Time Frame:	Ongoing, with annual updates in-cycle with City budget process
Related Policies:	
Land Use:	1.7, 2.5, 2.6, 5.4, 5.6, 5.7, 5.9, 6.3, 6.7, 6.8, 8.1, 8.3
Circulation and Mobility:	1.1, 1.6, 2.2, 2.3, 2.4, 4.1, 4.6, 4.8, 5.1
Natural Resources:	6.1, 6.6
Cultural Resources & Historic Preservation:	1.6, 3.5, 5.1, 5.2
Urban Design:	4.3, 4.4
Economic Development:	2.4, 6.1, 6.2
Infrastructure:	1.1



Growth Management: 1.2, 1.11, 2.2

Program II-2 Metropolitan Drive Extension

To further improve circulation near The Block at Orange shopping area and to improve access to Interstate 5, extend Metropolitan Drive from The City Drive/State College Boulevard to the Metropolitan Drive/Rampart Street connection.

Agency/Department: Public Works Department
Funding Source: Determined by CIP
Time Frame: Determined by CIP
Related Policies:
Circulation & Mobility: 1.1, 2.1, 2.2

Program II-3 Santiago Creek Bike Trail

Complete additional segments of a bike trail adjacent to Santiago Creek ~~to connect Tustin Street to Grijalva Park, as well as Collins Avenue along Santiago Creek, and then travel north from Walnut Avenue to Collins Avenue along the City-owned portion of the Santiago Creek Bike Trail Right-of-Way. The Santiago Creek Trail is planned~~ to extend through the City along the creek, and connect the regional Santa Ana River trail to Santiago Oaks Regional Park and wilderness areas east of Orange.

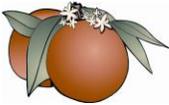
Agency/Department: Community Services Department
Funding Source: Determined by Recreational Trails Master Plan
Time Frame: Determined by Recreational Trails Master Plan
Related Policies:
Circulation & Mobility: 4.1, 4.4, 4.5
Natural Resources: 6.1, 6.2

Program II-4 Pedestrian and Bicycle Amenities

Provide appropriate bicycle and pedestrian amenities along City bikeways, trails, and sidewalks. Specific amenities may include bicycle racks, bicycle storage, water fountains, benches, trash cans, and emergency call boxes. Encourage private development projects to provide these amenities as well, especially within mixed-use areas and along the City's commercial corridors.

Identify a range of funding opportunities to enable extension of existing trails and development of new trails.

Agency/Department: Community Services Department, Community Development Department, Public Works Department
Funding Source: General Fund, grants
Time Frame: Ongoing



- Related Policies:
- Circulation & Mobility: 4.2, 4.4
 - Natural Resources: 2.8, 6.1, 6.6
 - Public Safety: 9.1, 9.3
 - Growth Management: 1.9

Program II-5 Emergency Operations Center

Maintain, equip, and update the Emergency Operations Center on an ongoing basis to improve public safety and response by agencies.

- Agency/Department: City Manager’s Office, Fire Department, Police Department
- Funding Source: General Fund, state and federal funds, grants
- Time Frame: Ongoing
- Related Policies:
 - Public Safety: 1.2, 3.4, 3.6, 5.1, 6.1, 6.2, 6.3, 6.5, 6.6, 8.2, 8.3, 8.4

Program II-6 Correct Sewer System Deficiencies

Repair and improve all areas that were identified in the ~~2003~~ 2012 Sewer Master Plan Update as having system deficiencies based on available resources and continue to identify anticipated deficiencies in the system. The City will make improvements to areas with frequent blockages or “hot-spots.” Developers shall also be required to pay the cost of providing new and improved wastewater services to project sites.

- Agency/Department: Public Works Department
- Funding Source: State and federal grant funds, Development fees
- Time Frame: Ongoing
- Related Policies:
 - Infrastructure: 1.1, 1.2, 1.6



III. Conditions or Requirements Placed upon Applicants during Development Review

Program III-1 California Environmental Quality Act

Comply with all provisions of CEQA. In addition to thresholds that may be established or adopted by the City in the future, use the following thresholds and procedures for CEQA analysis of proposed projects, consistent with policies adopted within the General Plan:

- **Circulation & Mobility**
 - Level of service (LOS) D (volume-to-capacity [V/C] ratio less than or equal to 0.90) shall be the lowest acceptable level of service for both roadway segments and peak-hour intersection movements.
 - Orange County's Congestion Management Plan (CMP) specifies LOS E (V/C ratio less than or equal to 1.00) as the operating standard for roadways on the CMP highway system.
 - Projects that increase V/C by .01 or more on affected roadway segments or intersections experiencing LOS E or LOS F conditions without the proposed project are considered to create significant impacts, and mitigation is required.
- **Parks and Recreation**
 - The City shall require dedication of parkland at a rate of 3.0 acres per 1,000 anticipated residents or payment of in-lieu fees for new residential projects.
- **Noise**
 - The City shall apply the noise standards specified in Tables N-3 and N-4 of the Noise Element to proposed projects analyzed under CEQA.
 - In addition to the foregoing, an increase in ambient noise levels is assumed to be a significant noise impact if a proposed project causes ambient noise levels to exceed the following:
 - Where the existing ambient noise level is less than 65 dBA, a project related permanent increase in ambient noise levels of 5 dBA CNEL or greater.
 - Where the existing ambient noise level is greater than 65 dBA, a project related permanent increase in ambient noise levels of 3 dBA CNEL or greater.
- **Historic and Cultural Resources**
 - "Historical resource" for the purposes of CEQA shall mean "historic district" in the case of a contributor to a historic district.
 - Historic resources listed in the Historic Register shall have a presumption of significance pursuant to CEQA Section 21084.1 and shall be treated as historical resources under CEQA.
 - The historical significance of an archaeological historic resource is evaluated using the criteria of Public Resources Code Section 5024.1 and Section 15064.5 et seq. of the state CEQA Guidelines.



All future development proposals shall be reviewed by the City for potential regional and local air quality impacts per CEQA. If potential impacts are identified, mitigation will be required to reduce the impact to a level less than significant, where technically and economically feasible.

Agency/Department:	Community Development Department, Public Works Department, Community Services Department
Funding Source:	General Fund, development fees
Time Frame:	Ongoing
Related Policies:	
Circulation & Mobility:	1.2, 2.3
Natural Resources:	5.6
Cultural Resources & Historic Preservation:	1.1, 1.3
Noise:	1.4
Growth Management:	1.1, 2.1

Program III-2 Site Development Review

Comply with all City procedures in the review of proposed development projects, and use the site plan review process to ensure that applicable General Plan policies and City standards and regulations are applied to proposals for specific development projects.

Agency/Department:	Community Development Department, Public Works Department, Police Department, Fire Department, Community Services Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	1.6, 1.7, 2.5, 2.7, 2.8, 3.1, 3.4, 4.3, 4.5, 6.1, 6.2, 6.9, 6.10, 6.12
Circulation & Mobility:	1.1, 1.7, 5.1, 5.2
Natural Resources:	1.3, 2.3, 2.6, 2.13, 2.14, 2.15, 2.16, 4.3, 4.4, 4.5, 5.4, 5.6, 5.7, 6.6, 7.5
Cultural Resources & Historic Preservation:	1.3, 1.4, 1.5, 1.6, 4.1, 4.2, 4.3, 4.4, 4.5
Public Safety:	1.1, 2.5, 3.3, 3.5, 4.2, 4.3, 6.2, 7.2, 7.3, 7.4, 9.1
Noise:	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 5.1, 5.2, 5.3, 6.1, 6.2
Urban Design:	2.4, 2.5, 2.6, 3.4, 3.5, 6.1
Infrastructure:	1.4, 1.5

Program III-3 Commission/Committee Review

Orange has several commissions and one committee whose purpose is to advise and assist the City Council in dealing with issues related to each commission’s or committee’s area of concern. The commissions and committee gather pertinent information, hear arguments,



weigh values, and make recommendations to the Council. Several of the commissions also have some administrative powers.

The City will continue to use the commission/committee structure to inform the public decision-making process.

The City will also consider expanding the authority of the Design Review Committee and Community Development Department’s staff to administer the Orange Historic Resources Inventory, Historic Register listings, and design review procedures for projects involving architectural and archaeological resources.

Agency/Department:	City Council, Community Development Department, Community Services Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Land Use:	2.5, 2.6, 2.7, 2.8, 3.1, 3.2, 4.5, 5.5, 5.8, 5.9, 6.1, 6.2, 6.3, 6.4, 6.7, 6.11, 8.1, 8.2, 8.3
Circulation & Mobility:	1.3, 2.3, 3.2, 4.1, 6.1
Cultural Resources & Historic Preservation:	1.1, 1.3, 1.4, 4.5, 4.6
Urban Design:	1.1, 6.1
Public Safety:	1.1, 3.5, 4.3, 7.4
Economic Development:	1.2, 2.5, 3.3, 4.5, 5.1, 5.2, 5.3, 5.4, 5.5

Program III-4 Traffic Impact Analyses

Require preparation of traffic impact analyses for new discretionary development projects. For projects that increase V/C by .01 or more on affected roadway segments or intersections experiencing LOS E or LOS F conditions without the proposed project, traffic impact analyses must propose binding mitigation strategies to be incorporated within the project.

~~Prepare and publish~~ Continue to update guidelines for the preparation of traffic impact analyses to reflect local conditions and industry standards.

Agency/Department:	Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	2.5, 6.10
Circulation & Mobility:	1.1
Growth Management:	1.2, 1.6



Program III-5 Transportation Demand Management Plans

Require major employers of 100 persons or more to institute transportation demand management (TDM) plans. Such plans establish incentives to encourage employees to carpool, take public transportation, bicycle, or use some means other than private automobiles to get to and from work.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Circulation & Mobility:	2.6
Natural Resources:	2.1, 2.2
Growth Management:	1.12

Program III-6 National Pollutant Discharge Elimination System Compliance

Before making land use decisions, the City will utilize available methods to estimate increases in pollutant loads and flows resulting from projected future development.

The City will follow the most current NPDES permit and countywide ~~Drainage Area Management Plan~~ [Model WQMP](#) and the City *Local Implementation Plan* to ensure that the City complies with applicable federal and state regulations. Applicants for new development and redevelopment projects shall prepare and submit plans to the City, as well as implement plans demonstrating accomplishment of the following:

[\(order re-arranged per Gene Estrada\)](#)

- ~~Provide on-site infiltration and runoff and temporary on-site retention areas~~ [Emphasize the need to implement and prioritize the use of low impact development BMPs that provide onsite infiltration and retention;](#)
- Use ~~natural treatment~~ [biotreatment](#) systems such as [flow through planters](#), wetlands and bioswales [where infiltration, evapotranspiration, and harvest and reuse are not to treat storm runoff where technically and economically](#) feasible;
- Limit areas of impervious surfaces and preserve natural areas;
- Limit directly connected areas of impervious surfaces;
- Limit disturbance of natural water bodies, natural drainage systems, and highly erodable areas;
- Use structural and nonstructural best management practices (BMPs) to mitigate projected increases in pollutant loads and flows;
- Use pollution prevention methods, source controls, and treatment with small collection strategies located at or as close as possible to the source;



- Control the velocity of pollutant loading flows during and after construction; and
- Implement erosion protection during construction.

In addition, applicants for large development projects are required to prepare and implement plans that meet site predevelopment hydrologic conditions and to control runoff on-site where technically feasible.

Agency/Department:	Public Works Department, Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use;	4.3, 6.5
Natural Resources:	2.12, 2.13, 2.14, 2.15, 2.16, 2.17
Public Safety:	2.3

Program III-7 Water Services and Supplies

As needed, require studies to determine water infrastructure requirements for future development projects, and require that any recommendations be incorporated into the design of projects. Require the dedication of necessary right-of-way and construction of water infrastructure improvements for development projects as needed. Developers shall also be required to pay the cost of providing new and improved water services to project sites.

For projects that satisfy the criteria set forth in Sections 10910–10915 of the California Water Code and Section 66473.7 of the Government Code, a water supply assessment or water supply verification demonstrating available water supplies exist to support development shall also be prepared.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees, General Fund
Time Frame:	Ongoing
Related Policies:	
Infrastructure:	1.1, 1.4, 1.6

Program III-8 Adequate Public Safety and Emergency Response

During the development application process, consult with Fire and Police Departments to evaluate the need for additional fire and police facilities or resources to serve new development projects and infill development areas. During updates to the Capital Improvement Program process, coordinate with service providers to evaluate the level of fire and police service provided to the community. Require adequate street widths and clearance for emergency access. Provide all appropriate safety features. Continue to use state-of-the-art techniques and technology to enhance public safety.



Adhere to requirements in the Municipal Code for adequate street widths and clearance for emergency access. Integrate CPTED techniques into development projects and practice active surveillance measures in high-risk areas such as parking lots.

The City shall use open space easements and other regulatory techniques to prohibit development and avoid public safety hazards where the threat from seismic hazards cannot be mitigated.

Agency/Department:	Community Development Department, Public Works Department, Police Department, Fire Department
Funding Source:	Development fees, General Fund
Time Frame:	Ongoing
Related Policies:	
Public Safety:	3.4, 4.4, 6.1, 6.2, 6.3, 6.4

Program III-9 Geologic Hazard Assessments

Pursuant to state law, geologic and/or geotechnical studies are required for proposed new development projects located in areas identified as susceptible to landslides and liquefaction and binding mitigation strategies must be adopted. Compliance with the recommendations set forth in site-specific geologic and/or geotechnical studies will be made a condition of approval for new development. In addition, the City may require applicants to incorporate measures to stabilize and maintain slopes on a site-by-site basis, such as proper planting, irrigation, retaining walls, and benching.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.9, 6.10
Public Safety:	1.1

Program III-10 Cultural Resources Inventories

Require cultural resources inventories of all new development projects in areas identified with medium or high potential for archeological, [paleontological](#), or cultural resources [based on resource sensitivity maps prepared in conjunction with the General Plan](#).

Where a preliminary site survey finds medium to high potential for substantial archaeological remains, the City shall require a mitigation plan to protect the resource before issuance of permits. Mitigation may include:

- Ensuring that a qualified archaeologist is present during initial grading or trenching (monitoring),
- Redesigning the project to avoid archaeological resources (this is considered the strongest tool for preserving archaeological resources),



- Capping the site with a layer of fill, and/or
- Excavating and removing the archaeological resources (recovery) and implementing curation in an appropriate facility under the direction of a qualified archaeologist (interpretation).

Alert applicants for permits within early settlement areas to the potential sensitivity. ~~If significant archaeological resources are discovered during construction or grading activities, such activities shall cease in the immediate area of the find until a qualified archaeologist can determine the significance of the resource and recommend alternative mitigation.~~ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the Community Development Department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.

If significant archaeological resources are discovered during construction or grading activities, such activities shall cease in the immediate area of the find until a qualified archaeologist can determine the significance of the resource and recommend alternative mitigation. The final written report should be submitted to the appropriate regional archaeological Information Center within three months after work has been completed. The City shall ensure that project applicants contact the Native American Heritage Commission for a Sacred Lands File Check and a list of appropriate Native American contacts for consultation concerning the project site and to assist in crafting the mitigation measures.

Agency/Department:	Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.11
Cultural Resources & Historic Preservation:	4.1, 4.5

Program III-11 Green Building, Energy Conservation, and Sustainable Development

The City strongly encourages new development and major renovation projects to employ green building techniques and materials. Encourage proposed development projects throughout the City to use Leadership in Energy and Environmental Design (LEED) standards developed by the U.S. Green Building Council or a similar third-party verified program. Encourage building orientations and landscaping that enhance natural lighting and sun exposure. Prepare guidelines for sustainable development to encourage incorporation of these practices in new development. These guidelines will include measures to maximize soil permeability to address related stormwater and surface-water runoff issues.



Require compliance with state Title 24 building construction standards and Energy Star conservation standards for all development projects.

Prepare and adopt an ordinance that requires and/or provides incentives for: (1) specified new residential development to comply with a specified green building program or show that its development provides comparable effectiveness to such a program; and (2) specified non-residential development of a specified size comply with a specified green building program or show that its development provides comparable effectiveness to such a program.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing; December 31, 2011 (For ordinance)
Related Policies:	
Natural Resources:	2.6, 2.7

Program III-12 Mixed-Use Noise Property Notification

When the City exercises discretionary review, provides financial assistance, or otherwise facilitates residential development within a mixed-use area, make providing written warnings to potential residents about noise intrusion a condition of that approval, assistance, or facilitation. The following language is provided as an example:

“All potential buyers and/or renters of residential property within mixed-use districts in the City of Orange are hereby notified that they may be subject to audible noise levels generated by business and entertainment related operations common to such areas, including amplified sound, music, delivery and passenger vehicles, mechanical noise, pedestrians, and other urban noise sources.”

Agency/Department:	Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Noise:	5.1, 5.3
Urban Design:	2.5

Program III-13 Ecological and Biological Resource Assessments

Analyze development proposals for potential impacts on significant ecological and biological resources. Require appropriate mitigation for all significant impacts if impact avoidance is not possible. Mitigation measures for habitat and species may include but are not limited to avoidance, enhancement, restoration, [compensatory mitigation](#), or a combination of ~~any of the three~~ [these](#).



Agency/Department: Community Development Department
 Funding Source: Development fees
 Time Frame: Ongoing
 Related Policies:
 Land Use: 6.4, 6.11
 Natural Resources: 4.1, 4.3, 4.4, 4.5

Program III-14 Archaeological Resources Management Report (ARMR Preservation Bulletin)

Establish the Archaeological Resources Management Report (ARMR Preservation Bulletin) as the standard report format for all documentation and accept reports only from registered professional archaeologists knowledgeable in Native American cultures and/or historical archaeology (qualified archaeologists).

Agency/Department: Community Development Department
 Funding Source: Development fees
 Time Frame: Ongoing
 Related Policies:
 Cultural Resources & Historic Preservation: 4.1

Program III-15 Historic Resources Design Review

Continue to use the [Secretary of the Interior’s Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings](#) as a basis for design review and incorporate them by reference into the *Old Towne Design Standards and other historic preservation design standards*. Any approved demolition permit for ~~listed~~ historic resources [listed in the City’s Historic Register](#) will be automatically subject to a delay of 180 days before the permit for demolition may be issued. The property owner will strive to develop alternatives to demolition that will preserve the historic resources.

~~The Community Development Director will appoint a City of Orange Preservation Officer. In lieu of such appointment the Director~~ [Design Review Committee or Historic Preservation Commission at such time such a commission is established](#), shall serve as [the review body for projects involving historic resources](#) ~~Preservation Officer~~.

Agency/Department: Community Development Department, City Council
 Funding Source: General Fund
 Time Frame: Ongoing
 Related Policies:
 Cultural Resources & Historic Preservation: 1.1, 1.2, 1.3, 1.4, 1.5, 2.3, 3.2



Program III-16: Public Access to Santiago Creek and Santa Ana River Public Interface

Ensure that new development does not preclude access to Santiago Creek and the Santa Ana River and associated trails. Development review should ensure that commercial and retail development in these areas support public access.

Agency/Department:	Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.4, 6.6
Circulation & Mobility:	4.1
Natural Resources:	1.3, 5.5, 7.1, 7.2, 7.3, 7.4, 7.5
Urban Design:	2.6

Program III-17: Office Condominium Conversions

Evaluate applications for conversion of industrial properties to office condominiums to determine the impact on the available balance of larger and smaller properties available for industrial use.

Agency/Department:	Community Development Department, Economic Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	4.1, 4.2, 4.3, 4.4, 4.5
Economic Development:	3.1, 6.1, 6.2

Program III-18: Noise Reduction in New Construction

Require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:

- Construction equipment shall be properly maintained per manufacturers’ specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc).
- Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power equipment.
- Construction operations and related activities associated with the proposed project shall comply with the operational hours outlined in the City of Orange Municipal Code Noise



Ordinance, or mitigate noise at sensitive land uses to below Orange Municipal Code standards.

- Construction equipment should not be idled for extended periods of time in the vicinity of noise sensitive receptors.
- Locate fixed and/or stationary equipment as far as possible from noise sensitive receptors (e.g., generators, compressors, rock crushers, cement mixers). Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.
- Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. Acoustical barriers shall be constructed material having a minimum surface weight of 2 pounds per square foot or greater, and a demonstrated Sound Transmission Class (STC) rating of 25 or greater as defined by American Society for Testing and Materials (ASTM) Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be specified by a qualified acoustical consultant.

Agency/Department:	Community Development Department, Public Works Department, Community Services Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Noise:	1.1, 1.2, 1.4, 1.5, 7.2

Program III-19: Groundborne Noise and Vibration

Implement the following measures to reduce the potential for human annoyance and architectural/structural damage resulting from elevated groundborne noise and vibration levels.

- Construction-Induced Vibration. The City shall implement or require implementation of the following measures through contract provisions and/or conditions of approval as appropriate:
 - Pile driving required within a 50-foot radius of historic structures shall utilize alternative installation methods where possible (e.g., pile cushioning, jetting, pre-drilling, cast-in-place systems, resonance-free vibratory pile drivers). Specifically, geo pier style cast-in-place systems or equivalent shall be used where feasible as an alternative to pile driving to reduce the number and amplitude of impacts required for seating the pile.

IMPLEMENTATION



- The preexisting condition of all buildings within a 50-foot radius and of historic buildings within the immediate vicinity of proposed construction-induced vibration activities shall be recorded in the form of a preconstruction survey. The preconstruction survey shall determine conditions that exist before construction begins for use in evaluating damage caused by construction activities. Fixtures and finishes within a 50-foot radius of construction activities susceptible to damage shall be documented (photographically and in writing) prior to construction. All damage will be repaired back to its preexisting condition.
 - Vibration monitoring shall be conducted prior to and during pile driving operations occurring within 100 feet of the historic structures. Every attempt shall be made to limit construction-generated vibration levels in accordance with Caltrans recommendations during pile driving and impact activities in the vicinity of the historic structures.
 - Provide protective coverings or temporary shoring of on-site or adjacent historic features as necessary, in consultation with the Community Development Director or designee.
- Railroad-Induced Vibration:
- Vibration sensitive uses shall be located a minimum of 100 feet from the railroad centerline, where feasible. To ensure compliance with FTA and Caltrans recommended guidelines, a site-specific groundborne noise and vibration assesment should be conducted. For sensitive uses located within 100 feet of the railroad centerline, the acoustical noise and vibration assessment shall demonstrate that potential impacts will be below the level of significance. If specific project-level impacts are identified, mitigation measures reducing the impacts to below the level of significance will be required.
 - A groundborne vibration assessment shall be conducted at proposed building pad locations within 200 feet of railroad right-of-ways, prior to project approval. Vibration monitoring and assessment shall be conducted by a qualified acoustical consultant. The assessment will demonstrate that rail-associated groundborne vibration and noise levels comply with recommended FTA and Caltrans guidance of 80 VdB and 0.2 in/sec PPV (or equivalent), respectively, or propose project-specific mitigation measures such as site design, building isolation, etc. to achieve that standard.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	General Fund, Development fees
Time Frame:	Ongoing
Related Policies:	
Noise:	1.1, 3.1, 3.2, 6.1, 7.2



Program III-20: Toxic Air Contaminant Exposure

Require each project applicant to implement the following measures to reduce the exposure of sensitive receptors to TACs from mobile sources, as a [project design features or a](#) condition of project approval:

- Activities involving idling trucks shall be oriented as far away from and downwind of existing or proposed sensitive receptors as feasible.
- Strategies shall be incorporated to reduce the idling time of main propulsion engines through alternative technologies such as IdleAire, electrification of truck parking, and alternative energy sources for TRUs to allow diesel engines to be completely turned off.
- Proposed developments shall incorporate site plans that move sensitive receptors as far as feasibly possible from major roadways (100,000+ average daily trips).
- Projects containing sensitive receptors (such as residences, schools, day care centers, and medical facilities) on sites within 500 feet of a freeway must demonstrate that health risks relating to diesel particulates would not exceed acceptable health risk standards prior to project approval.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Natural Resources:	2.1

IV. Planning and Outreach Initiatives

Program IV-1 Annual Review of General Plan and Land Use Policy Map

Annually review implementation of the General Plan and Land Use Policy Map to identify the effect of land development and use on City revenues and costs of providing and maintaining public facilities and services.

Report annually to the City Council regarding progress toward established objectives.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing, with annual reports to City Council
Related Policies:	All



Program IV-2 Park Acquisition, Construction, and Maintenance Report

Work actively to acquire, build, and maintain approximately 241 acres of additional parkland to achieve a minimum parkland ratio of 3 acres per 1,000 persons by 2030, and work toward a desired ratio of 5 acres per 1,000 persons by 2050. Evaluate progress toward achieving this goal by preparing a status report for the City Council and community every five years.

As a separate but compatible objective, support efforts by the County of Orange or private landowners to provide an additional 303 acres of regional parkland to support an overall objective of 10 acres of parkland per 1,000 persons, inclusive of County regional parks.

Work with the private sector to encourage use of vacant commercial or industrial properties for recreational purposes.

Agency/Department:	Community Services Department
Funding Source:	General Fund
Time Frame:	Baseline status report completed by 2013 Ongoing 5-year reporting beginning in 2016
Related Policies:	
Land Use:	1.7, 8.1, 8.3
Natural Resources:	5.1, 5.3, 5.4, 5.6, 5.7

Program IV-3 Public Education Programs

Use public education activities to accomplish the following objectives:

- Improve citizen participation in land use and economic development planning processes. Promote awareness of Orange’s historical and architectural resources and potential strategies for adaptive reuse of historic structures.
- Educate residents regarding air and water quality, including the effects of urban runoff.
- Raise public awareness of public safety issues—fire safety, flood hazards, homeland security, and other programs.
- Raise public awareness about the importance of green building techniques.
- Educate the public regarding the benefits of recycling and waste reduction.
- Promote traffic safety awareness programs.
- Promote the application of CPTED to new development projects.
- Support neighborhood meetings and community programs on crime prevention and education.
- Continue to support existing Neighborhood Watch programs, and support the efforts of the City of Orange Police Department to expand these programs.



Coordinate education activities and make materials available to residents. Utilize all available media—forums, flyers, brochures, e-mail, videos, interpretive displays, workshops, and the City’s website and cable television channel—to accomplish these objectives. Fully utilize the resources of the Orange Public Library to disseminate this information. Explore partnerships with local schools and educators to develop various educational programs related to historic preservation, personal and community safety, and environmental awareness.

Agency/Department: Community Development Department, Public Works Department, Fire Department, Police Department, Library Services Department, Community Services Department

Funding Source: General Fund; Federal, state, and private grants; **redevelopment funds**

Time Frame: Ongoing

Related Policies:

- Land Use: 5.2, 6.11, 8.1, 8.2, 8.3
- Natural Resources: 2.17
- Cultural Resources & Historic Preservation: 1.2, 1.3, 1.6, 2.2, 2.3, 3.1, 3.2, 4.4, 4.6, 5.1, 5.5
- Public Safety: 1.2, 3.6, 6.5, 7.1, 8.1
- Economic Development: 3.3, 4.4

Program IV-4 Santiago Creek and Santa Ana River Vision Plans

Continue efforts to prepare and adopt a vision plan for Santiago Creek addressing recreational trails, open space, and flood control.

Support future development of highly visible access points to the Santa Ana River, particularly at Lincoln Avenue, Katella Avenue, and Chapman Avenue. Partner with the City of Anaheim, resource agencies, and community organizations to complete a vision plan for the Santa Ana River, similar to the plan for Santiago Creek.

Agency/Department: Community Development Department, Community Services Department, Public Works Department

Funding Source: Grants, General Fund

Time Frame: Santiago Creek Plan completed by ~~2011~~ 2013
Santa Ana River plan completed by 2020

Related Policies:

- Land Use: 6.3, 7.3
- Circulation & Mobility: 1.1
- Natural Resources: 1.2, 4.2, 6.1
- Cultural Resources & Historic Preservation: 4.2



Program IV-5 Solid Waste Source Reduction and Recycling

Continue to implement waste diversion programs as well as public education programs as outlined in the City’s Source Reduction and Recycling Element required by Assembly Bill 939 (1989). Work to expand recycling pickup to all residential addresses in the City. Conduct a waste characterization study to identify the major constituents in the City’s solid waste stream. The results of the study will be used to guide development of the recycling and outreach program, and possible revisions to waste handler contracts. The City will also consider anticipated waste associated with the land use types of future development.

Agency/Department:	Public Works Department
Funding Source:	General Fund, user fees
Time Frame:	Ongoing
Related Policies:	
Natural Resources:	2.5
Infrastructure:	2.1, 2.2, 2.3, 2.4

Program IV-6 Transportation Demand and System Management

Participate in regional efforts to implement TDM requirements and support implementation of the employer TDM provisions of the South Coast Air Quality Management District’s Air Quality Management Plan by working with the SCAQMD to identify employers within Orange most suitable for participation in the TDM programs to achieve major reduction of VMT. Complete intersection capacity improvements and coordinate traffic signals as necessary to improve traffic flow.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Land Use:	7.4
Circulation & Mobility:	2.2, 2.5, 2.6
Natural Resources:	2.1, 2.2
Growth Management:	1.12, 2.1

Program IV-7 Growth Management Performance Monitoring Program

As required by [Renewed](#) Measure M, the City’s annual Performance Monitoring Program is intended to provide an annual evaluation of its development phasing plans. This program reviews and evaluates the implementation of phasing plans that reflect conditions of approval for traffic improvements required as mitigation measures for development



projects. The monitoring program is intended to ensure that road improvements or funding are actually provided as required, to determine whether development may continue. If the improvements or funding specified in project conditions have not been provided, the City shall defer development until compliance with the provision of this program is achieved.

The monitoring program includes an annual review of new development projects until all required improvements have been constructed. Traffic-related mitigation requirements, such as TDM programs, will be continued in conformance with the provisions of the project-approved programs.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Circulation & Mobility:	1.1
Growth Management:	1.2, 1.5, 1.12



V. Coordination with Other Agencies and Organizations

Program V-1 Utility Companies

As part of the development application and review process, coordinate with Southern California Edison (SCE), Time Warner Cable, Cox Communications Orange County, the Gas Company, AT&T, cellular telephone service providers, and other local utilities to assess capacity and infrastructure needs to support new development or development activities. Ensure through such coordination that Orange remains on the cutting edge of new infrastructure technology. Require that utilities be moved underground consistent with the City’s *Master Utility Undergrounding Plan*.

Agency/Department:	City Manager’s Office, Community Development Department, Public Works Department
Funding Source:	SCE utility undergrounding fund, private funding sources, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	7.3, 7.4, 7.5, 7.6
Urban Design:	2.8
Infrastructure:	4.1, 4.2, 4.3
Economic Development:	5.2, 6.2

Program V-2 Orange Unified School District and Santiago Canyon Community College District

Coordinate with the Orange Unified School District and Santiago Canyon Community College District to address the following issues, as applicable:

- Preparation of facilities master plans;
- Continued development of safe pedestrian and bicycle routes to all schools and ensuring that physical improvements (such as crosswalks and bike racks) are in place to support walking and bicycling to schools;
- Exploration of nonstructural solutions that may encourage people to walk or bus to school, rather than drive (e.g., staggered start times, walking groups);
- Continued joint use of school sites for community recreation;
- Exploration of joint use of school site(s) for public library service;
- Continued youth and family services to serve families of children living within the school district’s boundaries;
- Continued joint-use agreements to make additional recreational facilities available to the community during non-school hours;



- Requiring new or remodeling existing schools to install appropriate student pick-up/drop-off areas; and
- Preparation of an elementary school curriculum, including suggested supplemental activities, for teaching children about cultural and historical resources, personal and community safety, sustainable lifestyles, and environmental awareness in the City.

Agency/Department: Community Development Department, Community Services Department, Library Services Department
 Funding Source: Development fees, user fees
 Time Frame: Ongoing
 Related Policies:
 Land Use: 7.1, 7.6
 Natural Resources: 5.3
 Cultural Resources & Historic Preservation: 2.2, 3.1

Program V-3 Adjacent Jurisdictions and Special-Purpose Agencies and Organizations

Continue to coordinate with adjacent jurisdictions and special-purpose agencies and organizations for the following purposes:

- Land use planning efforts;
- Growth and facility planning, management, and maintenance;
- Planning and developing major east/west and north/south arterials and rapid transit;
- Ensuring that Orange benefits from the planned Anaheim Regional Transportation Intermodal Center (ARTIC);
- Connecting City trails to trails in adjacent jurisdictions and regional trails networks, including Santiago Creek, the Santa Ana River, and the proposed Tustin Branch Trail;
- Completing vision plans for Santiago Creek and the Santa Ana River;
- Maintaining an appropriate level of transportation impact fees and other public service fees;
- Continuing and adopting mutual-aid agreements;
- Maintaining flood control facilities and implementing a capacity analysis;
- Developing trails along service roads for flood control channels;
- Aircraft corridor planning, minimizing aircraft overflights in the City, and coordinating approval of heliport/helistop operations;
- Disaster preparedness and emergency response for earthquakes and wildland fires;
- Participating in interjurisdictional planning forums through the established Growth Management Areas (GMAs) adopted by the Regional Advisory Planning Council as well as the City’s Joint Powers Agreements with adjacent cities to address cumulative traffic impacts and to coordinate improvements in transportation facilities; and



- Monitoring and compiling information on faults within the planning area.

Agency/Department:	Community Development Department, Public Works Department, Fire Department, Police Department
Funding Source:	General Fund, development fees, gas tax revenues funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	7.3, 7.4, 7.5, 7.6
Circulation & Mobility:	2.2, 2.3, 2.4, 3.1, 4.1
Natural Resources:	6.1, 6.3, 6.4
Public Safety:	1.3, 2.1, 3.7, 5.1, 5.2, 6.3, 8.2, 8.3
Noise:	4.1, 4.2, 4.3
Growth Management:	1.4, 2.1, 2.2, 2.5, 2.6

Program V-4 Railroad Operators

Continue to coordinate with the SCRRA in providing a regional rail system (Metrolink) that links Orange to other employment and activity centers in Southern California. Coordinate with rail operators to address possible effects of increased railway volumes on grade crossings throughout the City, to reduce delays associated with freight trains, and to implement a Quiet Zone. Coordinate with operators to achieve appropriate mitigation to ensure continued safety for motorists and pedestrians.

Agency/Department:	Public Works Department, City Manager’s Office
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Land Use:	2.6
Circulation & Mobility:	1.5, 2.4, 2.6, 2.7
Natural Resources:	2.2
Noise:	3.2
Growth Management:	1.7, 2.5

Program V-5 Orange County Transportation Authority

Work closely with the OCTA to achieve the following objectives:

- Maintain consistency with the County Master Plan of Arterial Highways, including the reclassification of roadways described in the Circulation & Mobility Element, such as La Veta Avenue.
- Implement provisions of [Renewed Measure M²](#).
- Implement the OCTA Congestion Management Plan (CMP).
- Expand and improve the efficiency of bus service within the City.



- Encourage the expansion of alternative local transportation options such as a community circulator bus service between transit centers and major commercial, employment, and residential areas.
- Improve paratransit or other public transportation systems that enhance the mobility of Orange’s senior and youth populations, and the disabled.
- Encourage provision of attractive and appropriate transit amenities.
- Support and implement the OCTA Commuter Bikeways Strategic Plan and participate in future updates and revisions to the Plan.
- Reduce noise impacts of OCTA operations and facilities.

Agency/Department: Public Works Department, Community Development Department

Funding Source: General Fund, State Transit Assistance funds

Time Frame: Ongoing

Related Policies:

- Land Use: 2.4, 7.4
- Circulation & Mobility: 1.1, 1.4, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 4.1
- Natural Resources: 2.2
- Noise: 2.4
- Growth Management: 1.1, 1.3, 1.6, 1.9, 2.1, 2.2, 2.5, 2.6

Program V-6 California Department of Transportation and Transportation Corridor Agency

Work closely and coordinate with the California Department of Transportation (Caltrans) and the Transportation Corridor Agency (TCA) on all plans, activities, and projects that may affect state roadway facilities or transportation corridors passing through Orange. Additionally, work with these agencies to achieve the following objectives:

- Provide appropriate screening to control the visual impacts of transportation facilities.
- Provide landscaping within transportation facilities.
- Study the potential for a future interchange at State Route 55 and Meats Avenue.
- Determine the feasibility of conversion or joint use of surplus or otherwise underutilized lands under Caltrans or TCA control for open space.
- Plan for noise abatement along freeways and highways.
- Install, maintain, and update freeway and highway right-of-way buffers and soundwalls.
- Provide adequate visual buffers such as berms or landscaping between freeways and railways and adjacent land uses.

Agency/Department: Public Works Department, Community Development Department

Funding Source: General Fund, gas tax **revenues funds**

Time Frame: Ongoing



Related Policies:

Land Use:	6.10, 7.5
Circulation & Mobility:	2.3, 2.4, 2.5, 2.6
Natural Resources:	7.3
Noise:	2.4
Growth Management:	2.1

Program V-7 Local Water Districts

Coordinate with the Irvine Ranch Water District, ~~Santiago County Water District~~, Serrano Water District, Municipal Water District of Orange County, Metropolitan Water District of Southern California, Golden State Water Company, Serrano Water District, ~~Orange County Sanitation District~~, and East Orange County Water District to achieve the following water supply, distribution, and conservation objectives:

- Maintain groundwater recharge areas to protect water quality and ensure continued recharge of local groundwater basins.
- Reduce the amount of water used for landscaping and increase use of native and drought-tolerant plants.
- Encourage the production, distribution, and use of recycled and reclaimed water for landscaping projects.
- Maintain water quality objectives for urban runoff.

Agency/Department:	City Council, City Manager, Public Works Department
Funding Source:	User fees, development fees, General Fund, grants
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.10, 7.3
Natural Resources:	2.3, 2.4
Infrastructure:	1.3, 1.4

Program V-8 Santa Ana Regional Water Quality Control Board

Comply with all provisions of the NPDES permit, and support regional efforts by the Santa Ana Regional Water Quality Control Board to improve and protect surface water quality.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	User fees
Time Frame:	Ongoing



Related Policies:	
Land Use:	3.4, 4.3, 6.5
Natural Resources:	2.4, 2.11, 2.12
Infrastructure:	1.4, 1.5

Program V-9 South Coast Air Quality Management District

Work with the South Coast Air Quality Management District and the Southern California Association of Governments to implement the Air Quality Management Plan and meet all federal and state air quality standards for pollutants. Participate in any future amendments and updates to the Plan. Implement and interpret the General Plan in a manner consistent with the Air Quality Management Plan.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Land Use:	3.4, 4.3, 6.10, 7.4
Circulation & Mobility:	2.5, 2.6, 3.1, 4.1
Natural Resources:	2.1, 2.2, 2.8
Growth Management:	1.7, 1.8, 1.12, 2.2, 2.3, 2.4, 2.6

Program V-10 Orange County Flood Control District

Support efforts by the Orange County Flood Control District (OCFCD) to regularly maintain flood control channels and structures owned by the OCFCD, and to complete necessary repairs in a timely manner. Work with the OCFCD and U.S. Army Corps of Engineers to identify new flood control improvements, and establish installation programs for improvements as needed. Work with the OCFCD to identify opportunities to enhance the natural qualities of Santiago Creek to protect habitat and reintroduce native plants, animals, and fish.

Agency/Department:	Public Works Department, Community Development Department, Community Services Department
Funding Source:	Orange County Flood Control District
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.7, 6.9, 7.3
Natural Resources:	4.2
Public Safety:	2.1
Infrastructure:	1.5



Program V-11 U.S. Fish and Wildlife Service and California Department of Fish and **Game Wildlife**

Continue to coordinate with federal and state wildlife agencies in an effort to protect rare or endangered species of plants and animals. Require that all development activities adhere to federal and state legislation that protects all sensitive plants and animals. Coordinate with these agencies for City efforts to restore portions of Santiago Creek and the Santa Ana River, to develop bike trails and pathways adjacent to Santiago Creek, to recognize the archeological significance of Santiago Creek, and to integrate natural landscape components within the design of projects adjacent to waterways.

Agency/Department:	Community Development Department, Community Services Department, Public Works Department
Funding Source:	General Fund, development fees, grants, federal and state funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.4, 6.7, 6.11, 7.3
Natural Resources:	4.1, 4.2, 4.3, 4.4, 4.5, 6.1
Cultural Resources & Historic Preservation:	4.2

Program V-12 Central Orange County NCCP/HCP

Support compliance with the Central Orange County Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP). Participate in any future update to the Plan. Coordinate with the Fire Department and related agencies to ensure consideration of NCCP habitat areas when planning fuel modification zones.

Agency/Department:	Community Development Department, Fire Department
Funding Source:	General Fund, development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.4, 6.11, 7.3
Natural Resources:	4.1, 4.2, 4.3, 4.4, 4.5

Program V-13 Open Space Preservation Organizations and Agencies

Continue to work with local and regional open space preservation organizations and with federal and state agencies to identify and conserve urban open space and protect lands accessible for public use. Pursue grants and other resources to plan for open space preservation and, as appropriate, purchase properties to be included in the open space



system. Use conservation easements where feasible as part of the City’s open space acquisition program.

Agency/Department:	City Manager’s Office, Community Development Department, Community Services Department
Funding Source:	Grants
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.4, 6.11
Natural Resources:	1.1, 1.2, 1.3, 5.7

Program V-14 Orange Chamber of Commerce

Continue to work with the Orange Chamber of Commerce in promoting the local economy. The Chamber provides a variety of programs promoting economic development in Orange.

Agency/Department:	Economic Development Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	3.2, 5.3, 8.2
Economic Development:	3.2, 3.3, 5.2

Program V-15 Federal and State Historic Preservation Programs

The City will continue to support efforts by California’s OHP to administer federal and state-mandated historic preservation programs in California, including the following:

- California Historical Landmarks
- California Points of Historical Interest
- California Register of Historical Resources
- National Register of Historic Places
- Secretary of the Interior’s Standards
- CEQA

The Mills Act is another preservation tool created by the California Legislature, enabling cities to enter into historical property agreements with owners of qualifying properties that result in reductions to the owners’ property taxes. The agreements provide a benefit that ensures preservation and guarantees authentic rehabilitations and a high level of maintenance of historic resources. The City will continue to offer the Mills Act program to private property owners, [will expand the program to include newly designated historic resources](#), and publicize its availability. [In compliance with state legislation, the City will inspect Mills Act properties prior to contract approval and once every five years thereafter.](#)



Agency/Department:	Community Development Department
Funding Source:	General Fund, Mills Act fees , development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	1.5, 6.11
Cultural Resources & Historic Preservation:	1.2, 1.3, 1.4, 1.5, 2.2, 4.1, 4.2, 4.3, 4.4

Program V-16 Community History and Preservation Organizations

Develop partnerships with local history and preservation organizations to prepare Historic Context Statement updates, undertake new surveys, and update surveys. Partner with local history and preservation organizations to develop a citywide interpretive program, including signs, plaques, exhibits, and other similar elements, to increase awareness of the City’s history and its historic resources

Agency/Department:	Community Development Department, Library Services Department
Funding Source:	General Fund, grants
Time Frame:	Ongoing
Related Policies:	
Cultural Resources & Historic Preservation:	1.1, 1.2, 1.3, 2.2, 3.1, 3.4, 5.5

Program V-17 Orange County Airport Land Use Commission

Continue to work with the Orange County Airport Land Use Commission to increase safety and reduce noise associated with aircraft overflights and helicopter operations within the City by achieving the following objectives:

- Work with the Federal Aviation Administration and local airports (John Wayne Airport, Long Beach Airport, Los Alamitos Army Air Base) to determine appropriate aircraft altitude standards for aircraft flying over the City, taking into account public health and safety.
- Continue to regulate the siting and operation of heliports/helistops through the Conditional Use Permit process in conjunction with the Orange County Airport Land Use Commission and Caltrans Division of Aeronautics.
- Work with the heliport/helistop operators (police, fire, hospital, and private) to implement flight profiles, tracks, and operating parameters for noise control.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing



Related Policies:
Noise:

4.1, 4.2, 4.3