



*Almost Quitting Time by Steve Kell*

## **Safety Element**

The City of San Clemente intends to protect the community from hazards related to geologic, seismic, and soil hazards; flooding, tsunami, and sea level change; excessive noise; hazardous materials; radiological hazards; wildfire; marine hazards; and illegal activities. The Safety Element seeks to minimize potential property damage and human injury by reducing the exposure of people and property to these hazards and the risks of their occurrence. This element is intended to enhance safety through advance preparation for catastrophic events and by preventing or mitigating hazards and avoiding conditions that could adversely affect residents', businesses' and visitors' safety.

One of the City's primary tools for preparing and responding to hazards is the [San Clemente Multi-Hazard Emergency Plan](http://san-clemente.org/sc/standard.aspx?pageid=319) [http://san-clemente.org/sc/standard.aspx?pageid=319]. This comprehensive tool identifies key response resources, assigns emergency planning and response responsibilities to City of San Clemente and supportive agency staff, establishes communication protocols, outlines preplanned response actions by hazard type, and provides the bases for personnel training and ongoing maintenance of the City's emergency preparedness programs.

### **PRIMARY GOAL:**

Continue to be a well-prepared community that understands and limits exposure to potential natural and human-made hazards and effectively responds to and recovers from public safety emergencies.

## GOAL AND POLICY SECTIONS:

1. [Geologic, Seismic and Soil Hazards](#)
2. [Flooding and Marine Hazards](#)
3. [Wildfire](#)
4. [Noise](#)
5. [Radiological Hazards](#)
6. [Hazardous Materials](#)
7. [Emergency Services, Preparedness, Response and Recovery](#)

## ADDITIONAL LINKS

- [San Clemente Multi-Hazard Emergency Plan \[http://san-clemente.org/sc/standard.aspx?pageid=319\]](http://san-clemente.org/sc/standard.aspx?pageid=319)
- [Marine Safety Division website \[http://san-clemente.org/sc/standard.aspx?pageid=264\]](http://san-clemente.org/sc/standard.aspx?pageid=264)
- [Orange County Fire Authority website \[http://ocfa.org/\]](http://ocfa.org/)
- [Orange County Sheriff's Department website \[http://ocsd.org/\]](http://ocsd.org/)
- [Nuclear Regulatory Commission website \[http://www.nrc.gov/\]](http://www.nrc.gov/)
- [United States Geologic Survey California Earthquakes website \[http://earthquake.usgs.gov/earthquakes/states/index.php?regionID=5\]](http://earthquake.usgs.gov/earthquakes/states/index.php?regionID=5)

## Geologic, Seismic and Soil Hazards

There are no known active faults within the City of San Clemente; however, ground shaking resulting from regional seismic activity can have a significant local impact. Additionally, some areas where the water table is shallow with loose, unconsolidated sandy soils have the potential for [liquefaction \[link to Glossary\]](#) during a seismic event. Also, our coastal and canyon bluffs and hillsides can be steep and subject to landslides and slope failures. Potential geologic and soil hazards can be increased by inappropriate development, seismic activity and heavy rains. This section's goal and policies, and the related implementation measures, seek to mitigate potential threats from geologic, seismic and soil hazards through information sharing and establishing appropriate development standards.

### GOAL:

Minimize risk to life, property, economic and social dislocation and disruption of vital services that could result from geologic and seismic hazards.

### POLICIES:

- S-1.01. ***Up to Date Information.*** We collect and maintain relevant data on fault locations, soils reports and other information that can help identify seismic or liquefaction potential and areas at risk of landslides.
- S-1.02. ***Alquist-Priolo Act.*** If active or potentially active faults are identified, we will implement mandatory development restrictions and investigation requirements pursuant to the Alquist-Priolo Act.

- S-1.03. **Unreinforced Masonry Buildings.** We require the retrofitting of unreinforced masonry buildings during remodels to minimize hazards to life and property due to an earthquake or other geologic hazards.
- S-1.04. **Landslide Risk.** Where development is proposed on unstable terrain, excessively-steep slopes and other areas deemed hazardous due to landslide risk, it is prohibited unless acceptable mitigation measures are implemented.
- S-1.05. **Assessment and Mitigation.** Where appropriate, we require new development to assess the potential for liquefaction, slope instability and landslides and require that appropriate measures be incorporated into the project to mitigate such hazards.

## GENERAL PLAN INFORMATION:

[Figure S-1, Geologic, Seismic and Soil Hazards Map](#)

## ADDITIONAL LINKS:

- [Alquist-Priolo Act \[http://www.consrv.ca.gov/cgs/rghm/ap/Pages/Index.aspx\]](http://www.consrv.ca.gov/cgs/rghm/ap/Pages/Index.aspx)

## Flooding and Marine Hazards

Potential water-related hazards in San Clemente include flooding, tsunamis, and sea level rise. Flood hazards include coastal inundation, flash flooding down watercourses and channels throughout the community, and sheet flooding across low lying areas adjacent to these watercourses. A tsunami is a series of ocean waves triggered by the displacement of a large volume of water after a submarine disturbance, such as an underwater earthquake or landslide. While there is no record of large or moderate tsunamis in the San Clemente area, the potential for tsunami damage exists, as it does in most coastal California communities. Distant source tsunamis have produced run-up of less than two feet in San Clemente; however global climate changes affecting sea level have been observed over time and if observed patterns continue, a sea level rise should be expected. Sea level rise is a long-range concern and while predictions vary, a significant rise in sea level rise could adversely affect land use, transportation and water quality in low-lying coastal areas. Marine hazards also include common ocean-related public safety concerns such as hazardous surf and navigational boating hazards.

## GOAL:

Minimize risk to life, property, economic and social dislocation, disruption of vital services and environmental effects caused by flooding, tsunamis, and sea level rise.

## POLICIES:

- S-2.01. **Flood Control Channels.** Whenever feasible, we support the restoration of concrete lined flood control channels back to natural earthen channels.
- S-2.02. **Drainage Obstruction.** We require that property owners along canyons and watercourses keep natural drainage courses on their sites free of

obstructions, such as debris, structures and dams, which may adversely affect flooding on the site or on downstream properties.

S-2.03. **100-Year Flood Zone.** We prohibit development within the 100-year flood zone unless adequate mitigation is provided against flood hazards.

S-2.04. **Regulations.** We implement Federal, State, County and local flood control regulations, as appropriate.

S-2.05. **Interagency Coordination.** We coordinate appropriate procedures for police, fire and other agencies to respond during flooding, consistent with Federal, State, and County regulations, as well as the City of San Clemente Emergency Plan.

S-2.06. **Information.** Where accurate and reliable information regarding flooding, tsunamis, and sea level rise hazards is available, the City seeks to make such information publicly available to help reduce flooding and marine hazards.

S-2.07. **Marine Safety.** We maintain adequate staffing for lifeguard services to address beach and swimmer safety needs.

#### **LINKS TO GENERAL PLAN INFORMATION:**

- [Figure S-2, Flood Hazards Map](#)
- [Figure S-3, Tsunami Potential Inundation Map](#)

#### **ADDITIONAL LINKS:**

- [San Clemente Multi-Hazard Emergency Plan](http://san-clemente.org/sc/standard.aspx?pageid=319)  
[<http://san-clemente.org/sc/standard.aspx?pageid=319>]
- [City of San Clemente Climate Action Plan](#) [staff to provide link]
- [U.S. Environmental Protection Agency, Future Climate Change, Sea Level Rise](http://www.epa.gov/climatechange/science/future.html#sealevel)  
[<http://www.epa.gov/climatechange/science/future.html#sealevel>]

## **Fire**

San Clemente residents enjoy access to and views of natural open spaces. Several neighborhoods in San Clemente are adjacent to expansive open space resources, such as the Richard and Donna O’Neill Conservancy to the north and east of City limits, and San Onofre State Beach and Camp Pendleton to the south. These large open space areas at the urban-wildland interface contain vegetation that provides fuel for wildfires which can threaten life and property in San Clemente. Wildfires are of particular concern during Santa Ana wind events, when forceful winds blow dry air from the east to the west. They create extremely dry conditions in which wildfires can easily develop due to natural or human causes. Historically, wildfire is one of the most destructive hazards in San Clemente, affecting homes, businesses, the natural environment, and human lives.

**GOAL:**

Minimize risk to life, property, economic and social dislocation and disruption of vital services due to uncontrolled fire.

**POLICIES:**

- S-3.01. **Fire and Building Codes.** We coordinate with Orange County Fire Authority to proactively mitigate or minimize the adverse effects of structural fires, wildfires and related hazards like erosion, hazardous materials release and structural collapse by implementing appropriate fire and building codes.
- S-3.02. **Public Education.** We coordinate with Orange County Fire Authority to provide public education tools to increase awareness of fire prevention measures.
- S-3.03. **Orange County Fire Authority.** We contract with Orange County Fire Authority to maintain fire stations, equipment, and staffing to effectively respond to emergencies.
- S-3.04. **Peak Water Supply.** We maintain an adequate peak water supply for fire suppression, per the San Clemente Urban Water Management Plan and funding available for implementation.
- S-3.05. **Evaluation.** We coordinate with the Orange County Fire Authority to evaluate the effectiveness of fire safety strategies and implementation measures.
- S-3.06. **Balance Between Goals.** We balance the need for fire safety and defensible landscape perimeters with biological and open space preservation, consistent with the Coastal Conservation Plan, where applicable.

**GENERAL PLAN INFORMATION:**

- [Community Design Element \[link to CDE Homepage\]](#)
- [Emergency Services Section, Safety Element \[link to Emergency Services page\]](#)
- [Figure S-6, Critical Facilities Map](#)

**ADDITIONAL LINKS:**

- [Wildfire Hazards Map \[http://san-clemente.org/sc/Inf/Forms/Building/Download/1800 CAL FIRE - 2011 City of San Clemente VHFHSZ.pdf\]](http://san-clemente.org/sc/Inf/Forms/Building/Download/1800_CAL_FIRE_-_2011_City_of_San_Clemente_VHFHSZ.pdf)
- [Orange County Fire Authority website \[http://ocfa.org/\]](http://ocfa.org/)

## Noise

Excessive noise can adversely affect human health and well-being, economic productivity, and property values, especially in areas where sensitive land uses such as senior housing, schools, child care, and hospitals are located. Mobile and stationary noise sources contribute to overall noise levels, and the impacts of both must be analyzed when considering environmental effects of new development. Bisected by Interstate 5, San Clemente’s primary noise source is from automobile, truck and motorcycle traffic.

Passenger and freight rail services utilize a rail line that skirts the coastline and are also significant mobile noise sources. The City has successfully used federal tools to reduce train noise near sensitive land uses.

The General Plan is a tool for managing noise by planning for and maintaining compatibility between sensitive land uses and noise sources. Specific standards regulating the noise environment are provided by the San Clemente [Noise Ordinance](#) [staff to provide link].

**GOAL:**

Minimize exposure to excessive noise levels by taking appropriate actions to avoid or mitigate the detrimental effects of exposure to excessive noise levels on humans and animals and in particular, on sensitive land uses.

**POLICIES:**

- S-4.01. **Noise Control.** We effectively control ambient and stationary noise conditions by maintaining baseline information, monitoring conditions, following State guidelines, and enforcing locally adopted ordinances and building codes.
- S-4.02. **Street Design.** We consider noise impacts when designing new streets.
- S-4.03. **Interagency Collaboration.** We encourage and collaborate with local, regional, and statewide transportation agencies to minimize transportation-related noise impacts and provide appropriate mitigation measures that also consider impacts to community character and on natural resources (e.g., views).
- S-4.04. **Balance Between Noise Control and View Protection.** We will continue to work with local, State, and Federal agencies to reduce highway- and railroad-generated noise levels to within acceptable levels identified in the General Plan, while seeking to re-establish ocean views blocked by noise barriers on Interstate 5.
- S-4.05. **Rail-related Noise.** We minimize the noise impact of passenger and freight rail service on sensitive land uses by coordinating with rail authorities to effectively manage train noise and by aggressively pursuing noise mitigation measures that apply to rail uses.
- S-4.06. **Truck Routes.** To minimize truck traffic noise impacts to sensitive land uses, we designate areas where truck traffic is prohibited. [[link to Freight Movement section in the Mobility and Complete Streets Element](#)]
- S-4.07. **Collaboration with Camp Pendleton.** We collaborate with the United States Marine Corps, Camp Pendleton, to minimize the impacts of noise- or vibration-inducing activities on San Clemente residents and to inform the community in advance when such activities will be conducted.
- S-4.08. **Live Entertainment.** We control live entertainment noise conditions by requiring best management practices that minimize impacts on residential and



other sensitive uses and ensure compliance with the City's adopted Noise Ordinance.

**GENERAL PLAN INFORMATION:**

- [Figure S-4, Existing Roadway and Rail Noise Contour Map](#)
- [Figure S-5, Future Roadway and Rail Noise Contour Map](#)
- [Urban Design Element \[link to UDE Homepage\]](#)
- [Mobility and Complete Streets Element \[link to ME Homepage\]](#)

**ADDITIONAL LINKS:**

- [Noise Ordinance \[staff to provide link\]](#)
- [San Clemente General Plan EIR Noise Section \[to be provided with Screencheck EIR\]](#)

## Radiological Hazards

The San Onofre Nuclear Generating Station (SONGS) is the only nuclear power plant in Southern California. It is located in San Diego County, approximately three miles south of the City of San Clemente. SONGS is primarily owned by Southern California Edison, which is in charge of its operations and maintenance. In June 2013, Southern California Edison announced that it was going to retire the nuclear power plant, which had not been operational since January 2011. This is a process called decommissioning. The decommissioning process is regulated by the Nuclear Regulatory Commission (NRC). Coordination of policies and procedures for radiological hazards will continue to be relevant to the City. Southern California Edison will submit a Post-Shutdown Decommissioning Activities Report to the NRC by June 2015; it will provide a timeline and schedule of decommissioning activities.

The [San Clemente Multi-Hazard Emergency Plan \[http://san-clemente.org/sc/standard.aspx?pageid=319\]](http://san-clemente.org/sc/standard.aspx?pageid=319) was created to prepare the community for potential emergency situations that could develop as a result of excessive radiation exposure from SONGS. The Multi-Hazard Emergency Plan outlines procedures for oversight, communication, emergency warning, evacuation, response, and recovery.

**GOAL:**

Minimize risk to public health, safety, and welfare, and the natural and built environments of the City of San Clemente through proper communication protocols and nuclear disaster preparedness.

**POLICIES:**

- S-5.01. **Public Information.** We proactively communicate with State and Federal agencies and Southern California Edison and seek to ensure the City and its residents are informed about the status of and conditions at SONGS.

- S-5.02. ***Interagency Collaboration and Response.*** We collaborate with the counties of Orange and San Diego, the cities of Dana Point and San Juan Capistrano, the US Marine Corps Base Camp Pendleton, California State Beaches and Parks, Southern California Edison and other local, state and federal government agencies with roles in radiological emergency response to ensure the City and our neighbors can conduct coordinated emergency response to an event at SONGS.
- S-5.03. ***Public Education.*** We reduce risks to the public from radiological events through public awareness and education, by operating emergency warning systems, by establishing, updating, and implementing community protection in partnership with local, State and Federal government agencies, and through our readiness to implement emergency plans.
- S-5.04. ***Transport of Radioactive Materials.*** We work with Southern California Edison to ensure the transport of radioactive materials through the City of San Clemente complies with all State and Federal standards and does not adversely affect human health, land uses and activities.
- S-5.05. ***Disposal of Radioactive Fuel.*** We encourage the Federal government to establish a permanent, safe disposal site for spent nuclear fuel rods and the establishment of temporary sites, if needed, to move fuel away from San Clemente.

#### **ADDITIONAL LINKS:**

- [Radiological Emergency Evacuation Route Map \[http://san-clemente.org/sc/standard.aspx?pageid=587\]](http://san-clemente.org/sc/standard.aspx?pageid=587)
- [San Clemente Multi-Hazard Emergency Plan \[http://san-clemente.org/sc/standard.aspx?pageid=319\]](http://san-clemente.org/sc/standard.aspx?pageid=319)
- [City of San Clemente Emergency Planning webpage \[http://san-clemente.org/sc/standard.aspx?pageid=319\]](http://san-clemente.org/sc/standard.aspx?pageid=319)
- [Nuclear Regulatory Commission website \[http://www.nrc.gov/\]](http://www.nrc.gov/)
- [SONGS Website \[http://www.songscommunity.com\]](http://www.songscommunity.com)

## **Hazardous Materials**

San Clemente's industrial and manufacturing uses contribute to the City's prosperity. However, these uses can pose hazards related to the use and storage of toxic materials and the creation of toxic waste as byproducts. The storage, transportation, and disposal of these materials are sensitive processes. Seismic activity, flooding, marine hazards, and fires can result in hazardous materials being released onto land or into the air and water, contaminating the environment and endangering public safety.

The transportation of hazardous materials is of particular concern in San Clemente. Hazardous materials are transported through the community due to San Clemente's



## City of San Clemente Centennial General Plan

location along a busy rail route and along Interstate 5, a major north-south corridor for California.

**GOAL:**

Protect life, property, and the natural environment by minimizing the potential for exposure to and contamination from hazardous materials and waste.

**POLICIES:**

- S-6.01. **Public Maps.** We publicize areas of known hazardous materials contamination to reduce risk to public health, safety, and welfare.
- S-6.02. **Remediation Plans.** We require owners of contaminated sites to develop a remediation plan with the assistance of the County of Orange and State and Federal government agencies.
- S-6.03. **Coordinated Response.** We coordinate effective responses to hazardous materials incidents with other appropriate jurisdictions and agencies.
- S-6.04. **Local and Regional Participation.** We participate in local and regional efforts to mitigate the potential for land, water, and air contamination from hazardous materials or waste, and work to help ensure clean-up of contaminated areas if a release occurs.
- S-6.05. **Disclosure Laws.** Working with other public agencies, we help enforce disclosure laws that require the users, producers, and transporters of hazardous materials and waste to clearly identify these items.
- S-6.06. **Public Education.** Working with other public agencies, we help disseminate information to the public about the proper disposal of household hazardous materials and waste, and encourage the use of non-toxic alternatives.

**ADDITIONAL LINKS:**

- [San Clemente Hazardous Materials Map](#)  
[City staff to provide link]
- [Orange County Hazardous Waste Management Plan](http://oclandfills.com/hazardous/)  
[http://oclandfills.com/hazardous/]
- [Title 49, Federal Code of Regulations](http://cfr.vlex.com/source/code-federal-regulations-transportation-1098)  
[http://cfr.vlex.com/source/code-federal-regulations-transportation-1098]

## **Emergency Services, Preparedness, Response, and Recovery**

Emergency services in San Clemente include police protection, fire prevention and suppression, emergency medical care, marine safety and City emergency planning. Police services are provided by the Orange County Sheriff's Department, fire and emergency medical services are provided by the Orange County Fire Authority, marine safety services are provided by the City of San Clemente Marine Safety Division and at State beaches by the State of California, and emergency preparedness is organized by the City's Emergency Planning Program, Public Works Department. Maintaining safety in San Clemente's neighborhoods, business districts, and beaches contributes to the community's appeal to

residents, business owners, and visitors. The City of San Clemente approaches emergency services and planning in a proactive manner that includes education and prevention strategies.

San Clemente is susceptible to a variety of natural and human-made safety hazards including earthquakes, floods, marine hazards, fires, crime, and radiological exposure. The General Plan seeks to mitigate these potential threats to life, property, environmental quality, and economic vitality through preventative measures and through careful emergency planning.

**GOAL:**

Continue to be a safe, disaster-resilient community that is prepared through effective community outreach, proactive monitoring, and efficient emergency services, response, recovery and mitigation.

**POLICIES:**

- S-7.01. **Staffing, Facilities and Supplies.** We ensure adequate staffing, facilities and supplies for our police, fire, marine safety and emergency medical services, and emergency planning to provide appropriate and timely response to emergency needs.
- S-7.02. **Hazard Prevention Funding.** We give high priority to strategies and funding for hazard-prevention services, training, educational materials, and facilities.
- S-7.03. **Outreach and Education.** We provide community-based outreach and educational efforts to enable our residents to prepare for and respond appropriately in emergency situations, and to contribute to the overall safety of the community.
- S-7.04. **Interdepartmental and Interagency Collaboration.** We collaborate among City departments and with organizations outside of the City for a comprehensive approach to emergency services and disaster preparedness, response and recovery, including continuity of operations (e.g. information technology and financial services).
- S-7.05. **Partnerships.** We partner with other local, State and Federal emergency services agencies to enhance safety resources in the City of San Clemente.
- S-7.06. **Performance Measurement.** We periodically analyze public safety data to evaluate the effectiveness of our strategies and allocate resources accordingly.
- S-7.07. **Crime Prevention Through Environmental Design.** We require new development to incorporate Crime Prevention Through Environmental Design (CPTED) [[link to Glossary](#)] features in the orientation and design of sites, buildings, streetscapes, and open spaces.

- S-7.08. **Management Programs and Warning Systems.** We maintain emergency management programs and warning systems that meet State and Federal requirements.
- S-7.09. **Training.** We regularly conduct training exercises to prepare for and evaluate emergency and disaster response and recovery procedures.
- S-7.10. **Outreach.** We reach out to the community to educate, train and establish volunteer programs, to enhance the safety and disaster resilience of our community through volunteer programs, such as the Community Emergency Response Team (CERT) Program, Retired Senior Volunteer Program (RSVP), Explorer Scouts, and Neighborhood Watch and Radio Amateur Citizen Emergency Services (RACES).

#### **GENERAL PLAN INFORMATION:**

- [Figure S-6, City of San Clemente Critical Facilities Map](#)

#### **ADDITIONAL LINKS:**

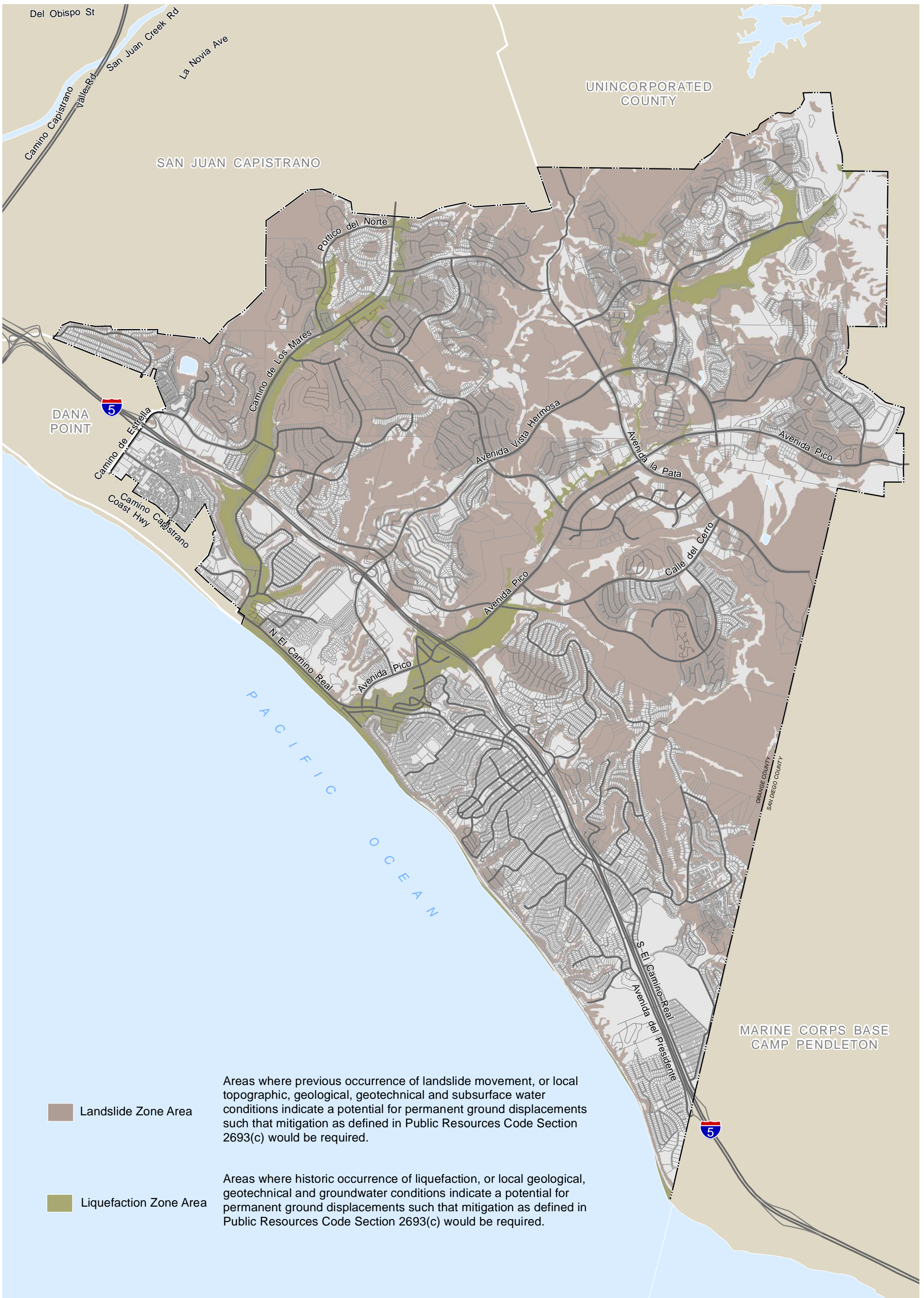
- [San Clemente Multi-Hazard Emergency Plan](http://san-clemente.org/sc/standard.aspx?pageid=319)  
[http://san-clemente.org/sc/standard.aspx?pageid=319]
- [City of San Clemente Police Services](http://san-clemente.org/sc/standard.aspx?pageid=266)  
[http://san-clemente.org/sc/standard.aspx?pageid=266]
- [San Clemente Police Services Annual Report](#) [staff to provide link; last one found on the website was from 2010]
- [City of San Clemente Fire Services webpage \(includes a link to a map of the stations\)](http://san-clemente.org/sc/standard.aspx?pageid=267) [http://san-clemente.org/sc/standard.aspx?pageid=267]
- [Orange County Fire Authority website](http://ocfa.org/) [http://ocfa.org/]
- [City of San Clemente Marine Safety Division webpage](http://san-clemente.org/sc/standard.aspx?pageid=264) [http://san-clemente.org/sc/standard.aspx?pageid=264]
- [City of San Clemente Emergency Services](http://san-clemente.org/sc/standard.aspx?pageid=319)  
[http://san-clemente.org/sc/standard.aspx?pageid=319]
- [Community Emergency Response Team \(CERT\) Program](#) [staff to provide link; couldn't find links on City site other than short-term information, i.e., calendar of events, schedule, etc.]
- [Retired Senior Volunteer Program \(RSVP\)](http://san-clemente.org/sc/standard.aspx?pageid=336)  
[http://san-clemente.org/sc/standard.aspx?pageid=336]
- [Explorers](#) [staff to provide link; couldn't find information on City website]
- [Neighborhood Watch](#) [staff to provide link]
- [Neighborhood Beach Watch](http://san-clemente.org/sc/standard.aspx?pageid=617)  
[http://san-clemente.org/sc/standard.aspx?pageid=617]
- [Radio Amateur Citizen Emergency Services \(RACES\)](http://san-clemente.org/sc/Inf/EmergencyPlan/FamilyEmergencyPlans/TricitiesTrifoldSC.pdf) [http://san-clemente.org/sc/Inf/EmergencyPlan/FamilyEmergencyPlans/TricitiesTrifoldSC.pdf]

## **Implementation Measures**

General Plan Implementation Measures are contained in the Strategic Implementation Program (SIP). The SIP contains Implementation Measures for one-time projects that end with a specific goal, and ongoing projects that requires routine activity with no specified end date. The SIP is updated by the City Council with the City budget and Long-Term Financial Plan (LTFP) to ensure the effective implementation of the Centennial General Plan. This coordination ensures that the General Plan remains a dynamic, up to date, responsive guide to public decision making and expenditures.

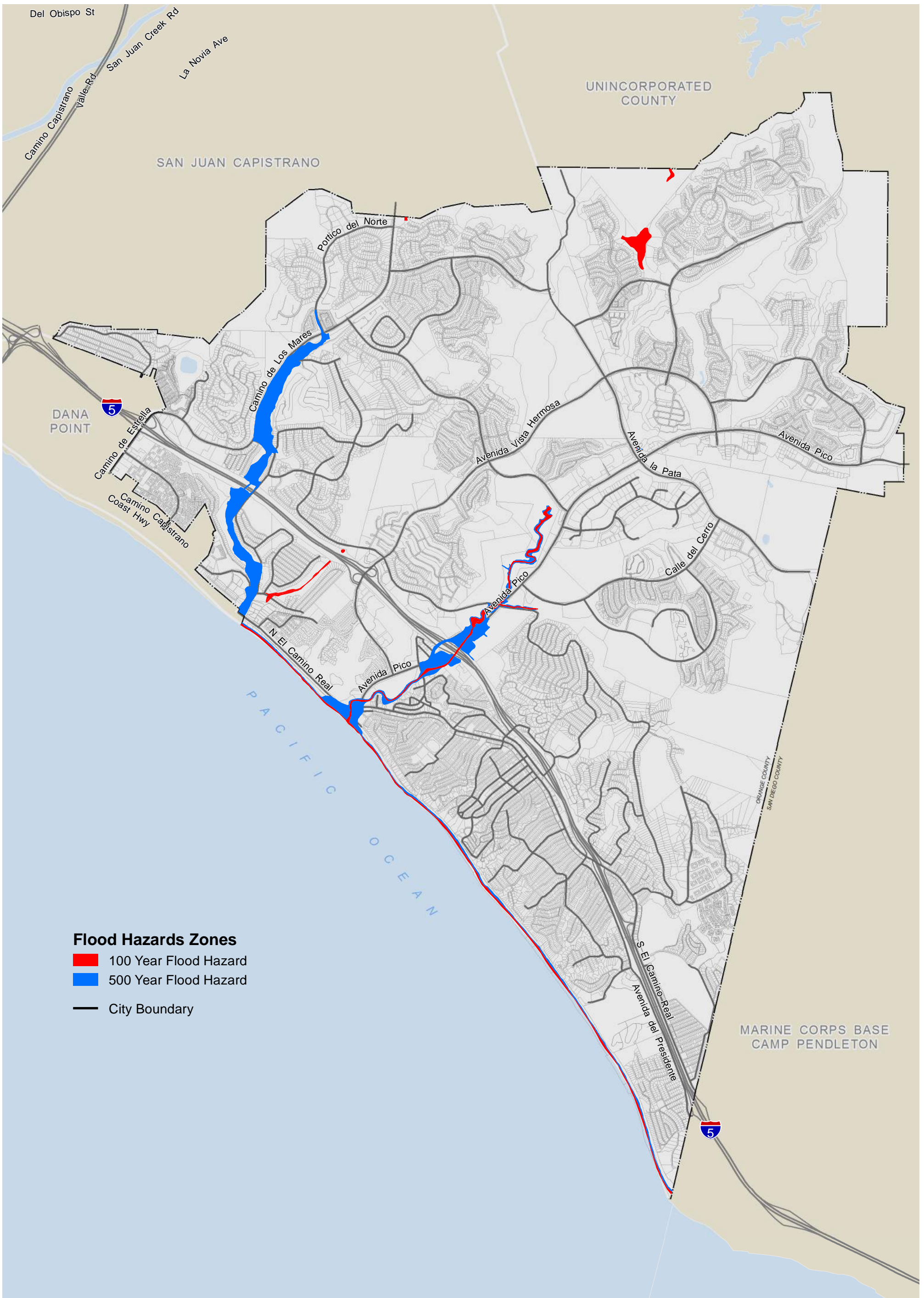
Click [here](#) to access Implementation Measures for this element in the latest Strategic Implementation Program.





**Figure S-1**  
**GEOLOGIC, SEISMIC, AND SOIL HAZARDS MAP**





Data Source: FEMA Digital Flood Insurance Rate Map data (DFIRM) 8.16.11

**Figure S-2**  
**FLOOD HAZARDS MAP**



0 1,250 2,500 5,000 Feet





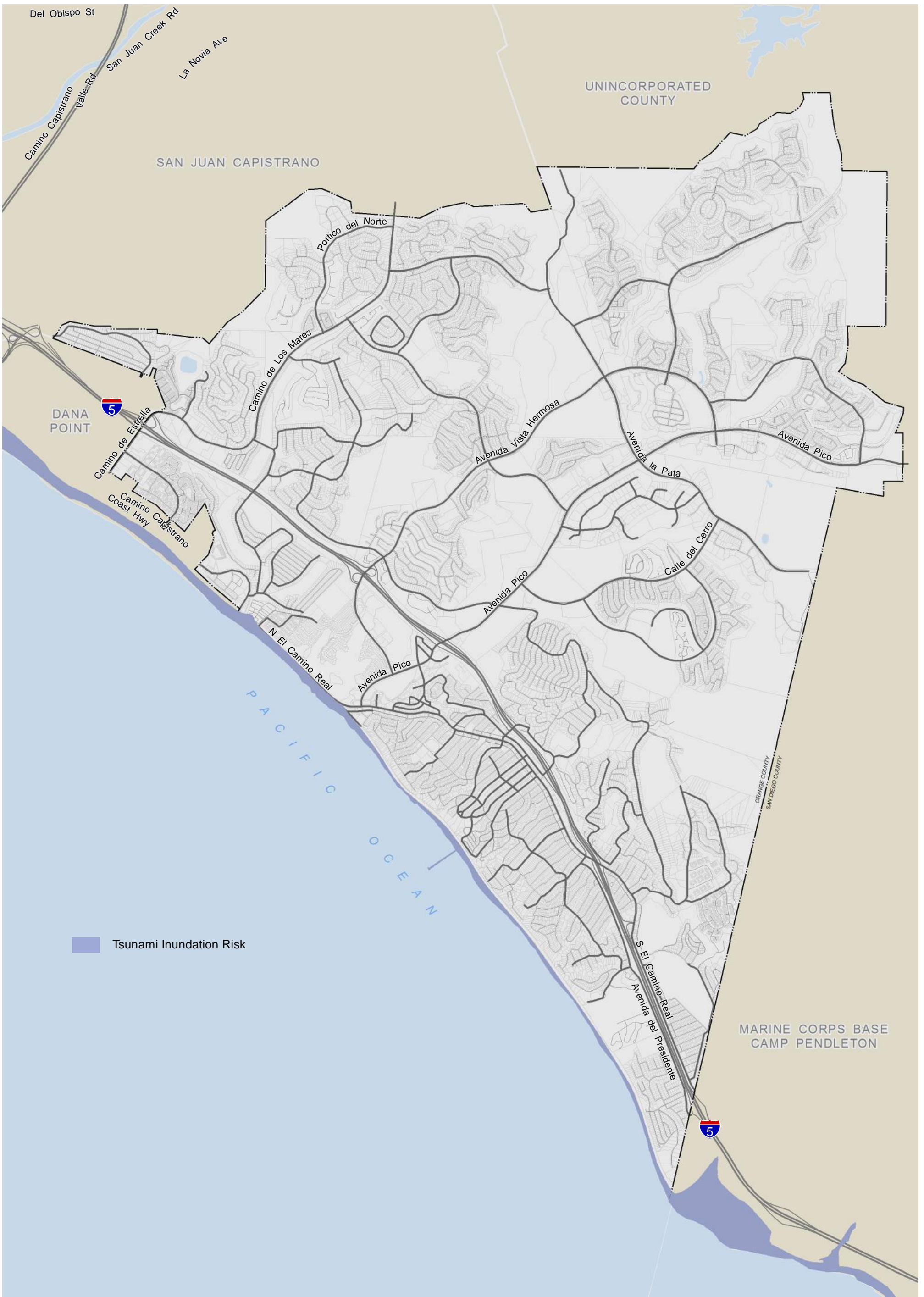


Figure S-3  
**TSUNAMI POTENTIAL INNUNDATION MAP**



Source: USC, Tsunami Research Center, 2013

0 1,250 2,500 5,000 Feet





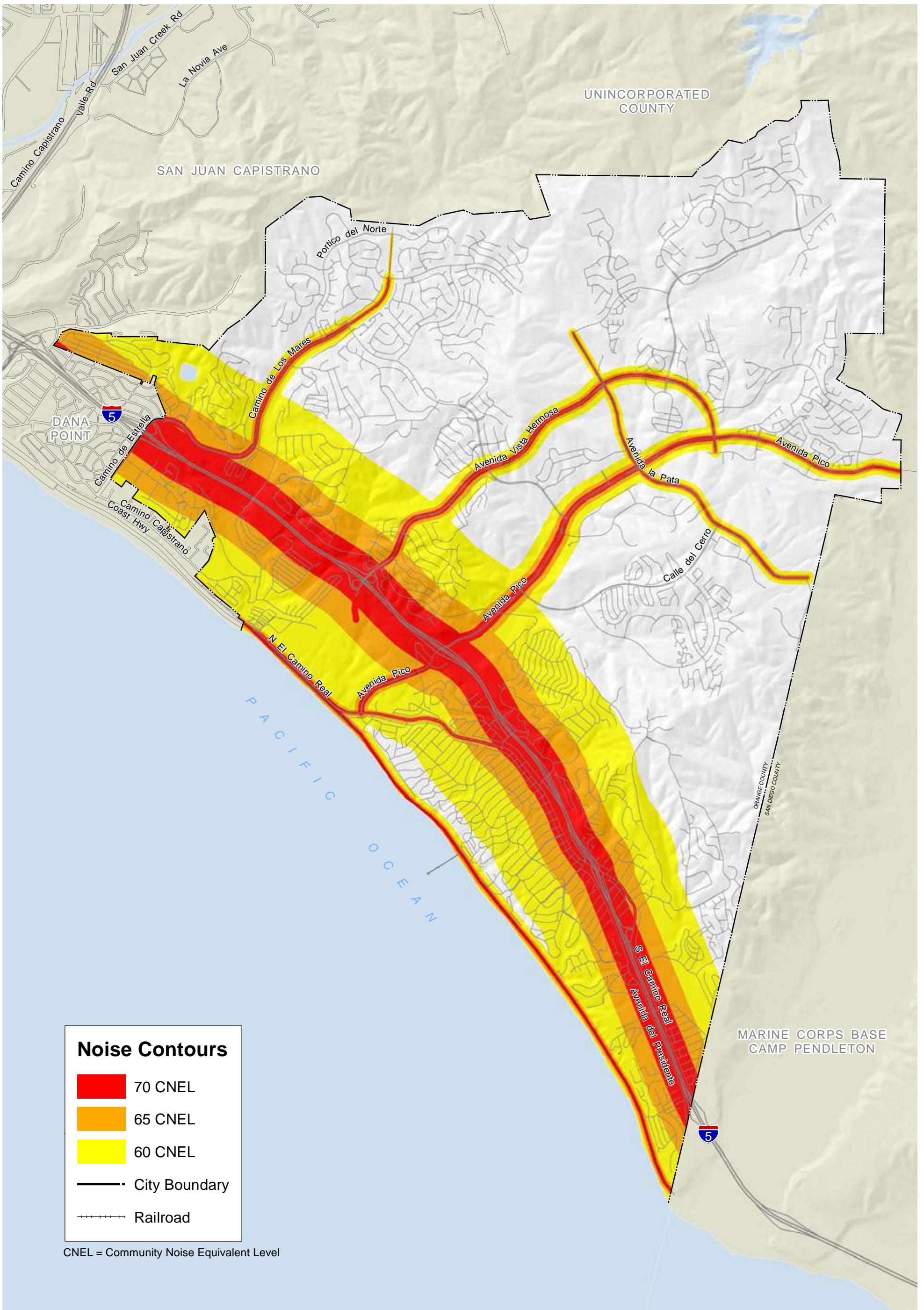
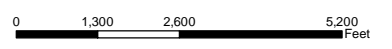


Figure S-4

# EXISTING ROADWAY AND RAIL NOISE CONTOUR MAP





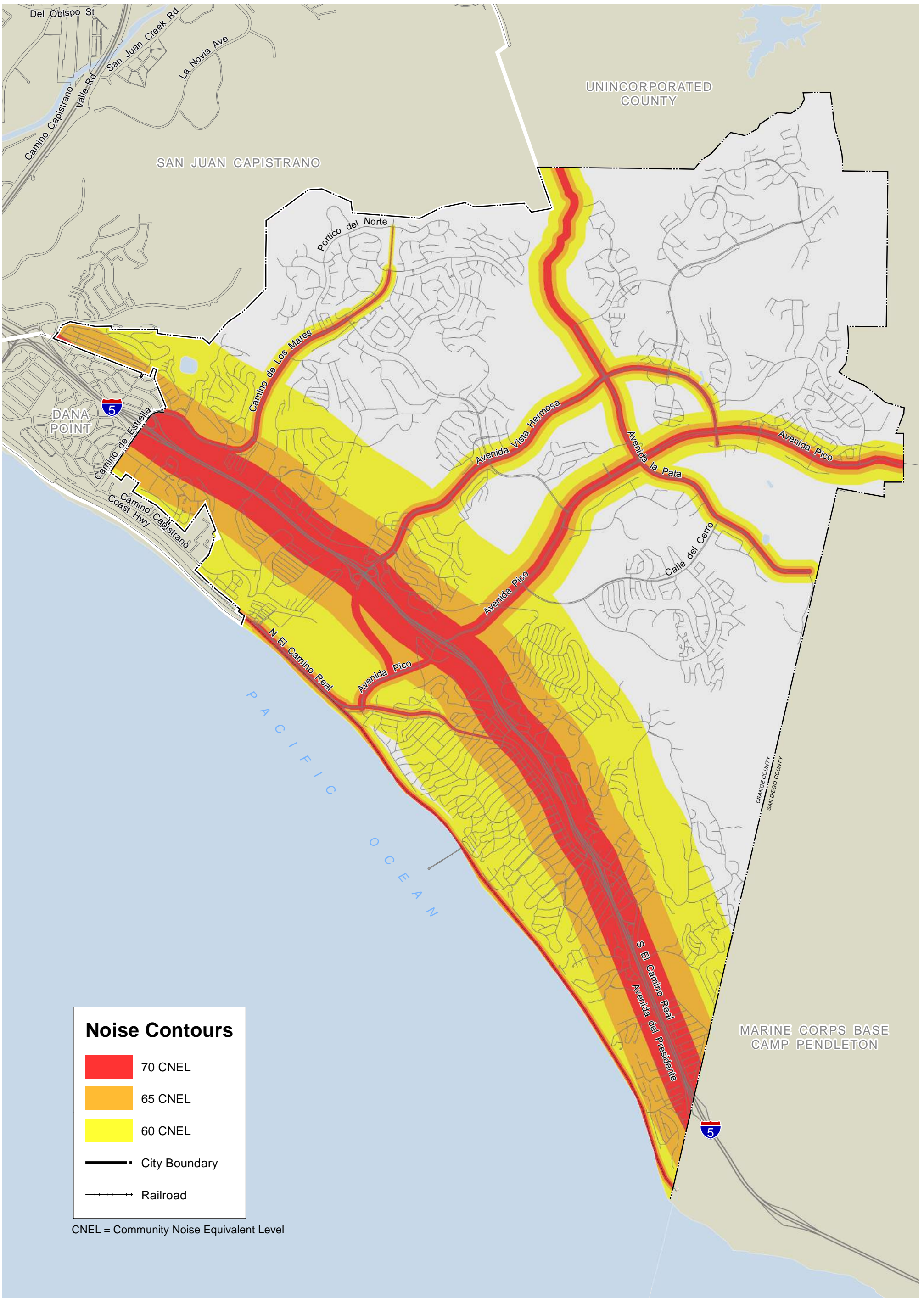


Figure S-5  
**FUTURE ROADWAY AND RAIL NOISE CONTOUR MAP**

0 1,250 2,500 5,000 Feet





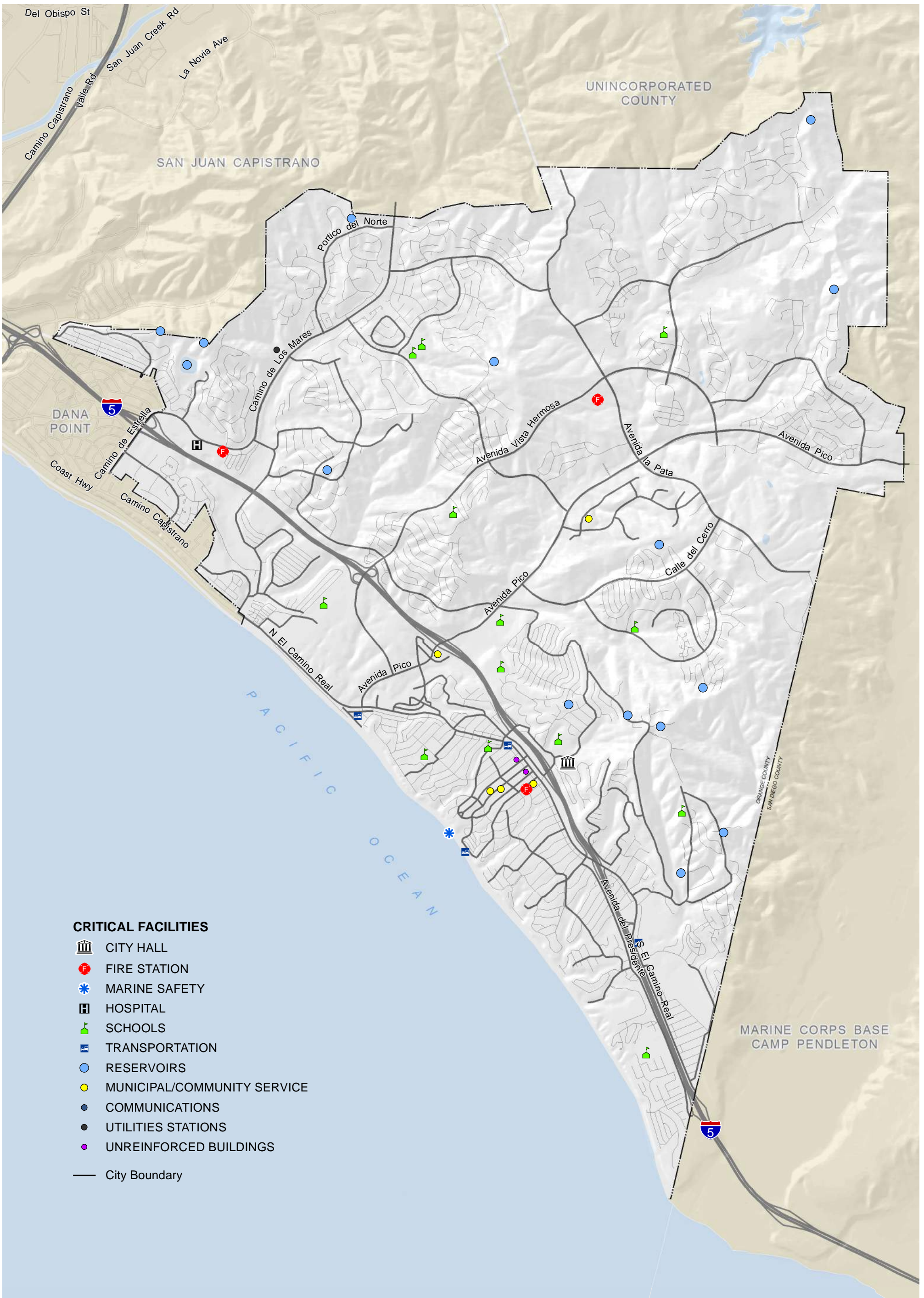


Figure S-6  
**CRITICAL FACILITIES**

0 1,250 2,500 5,000 Feet

