APPENDIX 3 -- GEOTECHNICAL EVALUATION REQUIREMENTS

The Hazards Maps incorporated in the Land Use Plan show geotechnical hazards in the coastal zone. The extent of additional geotechnical study needed before approval of a project depends on both the site and the type of project. Potential projects are ranked according to suitability for accepting risk, with those requiring the greatest caution listed first.

Land Use and Building Types

Type 1: Public, High Occupancy and Critical Use, including:

Hospitals
Fire and Police Stations
Community Facilities
Schools
Auditoriums, Theaters
Penal Institutions
High-rise Hotels, Office and Apartment Buildings (over 3 stories)
Major Utility Facilities

Type 2: Low Occupancy, including:

Low-rise Commercial and Office Buildings (1-3 stories)
Restaurants (except in high-rise category)
Residential (over 8 attached units and less than 3 stories)

Type 3: Residential (less than 8 attached units) and

Manufacturing and Storage/Warehouses (except where highly toxic substances are involved which should be evaluated on an individual basis with mandatory geotechnical review)

Type 4: Open Space, Agriculture, Golf Courses, etc.

Potential Hazards

Fault Rupture. Presently available geologic maps defining active or potentially active fault traces within the San Andreas fault zone have been used to determine special studies zones called for by California Public Resources Code, Sections 30000-30900. Before proceeding with any Type 1 development, published geologic information should be reviewed, the site should be mapped geologically, and aerial photographs of the site and vicinity should be examined for lineaments. Where these methods indicate the possibility of faulting, a thorough investigation is required to determine if the area contains a potential for fault rupture.

Seismic-Related Ground Failure. Suggested site investigation requirements for seismic-related ground failure potential of the four land use/building types listed above are described in the following table:

Land Use/Building Types	Seismic Related Ground Failure Zones (From Hazard Maps)		
	High (Zone 3)	Moderate (Zone 2)	Low (Zone 1)
Type 1	D	C	B
Type 2	C	C	A
Type 3	B	B	A
Type 4	---	---	---

A. Current building code requirements must be met, as well as other existing state and local ordinances and regulations. A preliminary geotechnical investigation should be made to determine whether or not the hazards zone indicated by the maps is reflected by site conditions.

B. In addition to A, geotechnical investigation and structural analysis sufficient to determine structural stability of the site for the proposed use is necessary. It may be necessary to extend the investigation beyond site boundaries in order to evaluate the shaking hazard. All critical use structure sites require detailed subsurface investigation.

C. In addition to A and B, surface and/or subsurface investigation and analyses sufficient to evaluate the site's potential for liquefaction and related ground failure shall be required.

D. In addition to A, B and C, detailed dynamic ground response analyses must be undertaken.

Dangerous or unspecified land uses should be evaluated and assigned categories of investigation on an individual basis.

Tsunami. Land Use Types 1, 2, and 3 should be disallowed in tsunami-prone areas. Development of harbors and Type 4 uses should be permitted, provided a tsunami warning plan is established.

Landsliding. Because of the high potential for landsliding in almost all of the coastal zone, all development plans should undergo a preliminary evaluation of landsliding potential. The effect of the development on the landslide potential must be taken into account, because slides can result from excavation, drainage changes, and deforestation. If landslide conditions exist and cannot be avoided, positive stabilization measures should be taken to mitigate the hazard.

Coastal Erosion. Planning for an Eroding Shoreline (#17, California Coastal Commission) describes areas requiring special studies based on bluff configuration. The Statewide Interpretive Guidelines for Geologic Stability of Bluff Top Development provide further development guidelines.

Source: Harding-Lawson Associates, Engineers, Geologists, and Geophysicists, 1979.