SAFETY ELEMENT

Two safety hazards within the University community include geologic hazards and the accident potential from aircraft operations at NAS Miramar. This element identifies the locations of these hazards and provides guidelines to maximize public safety.

I. EXISTING CONDITIONS

A. Geologic Hazards

Geologic risks within The City of San Diego have been mapped in the Seismic Safety Study for The City of San Diego by Woodward-Gizienski & Assoclates and F.B. Leighton & Associates (May 1974). This study indicates potential locations for faults, unstable slopes, ground failures, unstable coastal bluffs and other terrain conditions. Geologic hazards within the University community are illustrated on **Figure 40** and are summarized below:

1. Faults

   The closest known fault system that appears capable of generating a damaging earthquake is the Rose Canyon Fault Zone, located southwest of the community. Several faults within this zone are considered potentially active and a high risk. The only other potentially active fault in the area is the Carmel Valley Fault, located on the Torrey Pines State Reserve and adjacent properties. Several faults also cross North University, primarily in the Torrey Pines Fault Zone. These faults are considered inactive and a moderate safety risk.

2. Landslides and Slope Instability

   Old landslides and landslide-prone formations are the principal non-seismic geologic hazards within the community. Conditions that contribute to slope instability include slope inclination, rock orientation of the bedding, soil characteristics, and the presence of groundwater.

   Slopes with a moderate or high risk of slope failure occur along the coastal bluffs and canyons west of Torrey Pines mesa and along the south side of Sorrento Valley. Some slopes along Rose Canyon and San Clemente Canyon have a moderate or high risk of landslides. In addition, many localized landslide areas of high risk occur throughout the Plan area.

3. Coastal Bluff Instability

   The coastal bluffs west of Torrey Pines Mesa are highly unstable because joints and fractures inherent in the formation material are weakened by erosion

from mesa-top runoff and groundwater seepage. Landslides, block falls and talus failures are among the identified hazards.

4. Flooding and Liquefication

   The only locations in the community subject to inundation during a 100-year frequency flood are the lower portions of Rose Canyon and San Clemente Canyon. These areas will be retained as open space by either City ownership or easements so flooding impacts on development are not expected. The potential for damage caused by liquefication is considered to be low in these drainages and would not represent a constraint to land use.

B. Miramar Naval Air Station

A portion of the University community is impacted by the aircraft accident potential from NAS Miramar. Departures to the west along the Seawolf Departure create a safety hazard for the areas along Eastgate Mall, Miramar Road, Sorrento Valley and adjacent slopes and the Torrey Pines mesa.

The NAS Miramar Comprehensive Land Use Plan delineates the boundaries of two Accident Potential Zones. Only the northeast section of the community is impacted by Accident Potential Zone 1. The mesas and slopes north of Genesee Avenue and portions of the Torrey Pines mesa are located within APZ 2. The locations of the Accident Potential Zones are illustrated in **Figure 41**.

The Navy has defined the types of land uses which are compatible with the crash hazard zones. The matrix in **Figure 42** illustrates which land use types are considered suitable for the two APZ zones, according to the AICUZ study and Miramar Comprehensive Land Use Plan prepared by SANDAG. Further, the Navy has purchased in fee those properties which are most critical to the maintenance of a safe departure corridor.

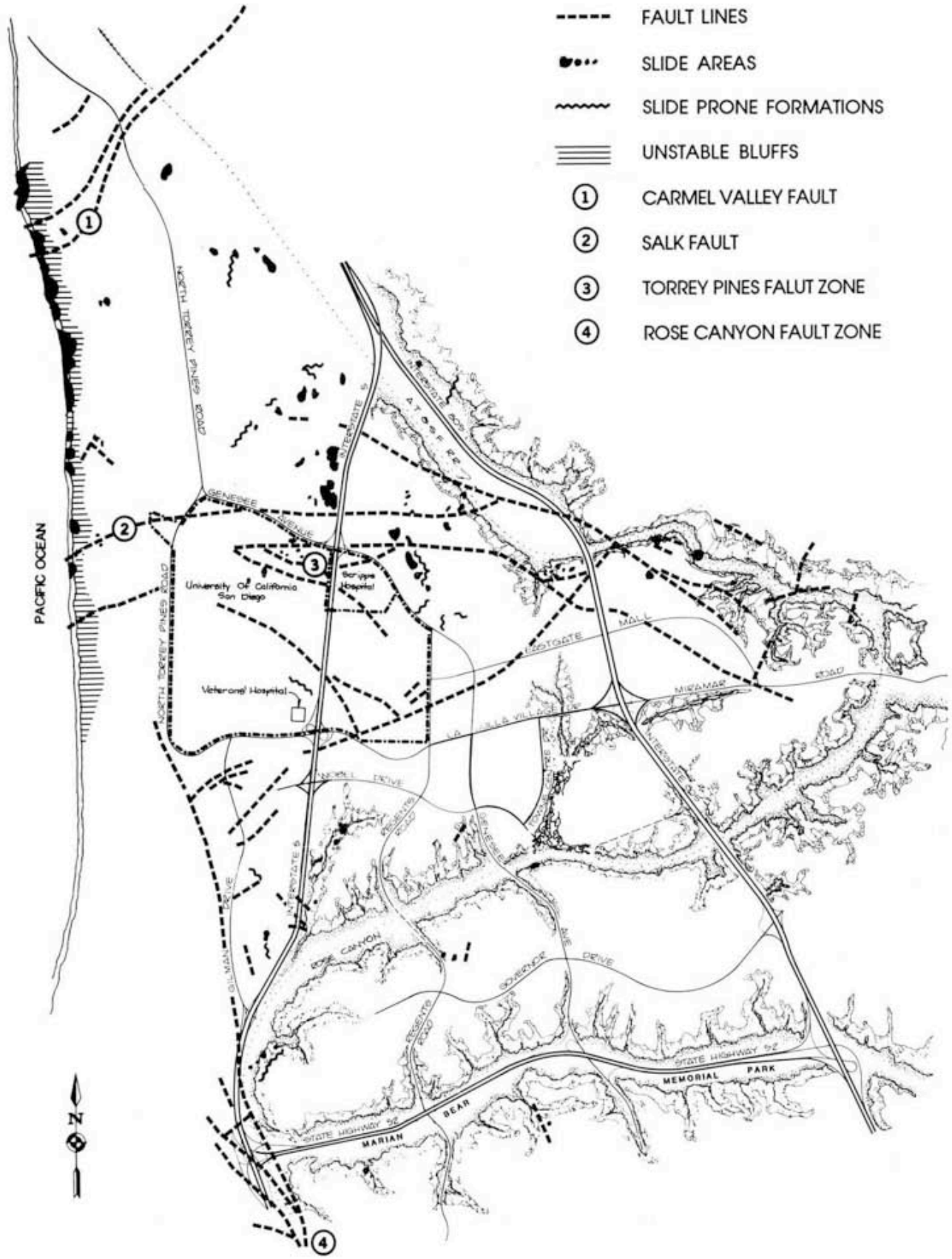
II. GOALS

A. Protect the public health and safety by guiding future development so that land use is compatible with identified geologic risks, including seismic and landslide hazards.

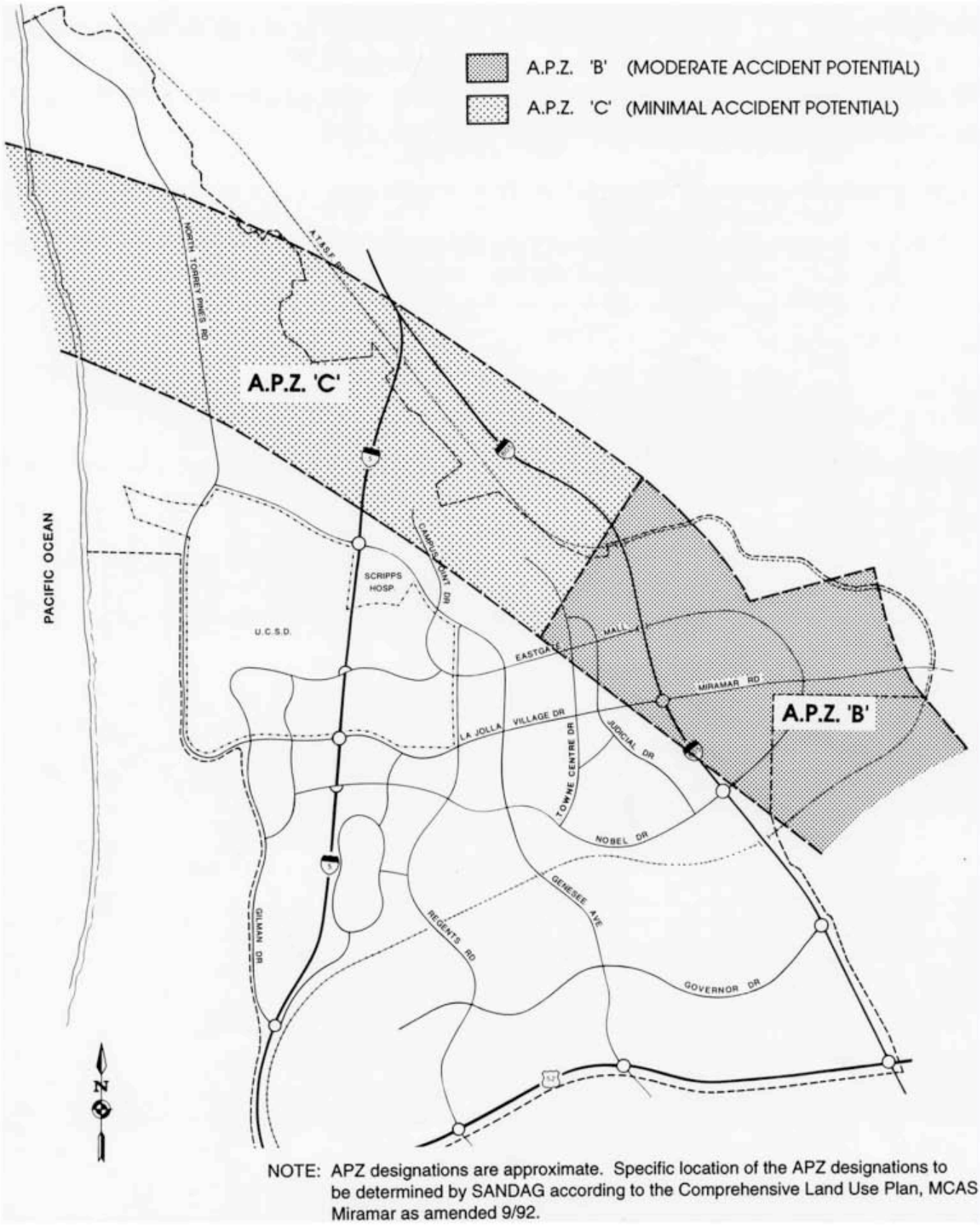
B. Ensure that proposed development does not create or increase geologic hazards either on- or off-site.

C. Promote public safety by taking into account aircraft accident potential in the placement of structures and activities.

D. Provide for the safe operation of NAS Miramar through the preservation of appropriate departure corridors.



Geologic Hazards
University Community Plan
40 FIGURE



NOTE: APZ designations are approximate. Specific location of the APZ designations to be determined by SANDAG according to the Comprehensive Land Use Plan, MCAS Miramar as amended 9/92.

Accident Potential Zones - NAS Miramar

University Community Plan

41 FIGURE

SOURCE: 1976 AIR INSTALLATION COMBATIBLE USE ZONE (AICUZ) STUDY: N.A.S. MIRAMAR

LAND USE	APZ A	APZ B	APZ C
RESIDENTIAL-SINGLE FAMILY, DUPLEX, AND MOBILE HOMES			(1)
RESIDENTIAL-MULTIPLE FAMILY			
TRANSIENT LODGING			
SCHOOL CLASSROOMS, LIBRARIES, AND CHURCHES			
HOSPITALS AND NURSING HOMES			
AUDITORIUMS, CONCERT HALLS, AND MUSIC SHELLS			
SPORTS ARENAS, AND OUTDOOR SPECTATOR SPORTS			
PLAYGROUNDS AND NEIGHBORHOOD PARKS			
GOLF COURSES, RIDING STABLES, WATER RECREATION, AND CEMETERIES	(3)	(2)	
OFFICE BUILDINGS, PERSONAL, BUSINESS AND PROFESSIONAL			
COMMERCIAL-RETAIL, MOVIE THEATERS, AND RESTAURANTS			
COMMERCIAL-WHOLESALE, SOME RETAIL, INDUSTRIAL, MANUFACTURING, AND UTILITIES		(4)	
LIVESTOCK FARMING, AND ANIMAL BREEDING			
AGRICULTURAL (EXCEPT LIVESTOCK), MINING AND FISHING	(3)		
PUBLIC RIGHT-OF-WAY			
EXTENSIVE NATURAL RECREATION AREAS			

INTERPRETATION

CLEARLY ACCEPTABLE

EXPOSURE TO ACCIDENT POTENTIAL IS SUCH THAT THE ACTIVITIES ASSOCIATED WITH THE LAND USE MAY BE CARRIED OUT WITH ESSENTIALLY NO INTERFERENCE OR SUBSTANTIAL LOSS OF LIFE AND PROPERTY.

NORMALLY ACCEPTABLE

EXPOSURE TO ACCIDENT POTENTIAL IS GREAT ENOUGH TO BE OF SOME CONCERN, BUT DENSITY OF PEOPLE AND STRUCTURES, WHEN PROPERLY PLANNED, WILL ALLOW THE ACCIDENT POTENTIAL ENVIRONMENT TO BE ACCEPTABLE.

NORMALLY UNACCEPTABLE

THE EXPOSURE TO ACCIDENT POTENTIAL IS SIGNIFICANTLY MORE SEVERE, SO THAT UNUSUAL DENSITY RESTRICTIONS ARE NECESSARY TO ENSURE ADEQUATE SAFTEY OF LIFE AND PROPERTY.

CLEARLY UNACCEPTABLE

THE EXPOSURE TO ACCIDENT POTENTIAL AT THE SITE IS SO SEVERE, DUE TO POTENTIAL LOSS OF LIFE AND PROPERTY, THAT PERFORMANCE OF LAND USE ACTIVITIES IS PROHIBITIVE.

1. SUGGESTED MAXIMUM DENSITY OF 1-2 DU/ACRE, POSSIBLY INCREASED UNDER A PLANNED UNIT DEVELOPMENT, WHERE LOT COVERAGE IS LESS THAN 20%.
2. CLUBHOUSES, RIDING RINGS WITH LARGE CLASSES, CHAPELS NOT RECOMMENDED.
3. GOLF COURSE, AGRICULTURE MAY BE ACCEPTABLE IF TREES, FENCES DO NOT POSE A NAVIGATIONAL HAZARD.
4. MANUFACTURE OF PETROLEUM, CHEMICAL OR SIMILAR PRODUCTS HAVING A SERIOUS FIRE OR EXPLOSION POTENTIAL CLEARLY UNACCEPTABLE.

Land Use Suitability in Accident Potential Zones

University Community Plan

42 FIGURE

III. PROPOSALS

A. Geologic Hazards

1. Geologic Studies

   When geologic hazards are known or suspected, a geologic reconnaissance should be performed prior to project approval to identify development constraints. This requirement would supplement the need for a full geo-technical report, which may be required at a later time in the permit process.

2. Hydrology

   Maintain the natural drainage system and minimize the use of impervious surfaces. Concentrations of runoff should be adequately controlled to prevent an increase in downstream erosion. Irrigation systems should be properly designed to avoid over-watering.

3. Vegetation

   Native vegetation should be retained where possible. Graded slopes should be revegetated with native or drought-tolerant species to restore pre-development drainage conditions.

4. Torrey Pines City Park

   Any future improvements to the City park should be designed to promote public safety and minimize further bluff damage. Pedestrian walkways and other improvements along the bluffs should be placed so as to avoid and prevent bluff instability hazards.

B. Miramar Naval Air Station

1. Compatible Land Uses

   New projects in the community should be reviewed by the City for compatibility with established Accident Potential Zones as delineated in both the Air Installations Compatible Use Zones Study (AICUZ) and the Comprehensive Land Use Plan (SANDAG) for NAS Miramar or subsequent similar documents. Where Navy easements are used to control development coverage, height limitations or specific uses, such easements should be considered as providing adequate assurance of compatibility with aircraft accident potential. In all cases, it will be the intention of The City of San Diego to work with the Navy in the implementation of the AICUZ and Comprehensive Land Use Plan recommendations.

2. Land Use Control

   Encourage the fee simple acquisition or the purchase of easements by the Navy for land affected by the aircraft accident potential. Also, encourage the development of a special zone surrounding NAS Miramar to restrict land uses and densities to those compatible with the Accident Potential Zones. In the absence of special zoning, the type and intensity of land use should be controlled through required development standards in planned developments or CPIOZ permits. If areas currently owned by the Navy are released into public or private use, special studies and amendments to the community plan should be conducted prior to rezoning or development to ensure traffic and overflight compatibility.