APPENDIX E

ENVIRONMENTAL FACTORS IN DETERMINING POINT SYSTEM

Biology (Figure 55)

The ecological importance of plant life is many folds. Vegetated areas among other things, help moderate temperature extremes by absorbing and releasing water, providing shade and absorbing light and radiation. These vegetated areas also absorb air pollutants, mitigate urban noise and slow excess runoff by absorbing water. Additionally, the interaction of plant and animal life is necessary for the continuance of the ecosystem, and to provide physical and psychological relief to the urban environment.

The canyons in Uptown contain natural vegetation characteristic of the Coastal Sage Scrub and Chaparral Floral associations. Riparian (streamside woodland) vegetation is found in some of the canyons. Ruderal (man disturbed) varieties are common and there are many instances where non-native vegetation introduces as landscaping material in adjacent development has invaded canyons and hillsides displacing native vegetation.

Chaparral is usually found in the canyon areas. Members of the chaparral association have extensive root systems that have important water retention qualities. Coastal sage scrub covered much of the flat areas of Uptown prior to urbanization. Remnants of this plant association are found only on undeveloped south-facing canyon slopes.

The vegetation of the canyons supports a diverse wildlife community, not only mammals, but birds, reptiles and insects. Small mammals such as rabbits, skunks, and foxes thrive in the canyons. The Mission Valley System is extensive enough to support a few coyotes. There are over 200 various species of bird life in the Uptown area.

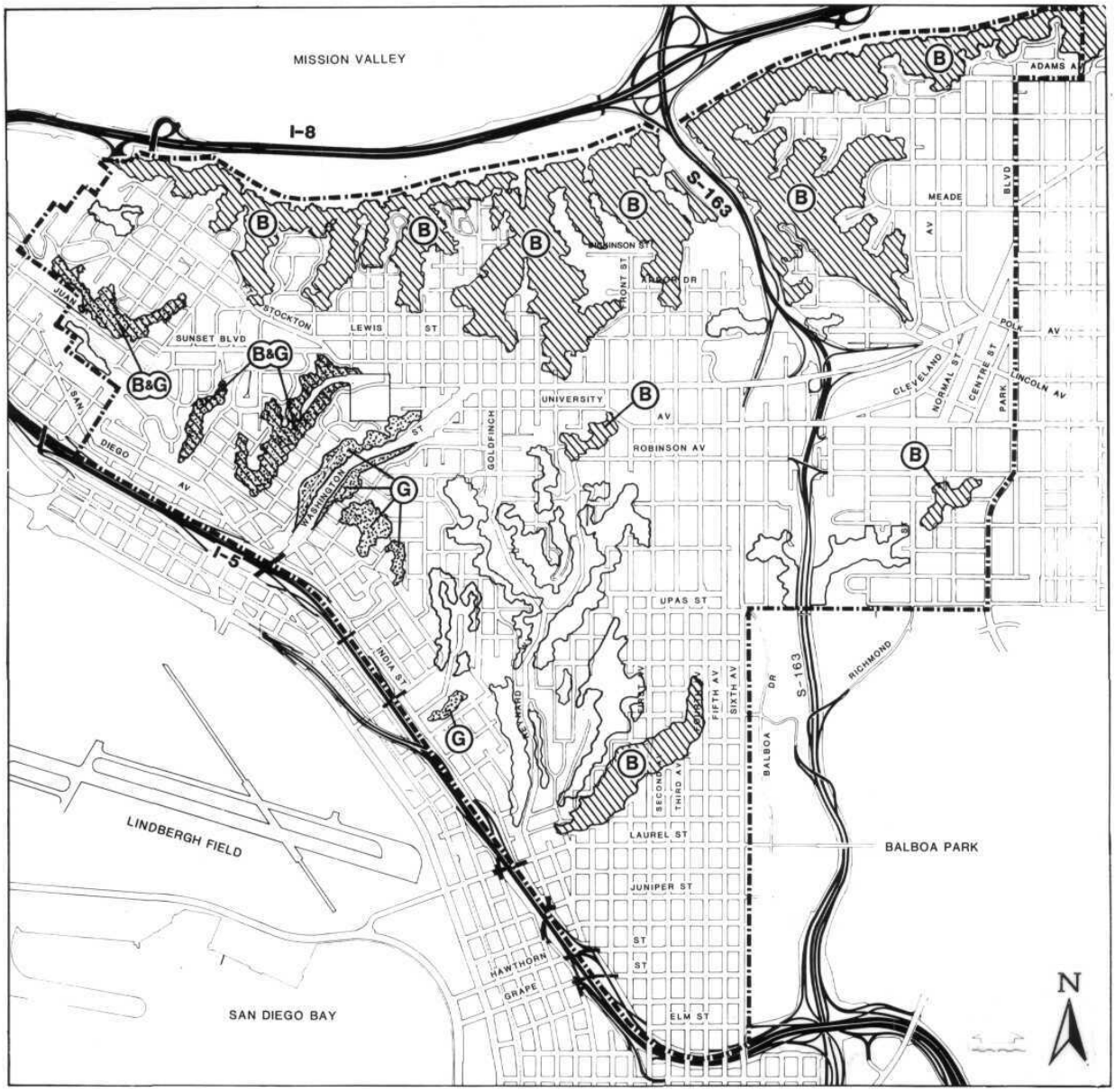
Geology (Figure 55)

Geological considerations relate to drainage systems and seismic safety (earthquake fault zones and steep areas of unstable soil). The geology complements open space areas since geological criteria is important in relating land use to seismic risk zones, with the protection of particularly sensitive geological areas from the safety hazards resulting from development encroachment.

Soils

The lateral canyons off Mission Valley and Interstate 163 contain the soil type of terrace escarpment (TEF) (Figure 56). It is four inches to ten inches of loamy or gravelly soil over soft marine sandstone, shale or gravelly sediments typical of a watershed. There are severe problems with erodibility and drainage in this type of soil.

All other canyon systems in the Uptown community contain gaviota fine sandy loam (GAF) and (GAE) soil (Figure 56). This soil type is chiefly clay. It has a very slow infiltration rate when thoroughly wet. There are severe problems with drainage because the runoff on these soils is quite rapid, resulting in high erosion and ground collapse.



G CANYONS WITH HIGH GEOLOGICAL CRITERIA

B CANYONS WITH HIGH BIOLOGICAL CRITERIA

CANYONS WITH HIGH GEOLOGICAL AND BIOLOGICAL CRITERIA

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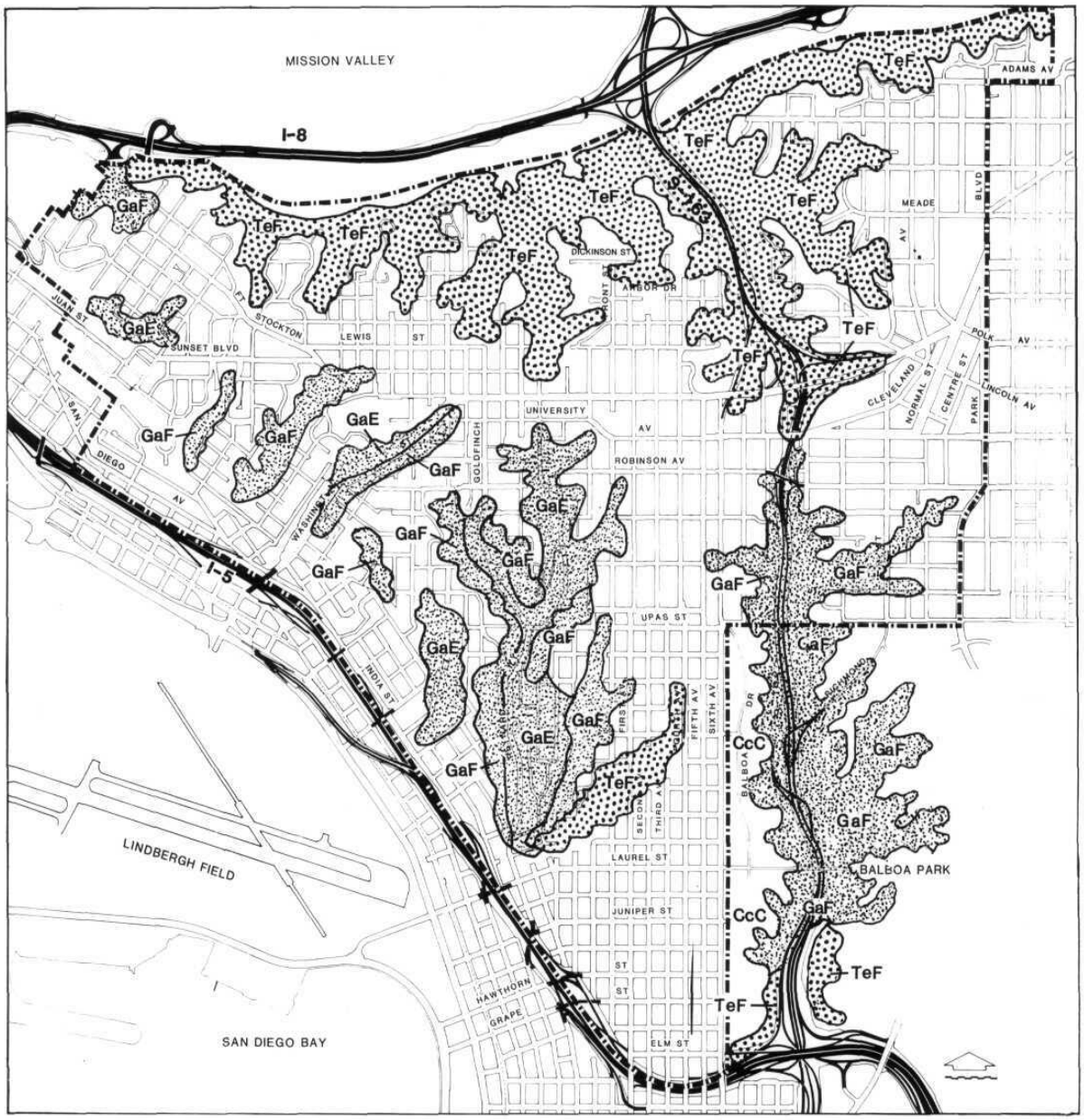
Appendix E - 1

FIGURE 55



TeF – TERRACE ESCARPMENT — SANDY SOIL

GaE – GAVIOTA FINE SANDY LOAM — CLAY SOIL

GaF – GAVIOTA FINE SANDY

CcC – CARLSBAD–URBAN LAND COMPLEX

EROSION & DRAINAGE PROBLEMS

EXISTING SOILS WITHIN NATURAL OPEN SPACE

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FIGURE 56

Appendix E - 2

Faults: The two major fault lines are the Old Town Fault and the Mission Bay Fault (Figure 57). The Old Town Fault runs south of Presidio Park through the Mission Hills Canyon System and the Washington Street Canyon System. The Mission Bay Fault runs to the south of the Old Town Fault, and does not cross any canyon systems. There are three other minor faults which run through the Mission Hills Canyon System.

Paleontology

Paleontological conditions are evaluated in terms of geological formations and paleontological sites found in the canyon areas. The San Diego Formation is the most important geological formation (Figure 58). This formation often contains both marine and non-marine fossils. The fossil record, in the Uptown area, is extremely important to not only local paleontologists, but scientists worldwide. To derive maximum benefit for scientific study and conservation of paleontological resources, sites must be adequately protected and the surrounding environments preserved.

Many of the sedimentary rocks that comprise the lithology of Uptown contain fossils. The fossil record in the Uptown area is extremely important to paleontologists. During the geologic history of the area, it went through a succession of environments ranging from marine and lagoonal to shoreline, and non-marine. In some cases, a geologic formation will have both marine and non-marine fossils. This is an unusual situation and provides the paleontologist with a unique opportunity to study a fossil assemblage from two environments.

The land formations that are of paleontological importance are the San Diego Formation and the Mission Valley Formation (Figure 58).

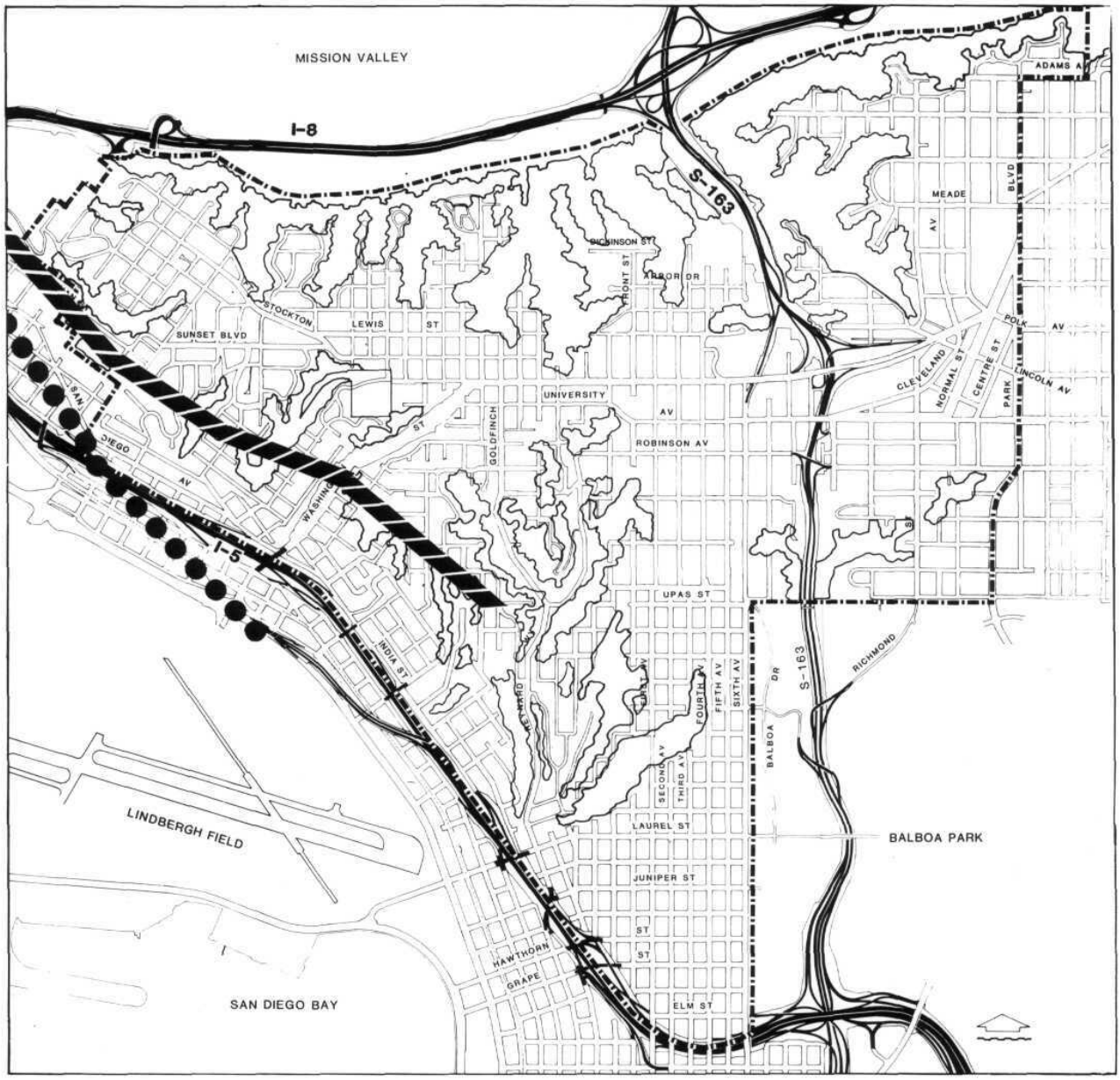
The San Diego Formation is exposed in the Mission Hills, the Washington Street, the Maple/Reynard and on the periphery of the Interstate 163 (University Heights) Canyon Systems. The Mission Valley Formation is exposed on the southern slopes of Mission Valley.

Archaeology

Nine archaeological sites have been recorded in the Uptown area. Seven of these sites are on the lower slopes of Mission Valley and are "early man" sites that have not been universally accepted by the archaeological community. One find was recorded in Hillcrest but was covered over by urbanization. The cultural groups reported in the historic record to be living in the plan area are called the Kumeyai or Diegueno. The culture of the Kumeyai evolved from a combination of the La Jolla group and a group which moved into the coastal areas from the desert about 3,000 years ago. A few groups of Kumeyai remained in the City as late as the 1890s.

Urban Form Considerations

Urban Form Open Space is a determinant of community identity, special scenic qualities, recreation potential and historical/cultural qualities. Additional consideration of community identity include buffers between neighborhoods, availability of parks, threat of development, linkage between neighborhoods and buffers to development (Figure 59).



OLD TOWN FAULT

MISSION BAY FAULT

FAULT LINES
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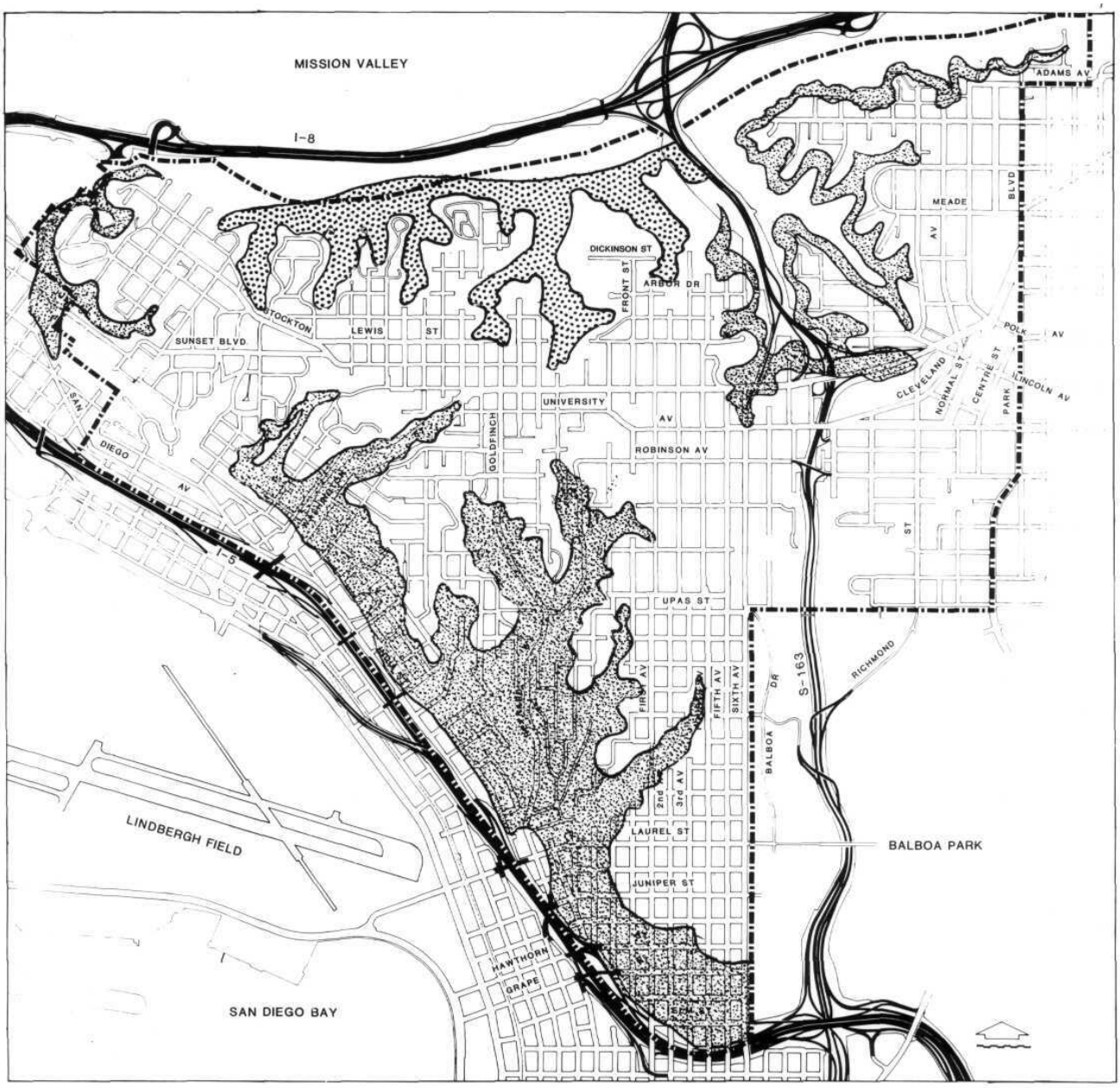
Appendix E - 3

FIGURE 57



MISSION VALLEY FORMATION

SAN DIEGO FORMATION

PALEONTOLOGY
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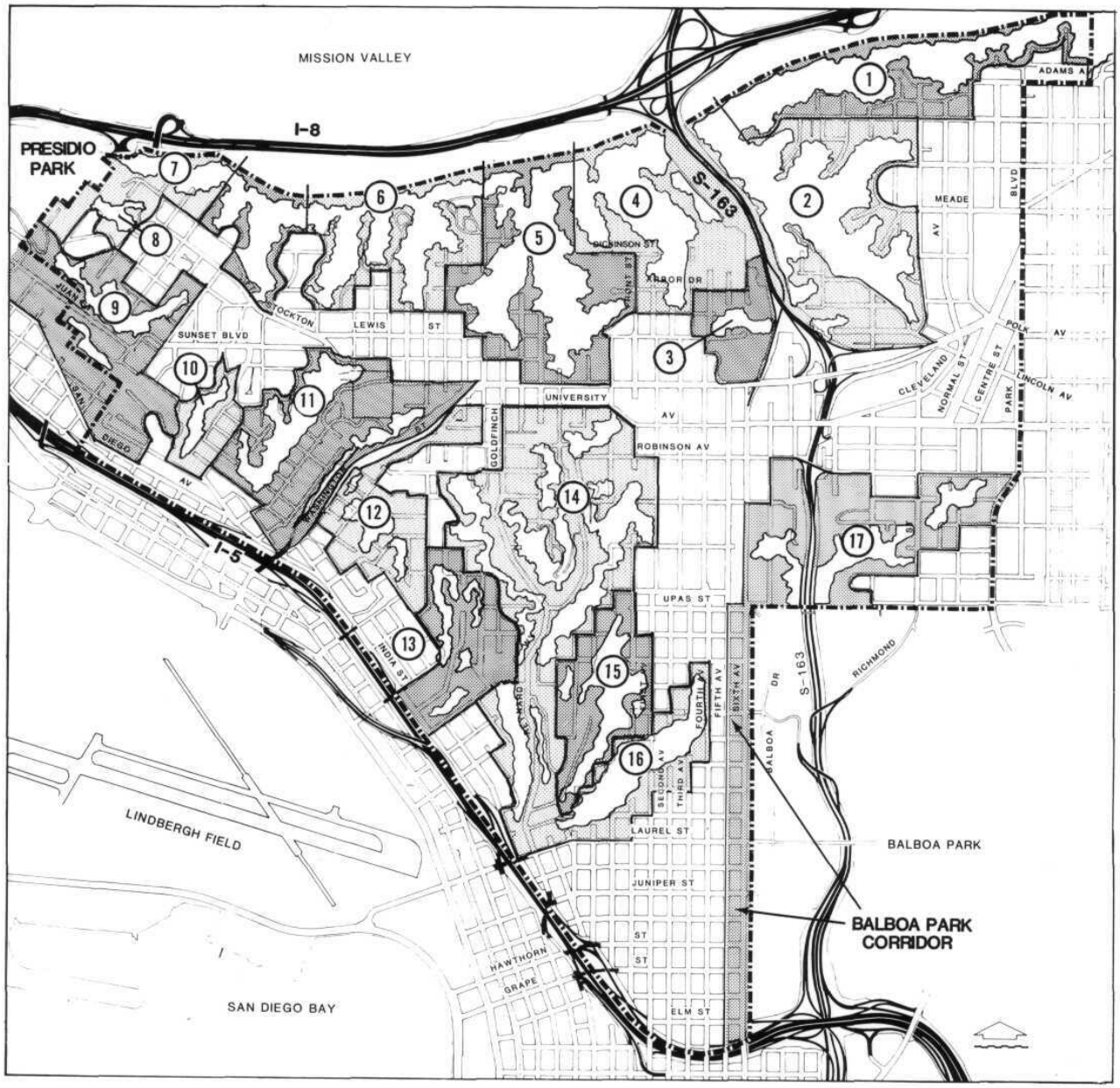
FIGURE 58



1. GOLDEN GATE
2. BUCHANAN CANYON
3. MERCY HOSPITAL
4. BACHMAN CANYON
5. DOVE CANYON
6. INGALLS–LARK CANYON
7. ALLEN CANYON
8. PRESIDIO
9. SUNSET
10. ALEMEDA
11. MISSION HILLS
12. WASHINGTON
13. BAYSIDE
14. REYNARD
15. ARROYO
16. MAPLE
17. BALBOA PARK EXT.

NEIGHBORHOODS SURROUNDING NATURAL OPEN SPACE

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Appendix E - 5

FIGURE 59