SAFETY ELEMENT AND ACTION PROGRAM

FOR THE

CITY OF EAST PALO ALTO GENERAL PLAN

December 1986

CITY OF EAST PALO ALTO

City Council

Barbara A. Mouton, Mayor
James E. Blakey, Jr., Vice-Mayor
Ruben Abrica, Council Member
John Bostic, Council Member
Warnell Coats, Council Member

Planning Commission

Melvin Harris, Chairman
Tikisa Anderson, Vice-Chairman
Onyango Bashir
Duane Bay
John Chavez
Midge Dorn
Joseph Goodwill
Makini Roach, Alternate

Public Safety Commission

Jahi Mirembe, Chairman
Gerald R. Bollier, Vice-Chairman
Tommie B. Roberts
Nimat Shakoor
Moses Webb

Staff

Frederic A. Howell, City Manager
Robert W. Johnson, City Attorney
Dan Nelson, Police Chief
Jesse Smith III, P.E., Public Works Director
Rod D. Barger, Senior Planner, Zoning Hearing Officer

Approved

Planning Commission: December 8, 1986
City Council: December 15, 1986

RESOLUTION NO. 00358

A RESOLUTION ADOPTING THE EAST PALO ALTO GENERAL PLAN SAFETY ELEMENT AND ACTION PROGRAM

WHEREAS, the Safety Element of the East Palo Alto General Plan has been prepared, in part, to respond to changes in State requirements and guidelines, and in part, to reflect changes in local land use conditions and policies; and

WHEREAS, adoption of Safety Element represents a key part of the completion of the East Palo Alto General Plan; and

WHEREAS, the Safety Element was reviewed at a Public Hearing and approved by the East Palo Alto Planning Commission on December 8, 1986; and

WHEREAS, the Safety Element was also the subject of a Public Hearing by the East Palo Alto City Council and was approved on December 15, 1986; and

WHEREAS, Negative Declaration #31-86, for this Element, was also approved at the above-reference hearings.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of East Palo Alto that the Safety Element and Action Program, attached hereto, is hereby adopted into the East Palo Alto General Plan.

PASSED AND ADOPTED by the City Council of the City of East Palo Alto this 15th day of December, 1986, by the following vote:

AYES: ABRICA, BLAKEY, BOSTIC, COATS, and MOUTON

NOES: NONE

ABSENT: NONE

Barbara A. Mouton
Mayor

ATTEST:

Frederic A. Howell
City Clerk

CONTENTS

CONTENTS (Cont'd)

INTRODUCTION

The Safety Element, originally an optional element, became required in 1971, partly in reaction to devastating wildland fires in September and October of 1970. The deadline for compliance by most jurisdictions was September 20, 1974.

The Safety Element aims at reducing death, injuries, damage to property, and economic and social dislocation resulting from fire, geologic hazards, and other public safety hazards. While the requirements for the safety element focus primarily on fires in wildland areas adjacent to urban development and on geologic hazards, it should also address other locally relevant safety issues, such as urban structural fires, hazardous materials, and defensible space.

Contents of the Safety element are prescribed by the following section of the Government Code:

> **Government Code Section 65301(i):** A safety element for the protection of the community from fires and geologic hazards including features necessary for such protection as evacuation routes, peak load water supply requirements, minimum road widths, clearances around structures, and geologic hazard mapping in areas of known geologic hazards.

Goals and policies to provide maximum protection for the community in these and other related areas are provided in the following sections of this element along with an action program delineating specific measures and times for their accomplishment.

THE EXISTING SITUATION

East Palo Alto is one of a few cities that has fortunately not had a history of natural disasters. While the municipal government is relatively new, the area has been urbanized for some time and the absence of disasters should not lead to the assumption that no problem exists. From a locational standpoint and because of the broad range of agencies responsible for various safety related services, it is important to identify both the hazard potentials and the protection services and methods in terms of their respective adequacy and need for upgrading.

Fire Safety

In an urban-industrial area, danger due to fires, chemical mishaps, major accidents and natural disasters is always present. Major responsibility for preventing these problems and reacting adequately to them falls on the City, particularly on the public safety departments. However, fire protection service in East Palo Alto is provided by the Menlo Park Fire Protection

District. The City and District work cooperatively to develop programs to prevent damage due to these kinds of emergencies or disasters.

A strong emphasis is placed on fire prevention. This involves Fire Codes for built-in fire suppression, automatic alarms, and a diligent inspection of buildings. It also involves both public and private sector costs. A major emphasis of increased fire detection and automatic fire control through built-in protection has been used to improve fire safety while reducing dependence upon traditional and increasingly costly "reactive" fire protection. An adequate and well-trained firefighting force is maintained. The Fire District provides emergency medical services in support of the County Paramedic Program.

East Palo Alto is fortunate to be a relatively safe community in terms of danger from major fires. Essentially, there are three categories of fires that are of primary concern to the City: structural, chemical, and grassland fires. This section of the Safety Element describes the problems and relative dangers of each type of hazard and identifies areas of deficiency.

Structural Fires

The threat of a major fire disaster occuring in East Palo Alto is minimal. Generally, structures are in fairly good condition, fire fighting equipment is adequate, hydrants are sufficiently located, and reasonable access for fire fighting equipment is available. Although there are isolated exceptions to this general statement, conditions are such that it is unlikely that structural fires will ever constitute a "disaster". However, as East Palo Alto continues to develop, careful attention should be given to fire protection in future residential and industrial developments. Additionally, due to the general age of the City's housing stock in major subdivisions such as the Gardens and University Village, emphasis should be placed on ensuring the installation of smoke detectors even when remodeling work is not undertaken.

The only major structural fire that has occurred since incorporation involved the vacant portions of the former Nairobi Shopping Center. While the blaze was spectacular in its dimensions, there was no major property loss because the builidngs were not occupied or stocked with merchandise. The work of the Menlo Park Fire Protection District on this fire prevented any damage to adjacent residents. Thus, this major structural fire was not classsified as a disaster.

Chemical Fires

The City has two major chemical plants located within its boundaries: Romic Chemical Corporation, the largest solvent reclamation operation in the western United States, and Sandoz Corporation, manufacturers of bio-rational pesticides a wholly

owned subsidiary of one of the largest pharmaceutical companies in the world, Rhone-Poulenc. Both are first-class facilities that operatate in full compliance with applicable Federal, State, County, and local regulations. However, their very nature holds the potential for an explosion or chemical fire of major proportion.

The threat of a major chemical fire disater occuring in East Palo Alto is considered minimal for the same reasons listed for structural fires, the manner in which these plants are operated, and their relative distance from residential areas. There have been no such fires at either facility since their operations began, although a specific spill during the summer months of 1986 carried the potential for a fire because of the flash point for the particular chemical involved. It is believed that the City's proposed Hazardous Materials Ordinance and implementation of related State legislation, AB2185, AB2187, will provide an additional measure of protection for East Palo Alto residents from the threat of chemical fires.

Grassland Fires

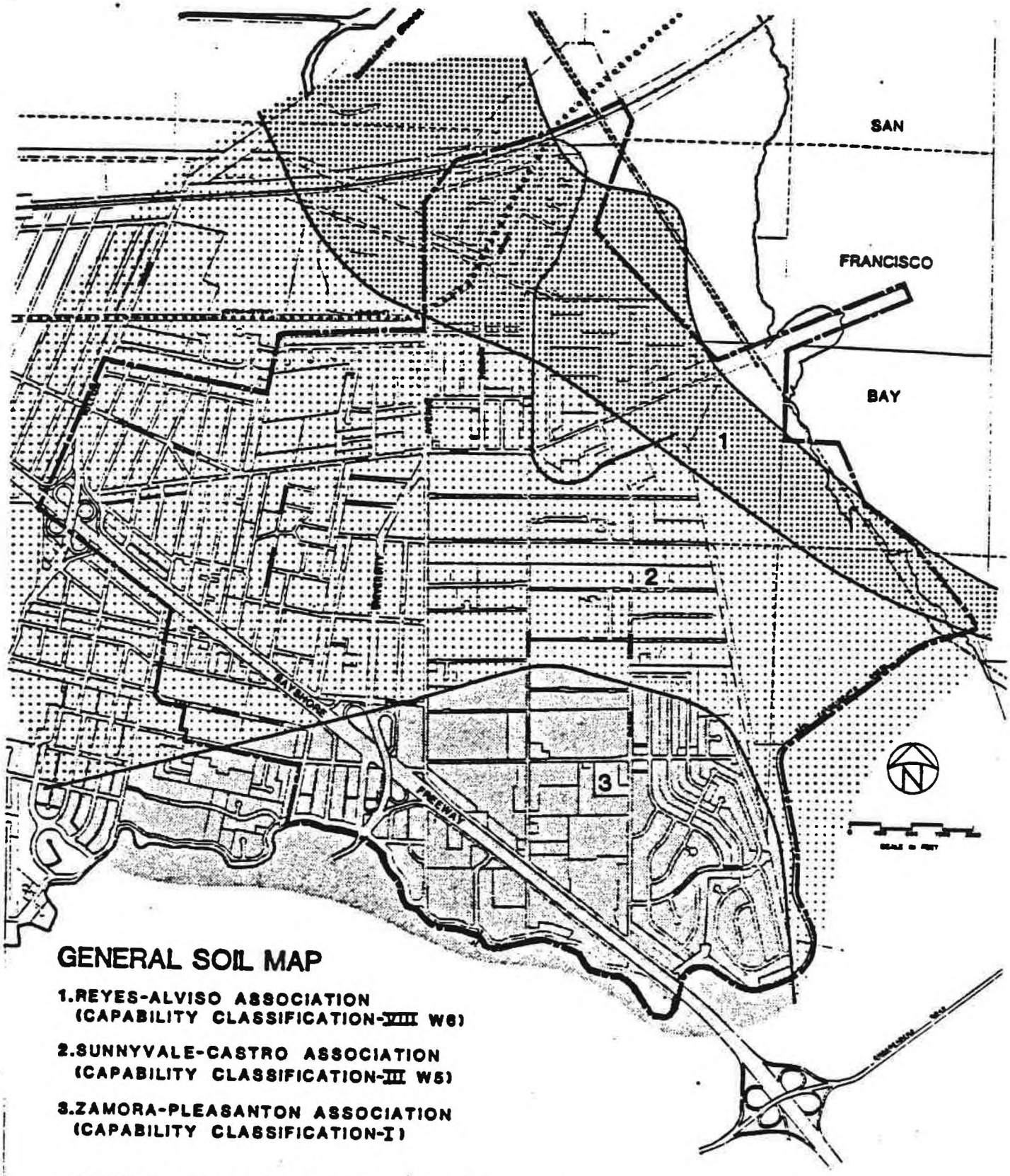
East Palo Alto is relatively flat in topography with no undeveloped hillside areas characteristic of many California cities. The largest area of undeveloped grassland is the Baylands which is subject to tidal action and, therefore, an unlikely location for grassland fires. The only other possibilities within the City for this type of fire are large, undeveloped lots which have historically been the sites of small brush fire generally caused by human carelessness and usually extinguished within minutes by the Fire Protection District. Current regulations and practice provide for the rototilling of these sites during late spring to reduce the amount of vegetation available for combustion. It is believed that the threat to the City of a major fire disaster occurring form grasslands fire is minimal.

GEOLOGY, SOILS, AND SEISMICITY

East Palo Alto is underlain by alluvial sediments, consisting of clays, sands, and gravels. Surficial soils found in the community generally fall within three categories: Zamora-Pleasanton Association, Sunnyvale-Castro Association, and the Reyes-Alviso Association (Figure 1). Development of remaining open areas is generally feasible form an engineering and geologic viewpoint following individual site investigations.

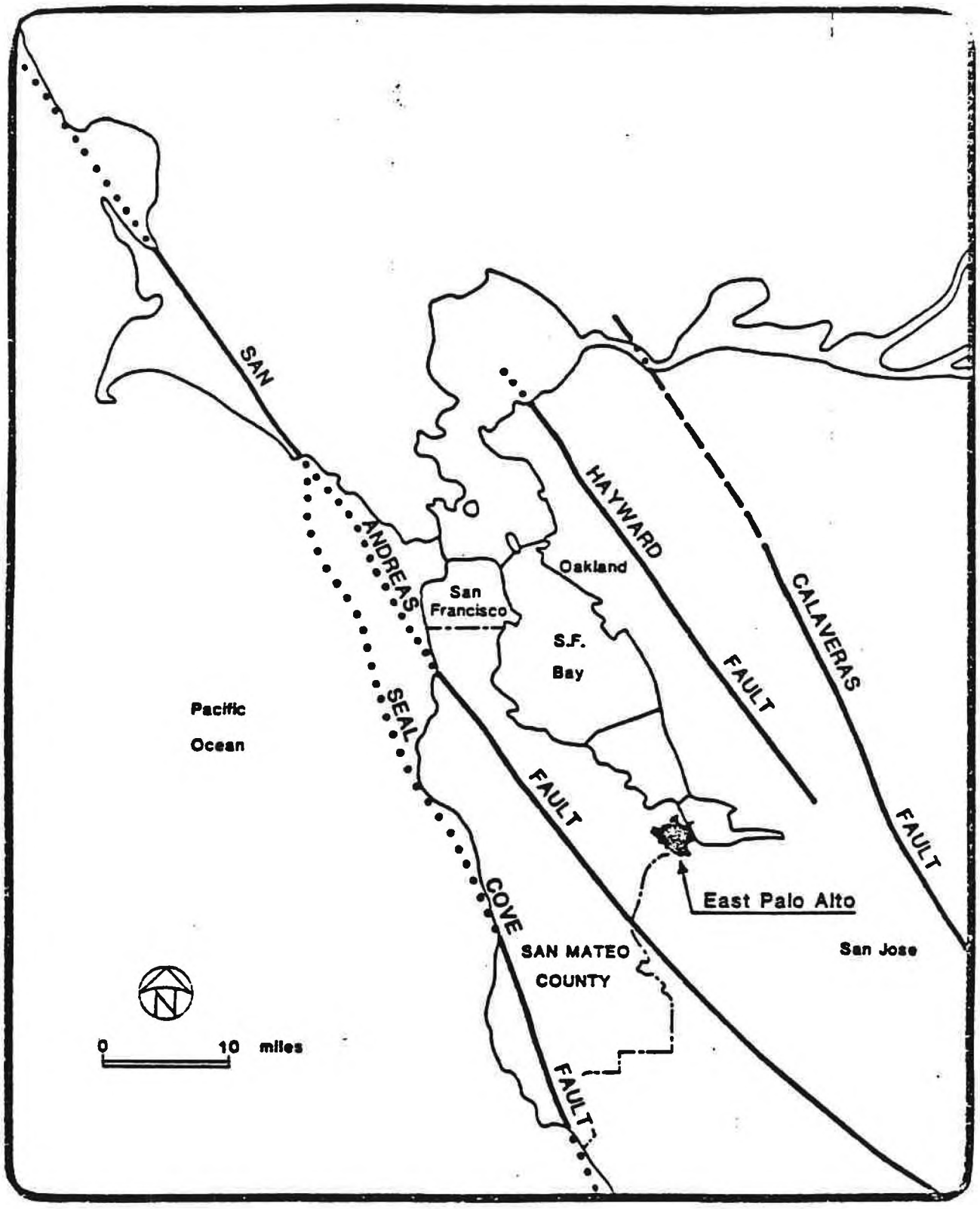
East Palo Alto is on the northern edge of an area which experienced about 2.5 feet of subsidence[1] since 1934 due to the withdrawal of underground water. A groundwater recharge program was implemented in the Santa Clara Valley that has virtually eliminated subsidence in the East Palo Alto area. There seems to be little likelihood of further subsidence under present groundwater management practices.[2]

FIGURE 1
GENERAL SOIL MAP



SOURCE:U.S.D.A. SOIL CONSERVATION SERVICE 1974

FIGURE 2
ACTIVE FAULT SYSTEMS IN BAY AREA



East Palo Alto lies in an area which is susceptible to the effects of earthquake activity. Four major faults are located sufficiently near to have the potential to shake the area during an earthquake. Table 1 gives the location and maximum recorded (Richter Scale Magnitude) or inferred earthquake for each of the faults, and Figure 2 shows their regional location in relationship to East Palo Alto.

The most damaging potential earthquake for East Palo Alto would likely be produced by the San Andreas Fault. The maximum predicted earthquake on this fault is 8+ on the Richter Scale. An earthquake of this magnitude could potentially cause severe ground shaking in East Palo Alto. The maximum credible earthquake on either the Hayward or Calaveras fault systems would be from 6-7 on the Richter Scale and would occur once every 10 to 100 years. Such an earthquake would probably result in moderate to severe ground shaking on site.

The possibility that a maximum tsunami (tidal wave) resulting from seismic activity in the Pacific Basin would reach the Golden Gate at the same time that a maximum tide occured is very remote. If this were to occur, the eastern portions of the community would be inundated. It is more probable that the Bayfront levees in East Palo Alto will not be overtopped in the event a tsunami occured.[3]

In the event of strong ground shaking, damage to buildings, utility lines, and bridges could occur, with resulting access problems and fire potential. Lurching of buildings may occur where weak foundation soils are present with damage to chimneys, masonry and brickwork, foundations, retaining walls, and other rigid elements.

Footnotes

1 Sinking or lowering of a part of the earth's crust.

2 Sedway/Cooke, Draft EIR - East Palo Alto Redevelopment Project Area No.1 Redevelopment Plan (November, 1973), pp.14 and 40.

3 Ibid., p. 40

4 A.C. Neufeld, San Mateo County Geologist.

TABLE 1
ACTIVE FAULTS IN THE EAST PALO ALTO VICINITY

Fault	Approximate Distance from East Palo Alto	Maximum Recorded Earthquake (Richter Magnitude)
San Andreas	10 miles southwest	8.3
San Gregorio/ Seal Cove	20 miles southwest	7.1
Hayward	11 miles northeast	7.0 $\pm$1/2
Calaveras	19 miles northeast	6.0

The potential for liquefaction may be present where hydraulic fills or other loose granular materials are present. However, the probability of significant liquefaction or densification is considered remote in East Palo Alto.

The potential for property damage and loss of life from natural hazards described above can be substantially reduced through enforcement of the City's Building Code and by requiring geotechnical investigations when appropriate. A geotchnical hazard investigation chart is shown in Figure 3.

Flooding

East Palo Alto is subject to flooding due: (1) to its location on low lying lands adjacent to San Francisco Bay and San Francisquito Creek; (2) the possible accumulation of surface runoff from adjacent communities during storms; and (3) the presence of a high water table (5-10 below ground surface). The three areas prone to inundation are located: (1) between Pulgas Avenue and the Baylands; (2) in a pocket on the western boundary of the community between Willow Road and Menalto Avenue; and (3) along San Francisquito Creek, on the southern boundary of the community. The flood hazard areas in East Palo Alto are depicted in Figure 4.

The area between Pulgas Avenue and the Baylands and along San Francisquito Creek are in the 100 year flood zone. The Federal Emergency Management Agency classifies these areas as Zone A and requires flood insurance on individual properties and in compliance with mandatory management standards. The area between Willow Road and Menalto Avenue is in the 500 year flood zone

FIGURE 3

GEOTECHNICAL HAZARDS INVESTIGATION CHART

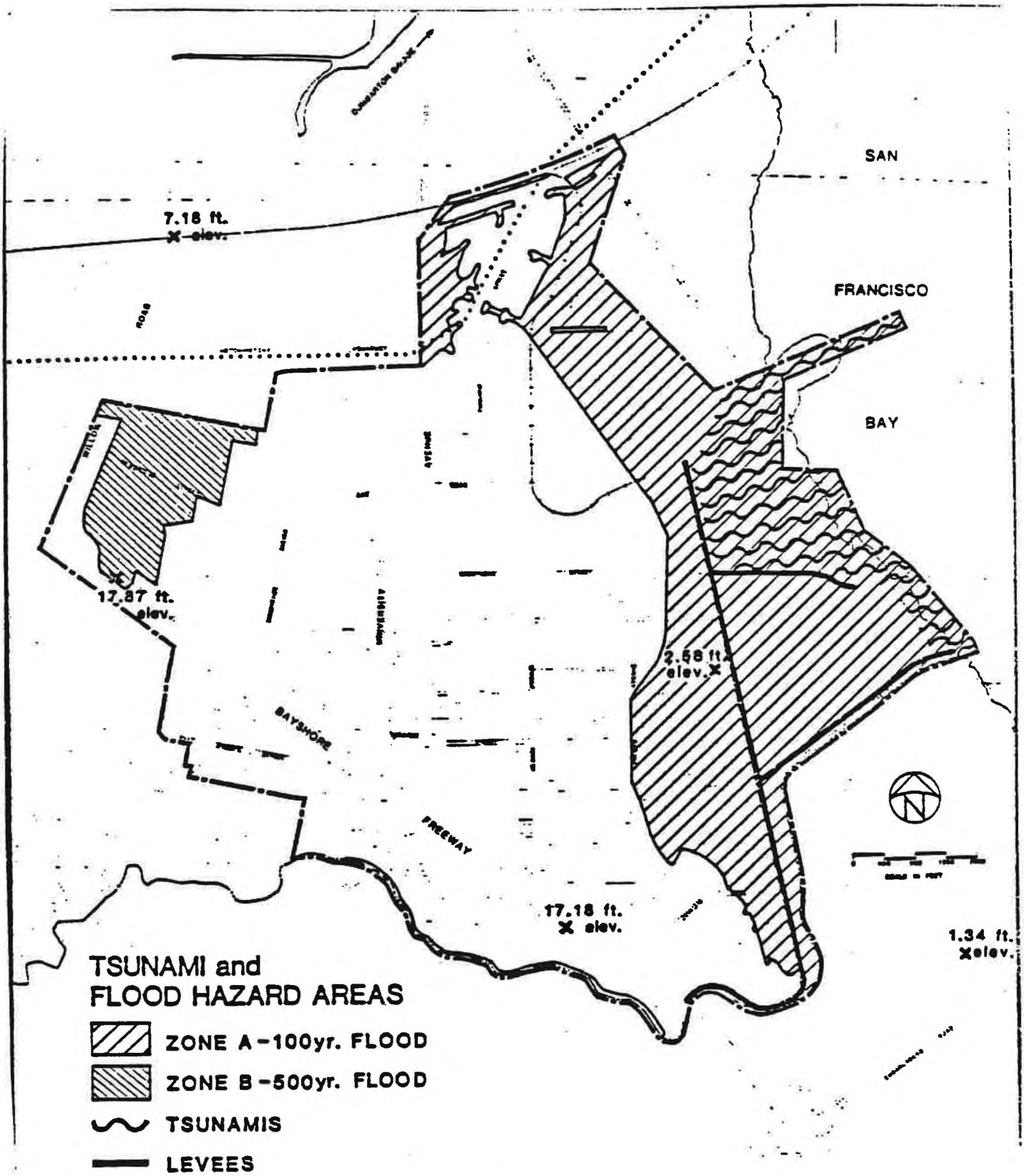
Zone	Characteristics	Hazards	SiteInvestigation Needed (Groups listed at end of chart)
D	Peat deposits or compressible bay mud thicker than 5 feet. Below 10 foot elevation (considering subsidence elevation factor).	Areas of high potential for liquefaction and differential settlement. Areas subject to flooding by San Francisco Bay water in the event of dike failure.	Mandatory for Group 1 and Group 2 unless detailed information permits waiver.
E	Water table ranges from 0-50 feet below ground surface. May contain areas of loose, water-saturated, non-clayey silt and sand.	Area of moderate potential for liquefaction or differential settlement. Lurching and lateral spreading potential is highest within 300 feet of stream channels.	Mandatory for Group 1 and Group 2 unless detailed informtaion permits waiver.
F	Valley areas where the water table is deeper than 50 feet below ground surface.	Areas of low potential for liquefaction, lurching and laterial spreading.	Not ⟷ automatically required; may be required by the Chief Building ⟷ Inspector based on specific project site need.

Group 1
Facilities which must survive a disaster in order to provide response capability (e.g. fire and police facilities, hospitals, and critical water and power facilities).

Group 2
Facilities which would imperil many people, cause major properly loss or cause major society disruption (e.g. large commercial complexes, large industrial/office complexes, large apartment complexes, schools, and theaters).

Group 3
Facilities which would imperil only a few persons, cause minor property loss or cause minor social disruption (e.g. small public, commercial industrial or office buildings, low density housing, warehouses, marinas and open spaces).

FIGURE 4
TSUNAMI AND FLOOD HAZARD AREAS



where flood eleveation is one foot or less. The Federal Emergency Management Agency classifies this area as Zone B. Flooding insurance is not required here and although management standards are recommended, they are not mandatory.[1]

Four drainage and flood control districts in East Palo Alto maintain a number of levees and ditches to control surface water runoff and tidal influences. However, University Village, most of the Industrial Park and the Baylands are not within a maintenance district. Two draiange ditches, which serve as extensions to the Universtiy Village and Demeter Street drainage systems, are enclosed to a point where they become open ditches in the industrial park north of the terminus of Demeter Street. The ultimate outflow is the San Francisco Bay. The City Public Works Department periodically maintains the ditches.

Urban pollutants transported by storm water reduce water quality and biological habitats in the Bay. Because of its low-lying location, East Palo Alto may accumulate pollutants from other communities. Typical surface runoff problems in the County are summarized in Table 2. The extent to which these occur in East Palo Alto is not precisely known.

Development in East Palo Alto is resulting in more impervious surface and increased runoff; however, the potential for flooding from this source is considered to be minimal.

In the absence of mitigation measures, flood hazard and surface runoff will increase in the Industrial Park north of Bay Road. The quality of storm water draining into the bay from this area will worsen. Development of industrial uses could, if not controlled, add grease and oil, debris and litter, heavy metals, nutrients and even toxic chemicals to the runoff. Uncontrolled, the increase could affect wildlife and vegetation in the Baylands.

Water quality impacts are primarily impacts associated with surface runoff from impervious surfaces. Runoff in East Palo Alto enters the Bay generally from three areas. West of University the runoff tends northwesterly to Ravenswood Slough. East of University and south of Bay road, runoff tends easterly to the Bay. East of University and north of Bay Road, runoff tends north and easterly to the Bay. The increase in impervious surface runoff west of University is negligible while the greatest potential for an increase lies in the portion of East Palo Alto located east of University Avenue. The relative increases in pollutant concentrations entering the Bay from surface water runoff is illustrated in Table 3.

Levees

East Palo alto is situated on low-lyinglands adjacent to San Francisco Bay, some of which were formerly marshlands. The community is bordered on the southern side by San Francisquito Creek which has experienced to periodic flooding. A system of levees borders the Creek and helps to protect urbanized areas from tidal flooding; however, much of the levee system is under the control Santa Clara and San Mateo Counties, along with some private owners. The federal Flood Insurance Administration has designated large areas of East Palo Alto as subject to flooding hazards.

Drainage Maintenance Districts

The City Public Works Department is responsible for drainage facilities within public rights of way; however, many local streets do not have curbs, gutters, or storm drains. Two drainage maintenance districts in East Palo Alto are operated by the County (see Figure 5). The East Palo Alto Drainage Maintenance District, which was formed in 1963 has the fewest drainage problems in East Palo Alto. The Palo Alto Gardens Drainage Maintenance District was formed in 1950 to maintain drainage facilities installed by the developer of the Palo Alto Gardens subdivision.

In 1968, San Mateo County applied to the U.S. Department of Housing and Urban Development for a grant to build a comprehensive drainage system in East Palo Alto and portions of East Menlo Park. The Ravenswood Slough Flood Control Zone and San Francisquito Creek Flood Control Subzone were formed to establish a taxing mechanism in areas not included in other districts. However, the public rejected a special assessment for these districts, and no facilities have been constructed.

Periodic Flooding Problems

Other areas in East Palo Alto were at one time subject to periodic flooding due largely to inflow of storm waters from other areas. The undeveloped area to the east of University Village is subject to tidal inundation during high tides. However, the major source of such flooding - runoff flowing through a culvert beneath the freeway - has been corrected.

Drainage Improvement Projects

The California Department of Transportation has installed a pump station and drainage system along Willow Road to Newbridge Street as part of the Dumbarton Bridge project. The County Public Works Department has improved the Palo Alto Gardens system by increasing the capacity of the pump station, and adding a line along Pulgas Avenue to East Bayshore, extending along East Bayshore to Clarke Avenue. There is a need to also install a drainage system

in the Bayshore Park area along Saratoga Avenue, Holland Avenue, Newbridge Street, and Alberni Street connecting to the State's new pump station at Newbridge Street and Willow Road. These improvements should relieve many of the previous problems in East Palo Alto.

Problems relating to increased storm water runoff as a result of increased development may be mitigated by: (1) consolidating all drainage districts in east Palo Alto, including the northeasterly corner of the community; (2) requiring payment of drainage maintenance fees for major subdivisions; (3) incorporating preventative requirements into the Development Review process; and (4) by requiring new development to provide proper drainage. Problems within existing developments are most likely to be corrected through the formation of neighborhood improvement districts.

FOOTNOTES

1 U.S. Federal Emergency Management Agency, National Flood Insurance Program.

2 Metcalf and Eddy/Engineers, Report to Association of Bay Area Governments San Francisco Bay Region of Surface Runoff Modeling (April, 1978)

TABLE 2
TYPICAL WATER QUALITY PROBLEMS RELATED TO SURFACE RUNOFF IN SAN MATEO COUNTY

PROBLEM	EFFECT	CAUSE
SILTATIONS/ EROSION	Makes water more turbid. Covers fish spawning beds. Generally clogs streams. Reduces reservoir capacity.	Improper construction or agricultural practices. Any practice which exposes bare soil to rain & runoff or any soil to excessive runoff.
GREASE & OIL	Unsightly. Coats birds & aquatic life. Makes recreational use undesirable Toxic to aquatic life.	Industrial activity. Traffic. Dumping of motor oil and other floating substances.
DEBRIS & LITTER	Unsightly. Coats birds & aquatic life. Makes recreational use undesirable.	Improper dumping & refuse disposal & general littering where material can be washed off.
BACTERIAL CONTAMINATION	Indicative of presence of fecal material. Contact/ ingestion can cause disease. Contaminates aquatic life in specific areas, especially shellfish. Eliminates recreational uses depending on level of contamination.	Deposit of animal fecal matter in areas subject to runoff. Cross connections with sanitary sewers. Malfunctioning septic tanks.
NUTRIENTS/ ALGAE GROWTH	Algae can cause taste & odors in drinking water. Can result in low concentrations of dissolved oxygen. Some is good; too much is bad. Hard to control once started in relatively confined water.	From natural organic material, fertilizers, industrial runoff, traffic.
HEAVY METALS PESTICIDES AND OTHER TOXIC CHEMICALS	Toxic to aquatic life. Tendency to magnify in food chain, i.e., lower forms have relatively low concentrations in body tissue, higher forms (fish & aquatic birds) have high concentrations.	Automobile operation, runoff from industrial areas. Runoff from refuse and garbage. Leaching of mine tailings.

Source: Association of Bay Area Governments, San Francisco Bay Area Environmental Management Plan, Vol. 1, June, 1978.

TABLE 3
SURFACE WATER RUNOFF POLLUTION CONCENTRATIONS*
(in $mg/_L$)

Biological Oxygen Demand(BOD)	431.1
Suspended Solids (SS)	1,615
Volatile Suspended Solids (VSS) Including Oil and Grease	1,860
Total Nitrogen	94.8
Relative Impact	Acceptable

1. The following assumption was used in developing this table:

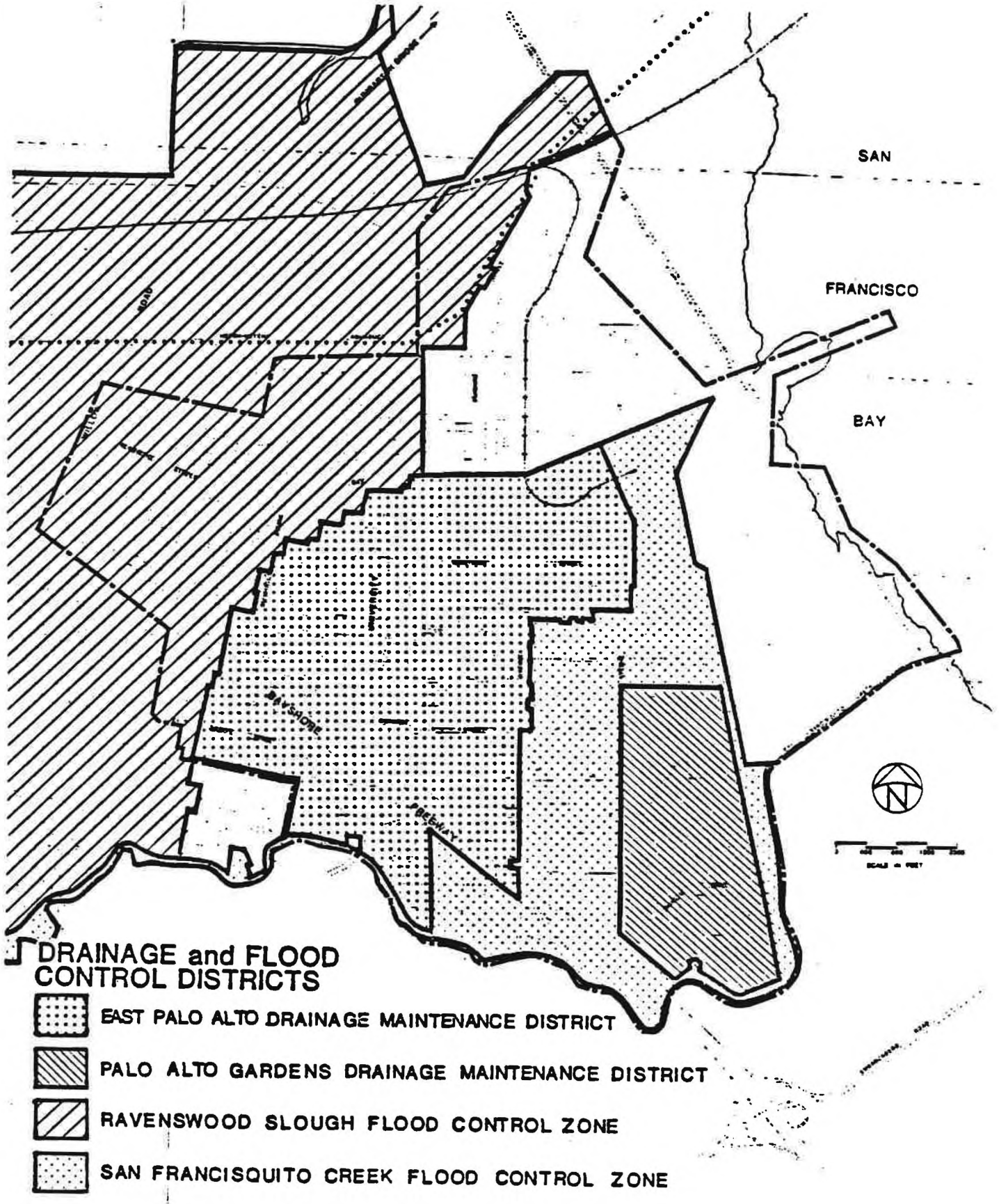
   The Macrosopic Planning Model (MAC) which can be used to identify and project surface runoff loading to the San Francisco Bay, can be applied locally.[2]

2 A verbal description of the model follows:

   Total Pollutant Concentration = the sum of: the total% of the total area of each land use type times the runoff coefficients of each land use type times the quality coefficients of each pollutant for each land use type.

* Note: these concentrations are based upon the adopted Community Plan.

FIGURE 5
DRAINAGE AND FLOOD CONTROL DISTRICT



Water Supply

East Palo Alto County Waterworks District

Water supply in East Palo Alto is provided by the East Palo Alto County Waterworks District and two mutual water companies (see Figure 6). The Waterworks District, which is governed by the County Board of Supervisors and staffed by the Public Works Department, was formed in 1927. The District purchases water from the City and County of San Francisco's Hetch-Hetchy Aquaduct, which passes through the University Village area of East Palo Alto. The District is financed entirely by user charges. The distribution system consists of underground cast iron pipelines, which are decaying and subject to frequent leakage due to the corrosivity of the soil. Several improvements have been made to the system recently, financed by a loan from the State Department of Water Resources. Deteriorated pipes have been replaced with asbestos cement pipes, and a new well has been drilled at Gloria Way and Bay Road to replace approximately one third of the Hetch Hetchy water.

In general, the District's service meets or exceeds County and State standards except for fire protection, which is limited in some areas by undersized pipes. Increased revenues from water service rate increases in 1972 and 1974 are being used for engineering and management services, upgraded maintenance and implementation of a capital improvement program to replace a portion of the distribution lines that need enlarging or replacement. The schedule of capital improvements could take up to ten years to complete, depending on future water sales revenues.

Mutual Water Companies

The two mutual water companies serving portions of East Palo Alto are the Palo Alto Park Mutual Water Company and the O'Connor Tract Mutual Water Company. These companies are owned by the property owners within their service areas. The larger of the two is the Palo Alto Park Mutual, serving some 600 to 650 homes. The system includes five wells, four of which are presently in use, and all built in 1924, when the area was developed with summer cottages. Some of the pipes are decaying due to age. The O'Connor Tract Mutual Water Company was formed in 1921 to serve the needs of the Charles Weeks Poultry Colony for irrigation and domestic water. The system has approximately 280 connections, including 21 apartment buildings located along O'Keefe Street west of the freeway. The company has two wells which operate at about half capacity and is considered to be in excellent condition.

The Palo Alto Park and O'Connor Tract Mutual Water Districts both derive their water supply from wells. These sources are considered more than adequate to meet present and future demands within their respective service areas. The bulk of the new development in the City would occur in the service area of the East Palo Alto County Waterworks District. The District currently draws its water supply from the Hetch-Hetchy Aquaduct and now supplements this source with groundwater from a new well. The District is now able to supply approximately twice the 3,500 customers originally serviced. It is likely that the District could service a residential buildout under the proposed buildout scenario in the East Palo Alto 2000 Commiteee Report with the current system. The effect of buildout under the Community Plan on existing capacity is shown in Table 4. This table does not include possible industrial water demands, which are highly variable according to type of industry.

TABLE 4
COUNTY WATERWORKS DISTRICT RESIDENTIAL SERVICE CAPACITY

	1982 Community Plan
Excess Capacity Available[1] (in housing units)	3,500
New Housing Units	2,400
Surplus [2]	1,100
Deficit[2]	--
% of Growth Accommodated	100%

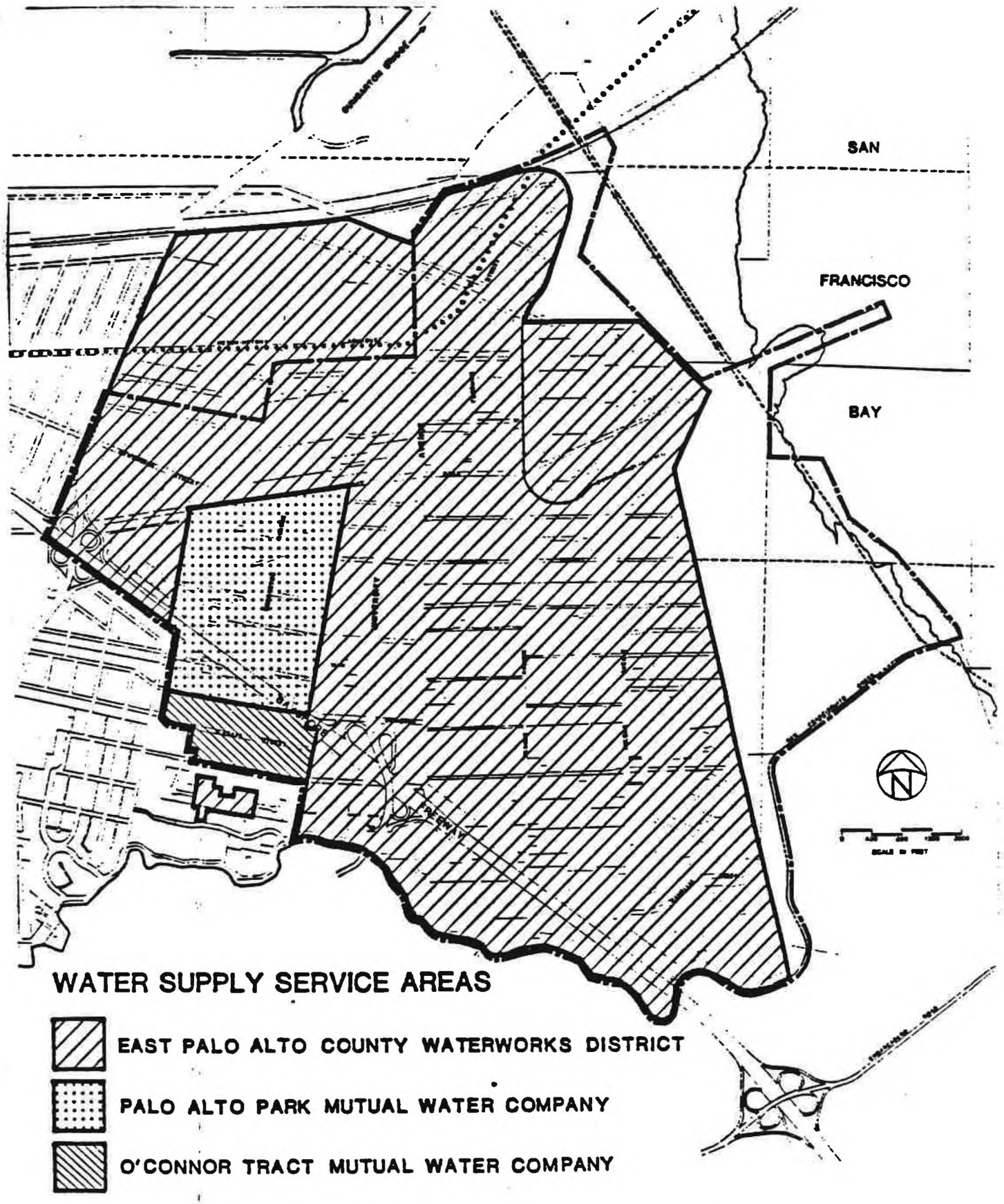
1 Estimated by San Mateo County Department of Public Works; assumes some modifications to previous distribution system.

2 Does not include possible water demands by new industry, which are highly variable by type of industry.

Water Supply Problems

Old water lines are rupturing periodically, causing interruptions in service and contamination of supply. The Palo Alto Park Mutual Water Company has the oldest lines. Frequent problems also occur in the East Palo Alto County Waterworks District. Fire protection in some areas of East Palo Alto is limited by substandard sized pipes and poor networking.

FIGURE 6
WATER SUPPLY SERVICE AREAS



Another problem linked to an expansion of water service is a possible draw-down of groundwater. In the past, excessive pumping of groundwater in some south bay areas has resulted in land subsidence and saltwater intrusion into freshwater aquifers, particularly in times of drought.

Additional growth in East Palo Alto would involve local extensions of water distribution systems which may adversely affect maintenance of older portions of the system. Of particular importance is the effect of expansions on the maintenance of adequate flows for fire fighting. This has been a problem in the past due to small pipes and poor networking in some areas. Indeed, this latter problem is more directly the cause of concern than expansions, per se.

Hazardous Materials

Some concerns related to hazardous materials are described in the chemical fires section of this element. Additionally, there is the problem of contamination of both soils and water from hazardous materials. This is particularly the case with the Sandoz Corporation site (formerly Zoecon). This property has been included on the Environmental Protection Agency's Superfund list. The State Water Quality Control Board has approved a program for monitoring the ground water in the surrounding area and the State Department of Health is currently reviewing a revised submittal of alternative plans for soil clean-up. The City has been working cooperatively with these agencies and other affected parties to arrive at a solution to this problem. It is anticipated that approval will be obtained and mitigation operations will be underway during calendar 1987. The City should maintain its active posture on this problem to ensure maximum protection for local residents.

Road Widths

The Circulation Element of the General Plan provides a detailed description of the City's transportation system, including the designation of streets by type. In summary, LOCAL streets provide direct accesss to adjoining properties and usually discourage through traffic; COLLECTORS carry traffic from local streets to arterials or freeways; and ARTERIALS provide through traffic between major points and interchanges. There are three interchanges in East Palo Alto with the Bayshore Freeway and now one direct link to the Dumbarton Bridge. No part of East Palo Alto is more than two miles from an interchange or the Dumbarton Bridge.

While East Palo Alto has many unimproved streets, particularly in the Palo Alto Park area, all of the three major arterials are currently improved, having a minimum right-of-way of no less than 60 feet. These include the Bay Road-Newbridge Street arterial (which is scheduled for reconstruction in 1987), Pulgas Avenue, and University Avenue.

Road widths in the City of East Palo Alto are considered to be adequate for the current and anticipated land uses. These uses are consistent with the largely residential character of the community and allow for a specified amount of commercial and industrial development. The principal concern relates to funding for needed improvements and on-going maintenance rather than a need to expand widths. Additionally, other controls and techniques to reduce peak-hour traffic flows related to the Dumbarton bridge must be explored.

Evacuation

In the event of either a natural or man-made disaster, it may become necessary to evacuate residents and occupants of commercial establishments. The City has maintained an excellent cooperative relationship with agencies and organizations that specialize in evacuation methods and techniques. Since incorporation, only two small-scale evacuation actions have been taken--both related to chemical spills. One large-scale evacuation alert was issued, but not implemented for the 1986 winter storm.

The City currently is preparing its Disaster Plan, an operations guide for handling evacuation and related activities in the event of a disaster. This plan will be completed in early 1987 and fully comply with the provisions of all applicable laws.

Reduction of Crime

The incidence of crime in community has a direct bearing on the perceived and actual quality of life. It is also an important consideration in capital investment decisions. The need for economic development in East Palo Alto and the desire of its citizens to improve the quality of life have led to the reduction of crime as a policy priority for the City Council.

There are various measures that a community can take to reduce the level of crime. These include the applications of technology, education, lighting, personnel, capital, and design. The most effective policy would seem to be one that combines all of these measures in a manner that produces the greatest reduction for the least cost. Assuming that a moderate amount of development will occur in East Palo Alto, special attention should be focused on design because it offers the potential for best satisfying these two criteria simultaneously.

Several design approaches have been used throughout history by various cultures to defend themselves and their property from outside intruders. Community design and architectural styles have been absorbed as part of the customs and life style of various cultures throughout the world. For numerous technological and sociological reasons, the modern day American culture has often disregarded many crime preventive design measures.

As East Palo Alto continues to develop and redevelop, several design concepts can be included into the planning process to provide psychological deterrents to crime. Since most of the residential sectors of the City have now developed, the majority of construction in East Palo Alto during the next decade will Occur at scattered sites throughout the City and in the Ravenswood Industrial park. For this reason, the implementation program should stress concepts applicable primarily to either commercial, office, or multifamily residential uses.

Crime preventive measures should be strongly encouraged in early design stages of all new construction and should be added to the list of considerations that Design Review, the Planning Commission, and the City Council weigh when considering approval of any project. The public as well as designers and decision makers should at least be familiar with some of the concepts and implementation measures that the element sets forth. Examples of some of these design concepts are shown in Figures 7 through 11.

FIGURE 7

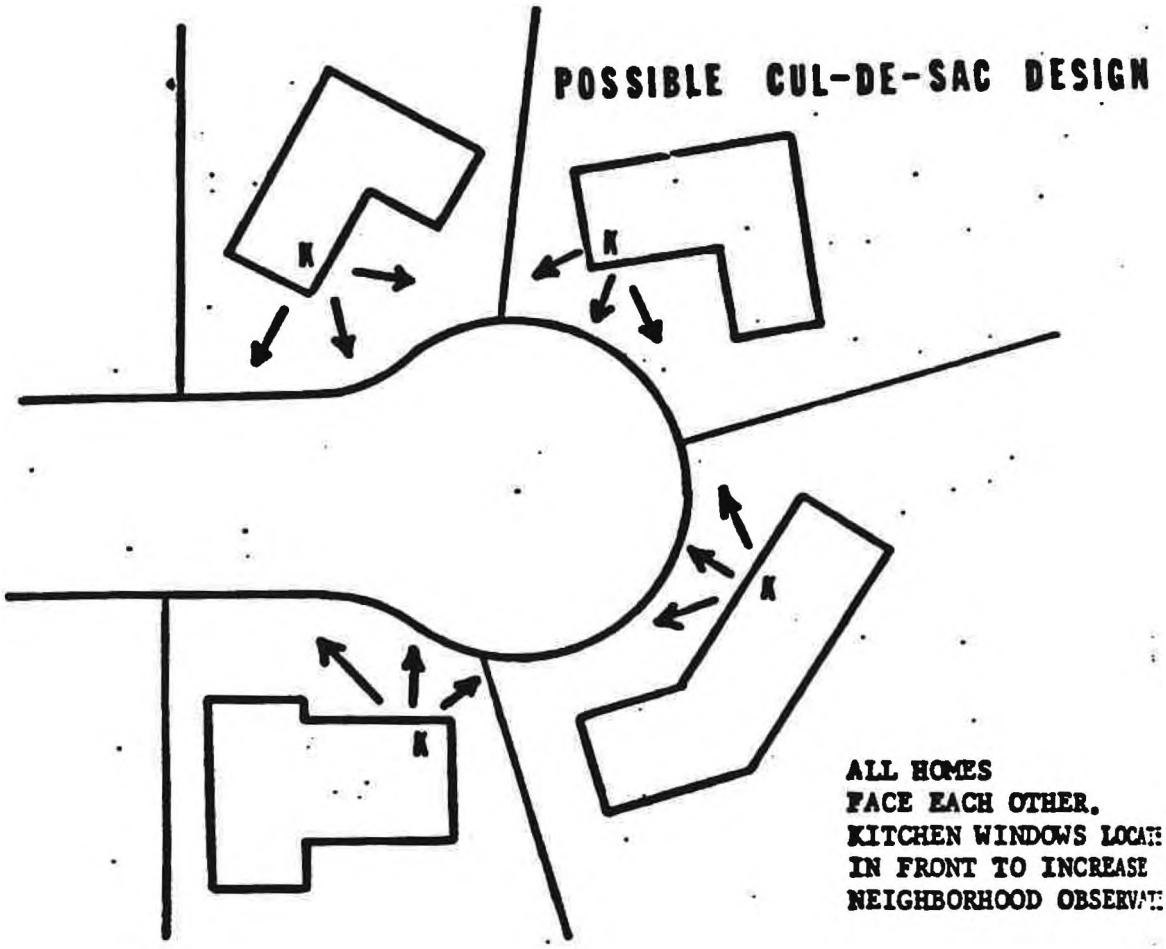


FIGURE 8

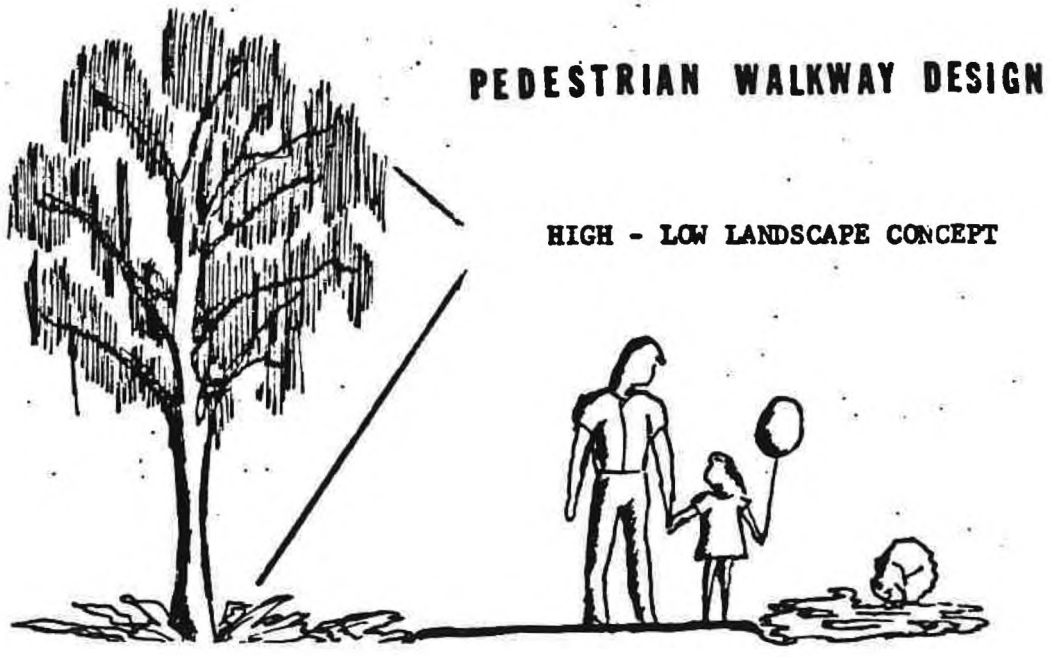
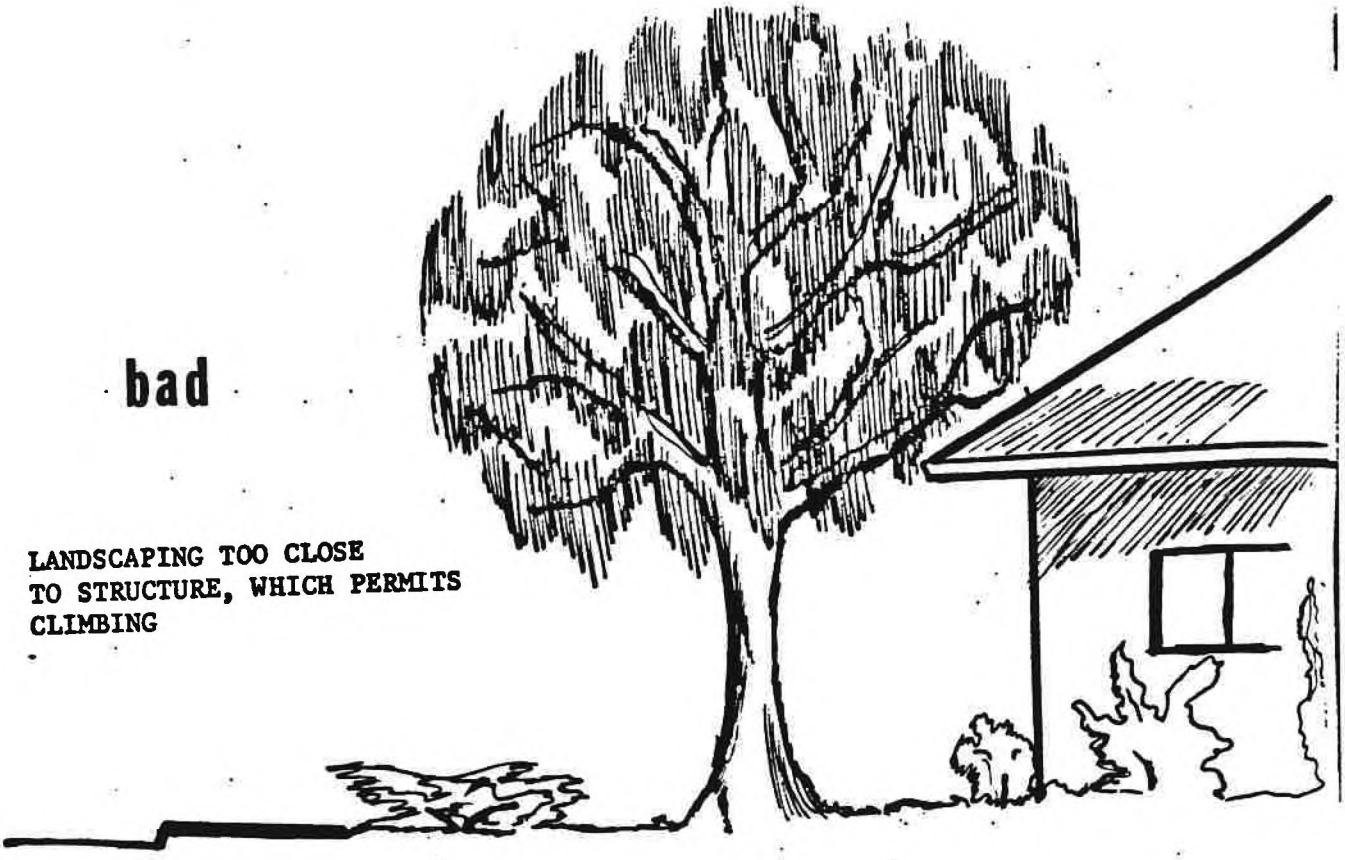


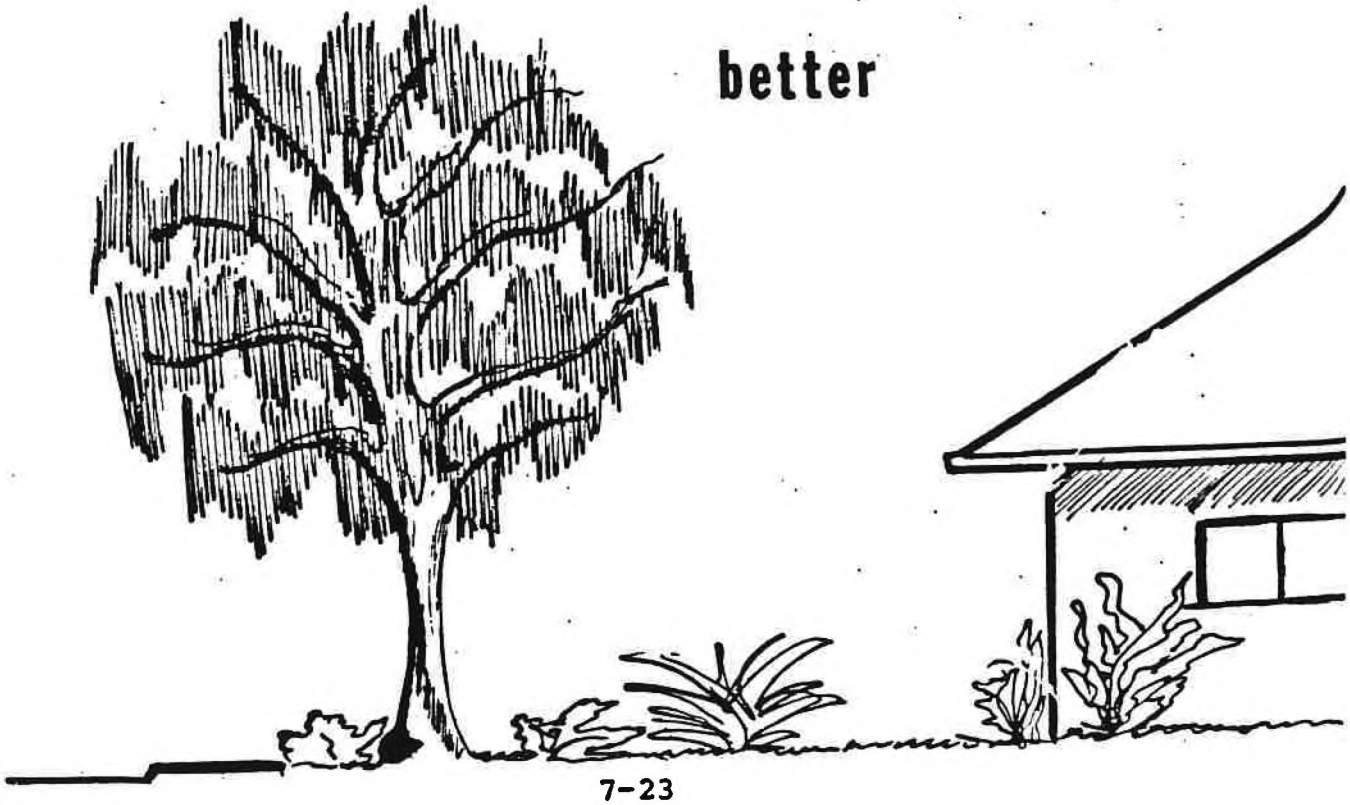
FIGURE 9

ROOF ACCESS



bad

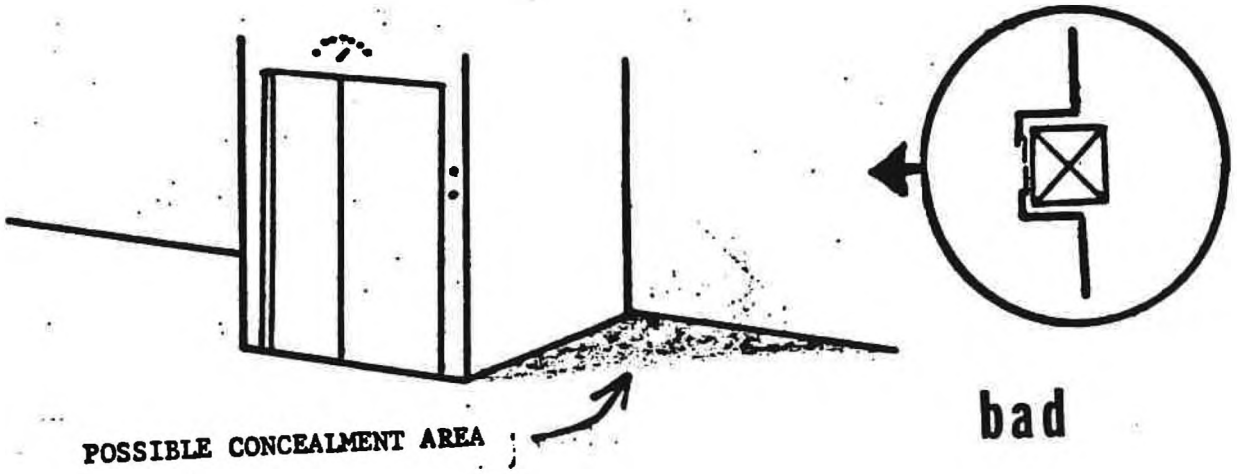
LANDSCAPING TOO CLOSE TO STRUCTURE, WHICH PERMITS CLIMBING

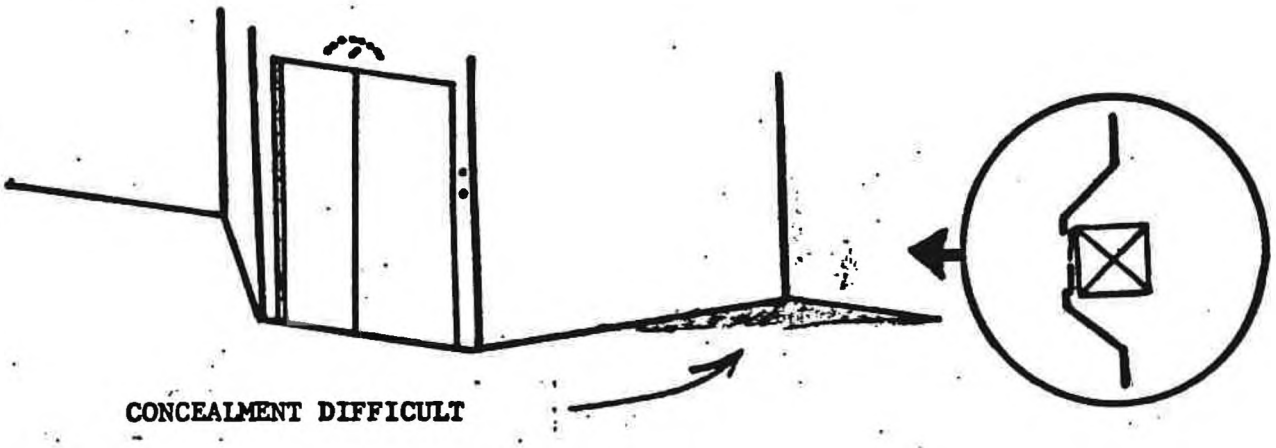


better

FIGURE 10

SAMPLE ELEVATOR SHAFT DESIGN





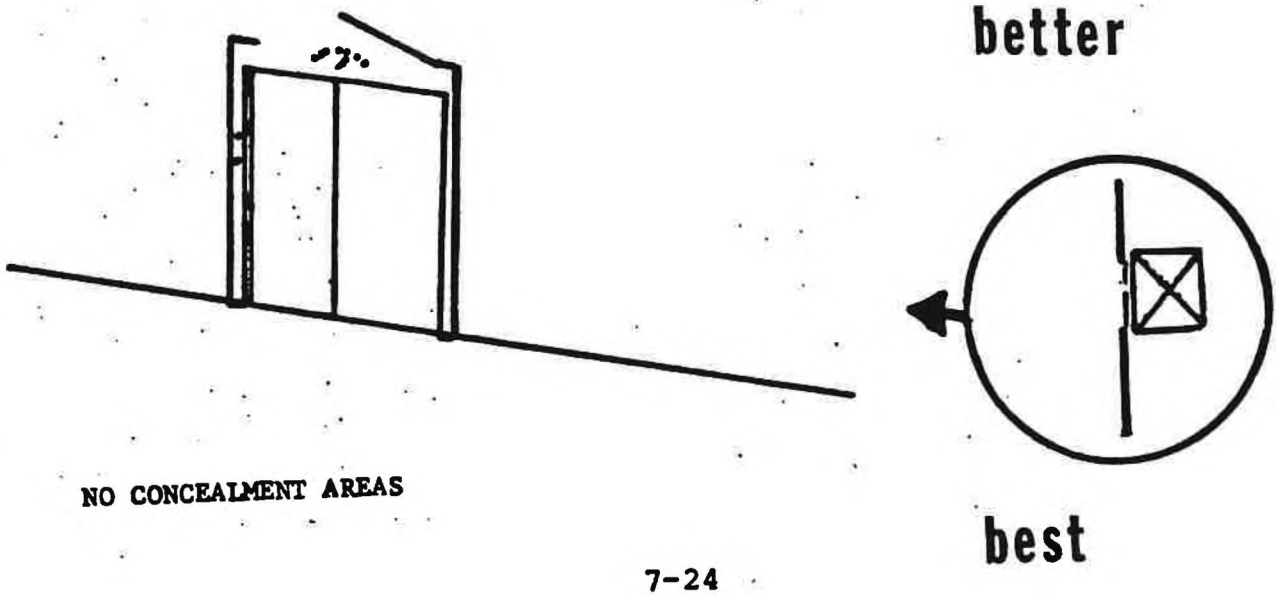
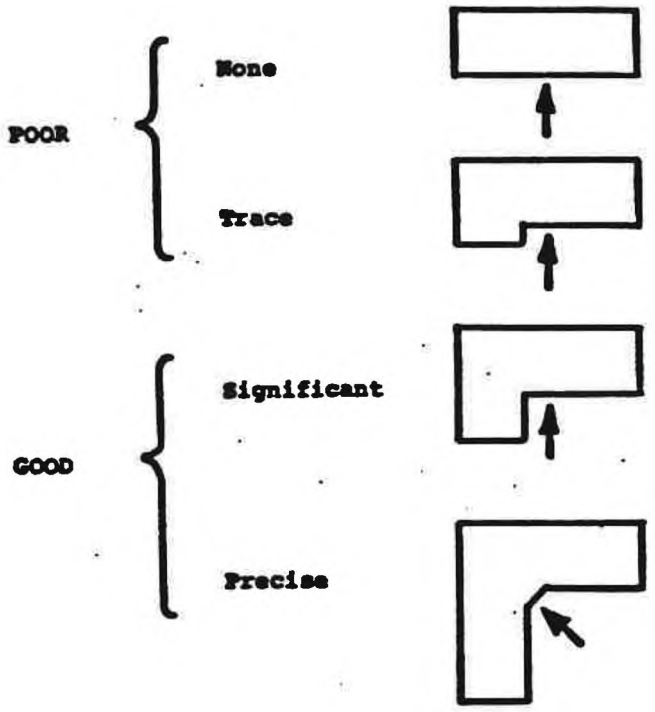


FIGURE 5. Definition of Entry Space as Formed by Shape of Building



GOAL AND POLICIES

The setting described in the foregoing sections of this element identifies areas of specific need, is responsive to the requirements of State Law for this element, and reflects certain priorities of the community. The following section of this Element specify goals and policies to address those identified needs. An action program for detailed implementation is also included.

The framework of the Safety Element is oriented around protection of the community from fires and a variety of other hazards. All of the policies and the action program that follow support this effort. The policies articulate the direction indicated by the goals for each area.

GOAL I TO PROVIDE A LIFE SAFETY AND FIRE PROTECTION SYSTEM, WHERE A COMBINATION OF PUBLIC SERVICE AND PRIVATE RESOURCES IS CAPABLE OF ACHIEVING A COMMUNITY-DEFINED LEVEL OF SERVICES AND ASSOCIATED RISKS.

POLICIES

1. Strive to prevent loss of life and injuries due to fire and other emergencies.

2. Minimize the direct and indirect losses due to fire.

3. Establish and maintain levels of fire protection service, including public and private responsibilities.

4. Enforce building codes designed to make homes relatively safe.

5. Implement fire safe practices including proper road construction and adequate water systems.

6. Utilize proper land use planning and zoning which will designate where and under what conditions people should live in areas relative to their exposure to the hazard of fire.

7. Define the related acceptable risks which meet community needs at a cost the community is willing to incur.

8. Assure the reliability of fire protection programs through an ongoing program of public education and code enforcement, and strive to create a community consciousness of the need to improve fire safety.

9. Assure that occupancies which exceed the established acceptable risks provide the necessary fire protection systems to reduce those risks to a level consistent with established acceptable fire risks.

10. Work cooperatively with the Menlo park Fire Protection District to ensure that the above policies are effectively carried out.

GOAL II: TO IDENTIFY SEISMIC AND GENERAL HAZARDS, REDUCING EXISTING HAZARDS THROUGH MITIGATION MEASURES WHERE POSSIBLE.

1. Consider seismic conditions in the review of building plans, development proposals, precise plans, zoning action, etc.

2. Modify construction requirements where hazardous site conditions are identified.

3. Inventory existing buildings in classes of high to moderate risk for potential hazards (signs, architectural elements, etc.) and develop programs to reduce these hazards giving critical structures first priority.

4. Continue multi-family housing inspection for Building and Safety Code violations, also including evaluation of deteriorated or inadequate foundations and support systems.

5. Consider implementing inspection of the City's unreinforced masonry construction commercial buildings.

6. Continue to make building Code amendments which promote building safety while protecting historical structures and the housing supply.

7. Promptly adopt the latest Uniform Building Code.

8. Required geologic studies shall be prepared by an engineering geologist.

9. The City shall maintain a comprehensive file of geologic reports and an updated Investigation Zones Map.

10. New construction shall be designed to eliminate flood hazards and the City will support flood control measures to eliminate flood hazard areas.

11. Continue monitoring ground water level and consider using City wells in emergencies.

GOAL III: TO CONDUCT DISASTER EDUCATION AND PLANNING AS AN ONGOING PROCESS, INTERGRATED WITH REGIONAL ACTIVITIES.

POLICIES

1. Design and implement the City's Disaster Plan to deal with seismic and other natural disaters, including establishment of emergency water supplies for firefighting, cooking, and drinking within Class 2 risk structures.

2. Institute programs to educate the public about the existence of seismic hazards and about appropriate actions to be taken in case of a seismic emergency.

3. Maintain effective relationships with other appropriate agencies to minimize community exposure to risk in the event of disaster.

GOAL IV. TO PROTECT THE CITY FROM FLOOD HAZARDS.

POLICIES

1. Require that all new development in the City be constructed at levels of elevation that take these structures out of risk of being flooded.

2. Improve and maintain the City's storm drainage system to the extent that flood waters can be taken without risk of hazard to persons , property, and buildings.

3. Institute programs to educate the public about the pros and cons of insurance purchases relative to property location and structure.

4. Encourage the consolidation of all drainage and flood control functions and facilities, including the levees, under one district.

GOAL V: TO ENSURE THAT ROADS ARE CONSTRUCTED TO STANDARDS THAT ALLOW THE MOVEMENT OF TRAFFIC AND EMERGENCY VEHICLES THROUGHOUT THE CITY IN AN EFFICIENT, EFFECTIVE, AND SAFE MANNER

POLICIES

1. Require that all roads be constructed to City standards, allowing consideration for creative road design only when it can be proven to be safe, effective, and efficient.

2. Encourage City residents to park their vehicles on their property and out of the public right-of-way on collector and arterial streets.

3. Continually seek outside sources of funding to ensure that major streets are adequately maintained.

GOAL VI: TO ENSURE AN ADEQUATE SUPPLY OF WATER FOR PURPOSES OF DRINKING, FIRE PROTECTION, AND EMERGENCY USE.

POLICIES

1. Encourage the consolidation of all water companies in the City to improve and standardize the level of service within the entire City.

2. Encourage the preparation of a capital improvements program for the overall water distribution system,identifying both long-term and short-term improvements needed, sources of funds, and a schedule of improvement.

3. Encourage the vigorous conservation of water in households and businesses through an educational program and the adoption of appropriate regulations.

4. Develop and maintain effective working relationships with existing water service providers to assist local residents and facilitate consolidation.

GOAL VII: TO REDUCE THE THREAT TO LIFE AND PROPERTY FROM HAZARDOUS MATERIALS.

POLICIES

1. Ensure that businesses and organizations handling hazardous materials in East Palo Alto are in compliance with all applicable statutes.

2. Continually monitor the regulatory process for hazardous materials to ensure that the City is aware of and in compliance with changes as they occur.

3. Ensure that the Community is adequately protected from existing hazardous material contamination and during its eventual removal.

GOAL VIII: TO ENSURE AN ENVIRONMENT THAT IS CONDUCIVE TO CAPITAL INVESTMENT AND A HIGH QUALITY OF LIFE THROUGH THE REDUCTION OF CRIME.

POLICIES

1. Support a vigorous crime prevention program including neighborhood watch as a major component.

2. Implement an educational program of crime prevention in the local schools and with senior citizens of the community.

3. Ensure that adequate lighting is provided in the public right-of-way and in new developments.

4. Explore the use of cable television as a means to further prevent crime and provide public information.

5. As projects are submitted to the City, plans should be reviewed in detail for the following considerations:

Exterior Features

A. Surface Irregularities. Areas where a person could be concealed should be eliminated.

B. Points of Entry. Points of entry to structures should not be obscured by walls or landscaping.

C. Ability to Climb. Access to roofs should be eliminated by insuring that surface materials and ornamental features, including landscaping and fences, are not designed to permit climbing.

D. Size of Windows. In order to reduce the propensity for crime, windows are ideally very narrow or extremely large.

E. Doors. The hardware of doors, door jambs, locks and hinges should be of sufficient strength to withstand severe forces. Metal doors and jambs are recommended on commercial and office buildings.

F. Storage Facilities. Storage facilities or housing for air-conditioning equipment should not permit access to any structure, its roof, or underside. When possible, these facilities should be located on the interior of structures.

G. Roof. Whenever possible, roofs should not allow concealment. Ideally, roofs would be free of skylights, electrical equipment, and have at least a moderate pitch. Mansard style roofs should be avoided.

Interior

A. Interior Areas. Interior walkways, atriums, and uncovered spaces should be secured.

B. Underground Garages. Stairwells and elevators leading to underground garages should be designed in such a manner to prevent concealment. Preferably, stairwells and elevator entrances would be free from hidden corners.

C. Lighting. Irregular surfaces and entryways should be lighted in a manner to prevent concealment. Two foot-candles on ground surfaces are recommended. Danger areas should be illuminated at approximately 4 to 6 foot-candles.

D. Accesss to Underneath Structures. Access to the underside of structures should be eliminated.

Landscaping

A. Use of the "high-low" concept should be encouraged. Access to roofs via trees should be avoided.

6. Ensure an adequate allocation through the budget process to maintain an effective Public Works Staff and police force.

SAFETY ELEMENT ACTION PROGRAM

The activities listed in the Action Program for the Safety Element of the General Plan are intended to ensure attainment of the goals and policies of the Element, and facilitate future revisions of the Element as required. They are more specific in nature than the policies and in most cases included a targeted completion date.

1. For purposes of review with the Fiscal Year 1987-88 Program Budget, an acquisition plan for special districts serving the City shall be prepared.

2. A technical supplement for the Safety Element shall be prepared by no later than April 1988, containing updated statistics for relevant portions of the Element to establish acceptable levels of service and related cost measurements.

3. The City shall implement the provisions of AB2185 and AB2187 in a timely manner and in full compliance with the State Office of Emergency Services.

4. The City will continue to coordinate with the State Department of Health and the Regional Water Quality Control Boards to ensure speedy and effective clean-up of contamination at the Sandoz site.

5. By no later than July 1987, the City will adopt a completed Disaster Plan.

6. By no later than July 1987, the City will adopt its completed Hazardous Materials Ordinance.

7. The City will design and implement a comprehensive Code enforcement program that focuses on public health and the adopted neighborhood standards. It is expected that the systematic implementation of this program can be underway by late spring, 1987.

8. The Public Safety Commission will prepare and recommend the adoption of a comprehensive, long-term, public safety master plan for the effective utilization of local residents in the delivery of public safety services and the prevention of crime.

9. Ensure that a program of CPR training is made readily available for local residents.

10. Expand the Neighborhood Watch Program throughout the City.

11. Develop and implement a plan to ensure that funds are generated for needed improvements, that the tax base is increased, and that a budget is established for emergency supplies and equipment.

CITY OF EAST PALO ALTO

COMMUNITY DEVELOPMENT DEPARTMENT

NEGATIVE DECLARATION

A notice, pursuant to the California Environment Quality of 1970, as amended (Public Resources Code 21,000, et seq.) that the project for a Safety Element of the proposed East Palo Alto General Plan

when implemented will not have a significant impact on the environment.

PLANNING APPLICATION NO.: GP-074

OWNER: City of East Palo Alto

APPLICANT: City of East Palo Alto

ASSESSOR'S PARCEL NO.: N/A

PROJECT DESCRIPTION AND LOCATION

SAFETY ELEMENT OF THE PROPOSED EAST PALO ALTO GENERAL PALN

FINDINGS AND BASIS FOR A NEGATIVE DECLARATION

The Community Development Department has reviewed the initial study for the project and, based upon substantial evidence in the record, finds that:

1. **The project will not adversely affect water or air quality or increase noise levels substantially;**

2. **The project will not have adverse impacts on the flora or fauna of the area;**

3. **The project will not degrade the aesthetic quality of the area;**

4. **The project will not have adverse impacts on traffic or land use;**

5. **In addition, the project will not:**

   a **Create impacts which have the potential to degrade the quality of the environment.**

   b. **Create impacts which achieve short-term to the disadvantage of long-term environmental goals.**

Analysis of Yes and Maybe Responses in the Environmental Evaluation Check List

4(d) The Safety element deals with the issue of storing, transporting, cleaning up and disposing of hazardous materials.

6(l) Adoption of the Safety Element and General Plan requires that the existing Community Plan/EIR be amended.

6(r) Policies in the Safety Element deal with the cleanup of hazardous materials which means that those performing the cleanup will be exposed to the hazardous materials.

Mitigation Measures

4(d) The Safety Element recommends policies that deal with the storage, transport, cleanup and disposal of hazardous materials using methods that are the safest and most efficient at this time. It is not anticipated that these policies will result in negative environment impacts. On the contrary, it exposes safety and caution to the greatest extent possible.

6(l) If the contents of the Safety Element are found to be appropriate, then the City Council will approve the Element. If it is found to be inappropriate, it will be returned to Staff for further work.

6(r) Those performing the cleanup of hazardous material will be professionals and will be protected to the greatest extent possible by the most modern safety equipment available.

c. Create impacts for a project which are individually limited, but cumulatively considerable;

d. Create environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The City of East Palo Alto has, therefore, determined that the potential environmental impact of the project is insignificant.

MITIGATION MEASURES (if any) included in the project to avoid potentially significant effects.

please see attached sheet entitled mitigation measures

RESPONSIBLE AGENCY CONSULTATION

INITIAL STUDY

The East Palo Alto Community Development Department has reviewed the Environmental Evaluation of this project and has found that the probable impacts are potentially insignificant. A copy of the initial study is attached.

REVIEW PERIOD: November 25, 1986 to December 15, 1986

All comments regarding the correctness, completeness,, or adequacy of this Negative Declaration must be received by the City Community Development Department, 2415 University Avenue, East Palo Alto, no later than 5:00 p.m., December 15, 1986

CONTACT PERSON:

Rod Barger

TABLE OF IMPACTS AND MITIGATION MEASURES
FOR SAFETY ELEMENT OF THE PROPOSED EAST PALO ALTO GENERAL PLAN

December 1986

Area of Impact	Scale of Impact before mitigation				Mitigation Measures*	Scale of Impact After mitigation		
	None	Minor	Moderate	Major		None	Minor	Moderate
1. Land suitability and geology	X							
2. Vegetation and wildlife	X							
3. Physical resources	X							
4. Air quality, water quality, sonic		X			4(d)		X	
5. Traffic and transportation								
6. Land Use and General Plan		X			6(l), 6(r)		X	
7. Aesthetic, cultural and historic								

*See attached listing of numbered mitigation measures.