



DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

LINDA CROCKETT LINGLE
Mayor
CHARMAINE TAVARES
Director
LEE DODSON
Deputy Director

RECEIVED

1580-C KAAHUMANU AVENUE, WAILUKU, HAWAII 96793

'95 JUL 28 10:32 (808) 243-7230

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

July 26, 1995

Mr. Gary Gill, Director
Office of Environmental Quality Control
220 South King Street
Central Pacific Plaza, Suite 400
Honolulu, HI 96813

Re: Final Environmental Assessment/Negative Declaration for the Proposed
Ho'aloaha Park Improvements, Canoe Hales & Public Restrooms at Kahului,
Maui, Hawaii (TMK 3-7 08:17)

Dear Mr. Gill:

The Maui County Department of Parks and Recreation has determined that the proposed Ho'aloaha Park Improvements Project will not have significant environmental effects and has issued a Negative Declaration. Please publish this notice in the August 8, 1995, OEQC Bulletin. No comment letters were received during the 30-day public comment period which began on June 23, 1995.

Transmitted herewith are four (4) copies of the Final Environmental Assessment prepared for the Ho'aloaha Park Improvements Project, and a completed OEQC Bulletin Publication form.

We thank you for your assistance in handling this matter. Please contact Mr. Rory Frampton of Christ Hart & Partners at 242-1955 if you have any questions.

Sincerely,


CHARMAINE TAVARES
Director
Department of Parks & Recreation

Enclosures

cc: Joe Alueta, maui Planning Department
Rory Frampton, Chris Hart & Partners

97

1995-08-23-MA-FEA-Ho'Aloha Park Improvements
CANOE HALE and Public Restroom

JUL 23 1995
FILE COPY

FINAL
ENVIRONMENTAL ASSESSMENT

HO'ALOHA PARK IMPROVEMENTS
CANOE HALE & PUBLIC RESTROOMS

KAHULUI, MAUI, HAWAII
TMK 3-7-08:17



Prepared for:

Department of Parks and Recreation
County of Maui
1580 - C Kaahumanu Avenue
Wailuku, Maui, Hawaii 96793

Prepared by:

Chris Hart and Partners
Landscape Architecture and Planning
1955 Main Street, Suite 200
Wailuku, Maui, Hawaii 96793
Phone: 242-1955

On Behalf of:

Hawaiian Canoe Club &
Na Kai Ewalu Canoe Club
Kahului, Maui, Hawaii

JULY 1995

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JULY 1995

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Hydrology Analysis and Soil Erosion Control Report

I. PROJECT OVERVIEW

Applicant	Hawaiian Canoe Club & Na Kai Ewalu Canoe Club
Planning Consultant/Agent	Chris Hart & Partners 1955 Main St. Suite 200 Wailuku, Maui, Hawaii 96793
Land Owner	County of Maui
Tax Map Key (TMK)	3-7-08:17
Accepting Agency	County of Maui Department of Parks and Recreation 1580 - C Kaahumanu Avenue Wailuku, Maui, Hawaii 96793

A. PROJECT LOCATION, EXISTING USE, LAND USE DESIGNATION, AND OWNERSHIP

The applicants, Hawaiian Canoe Club and Na Kai Ewalu Canoe Club, propose to construct two (2) new canoe hale (house) facilities, public restrooms, paved parking, landscape planting and other park improvements at Ho'aloa Park in Kahului, Maui, Hawaii (TMK 3-7-08:17. Hereafter referred to as "Parcel 17"). See Figure 1. The project site is situated at Ho'aloa Park and is located between the Kahului Chart House Restaurant and the Maui Seaside Hotel. See Figure 2.

The project site is currently utilized for park purposes including beach activities and picnics. The park has a few picnic tables and vegetation consists of grass areas, Beach Naupaka, and a variety of trees, including palm, hau, milo, monkey pod, and banyon.

Land Use Designations:

- State Land Use Designation: **"Urban"**
- Community Plan: **"Park"**
- County Zoning: **"B-2 Business"**
- Other: **"Special Management Area"**

Ownership of the subject property was recently conveyed from Alexander & Baldwin, Inc. to the County of Maui.

B. PROJECT NEED

Both applicants, Hawaiian Canoe Club and Na Kai Ewalu Canoe Club, previously leased land from Alexander & Baldwin, Inc. to house their canoe club hales. See Figure 2. However, in 1994, Alexander & Baldwin, Inc. sold the land on which the hales were located to the State Department of Transportation, Harbors Division because of the State's need to expand the Kahului Harbor. In order to avoid displacement of the clubs, Alexander & Baldwin, Inc. conveyed parcel 17 to the County of Maui with the provision that the park be used for Hawaiian outrigger canoeing activities.

Membership of Hawaiian Canoe Club and Na Kai Ewalu Canoe Club, the two largest canoe clubs of the nine member Maui County Hawaiian Canoe Association, total more than 500 and consists of residents from central Maui, Upcountry, and East Maui. Displacement of both canoe clubs would have a significant adverse impact on the canoeing community and the public at large. The canoe clubs provide opportunities for adults and children to learn and experience Hawaiian outrigger canoeing as a recreational sport, for personal growth and character development, and as a vehicle for education and awareness of Hawaiian cultural values.

C. BACKGROUND INFORMATION

On December 16, 1994, the Maui County Council adopted Resolution No. 94-141 which authorized the grant of a license to occupy County owned land for the location of the new canoe club hales. The subject property, consisting of approximately 91,950 square feet, is a portion of Ho'aloa park. Approximately 8,400 square feet was granted to the canoe clubs on a "exclusive" use basis for the site of the two new canoe hales; plus a ten (10) foot perimeter area of land around each hale.

The remaining portion of land, approximately 83,550 square feet, was granted to the canoe clubs on a "non-exclusive" use basis. In addition, the County Council approved the canoe clubs request to license, on a "non-exclusive" basis, Easement "E" for access and utility purposes.

D. PROPOSED ACTION

The proposed project involves the construction of two (2) canoe hales, each measuring approximately 55 feet by 74 feet. See Figures 3, 4, & 5. The hales will be approximately 30 feet high and have a partial second floor area. The second floor (1,712 sq. ft.) will include space for a meeting area, office, storage, and a lanai-lookout area on the makai end. The second floor will be located above the base flood elevation (approximately 10 feet above grade) and will be under the higher portion of a split pitch, Dutch gable roof system. The ground floor area (4,107 sq. ft.) will be used for storage of six-man and one-man canoes, kayaks, lawn equipment and will have men's and women's locker space as well as bathrooms. The ground level floor will be designed to meet the National Flood Insurance Program Requirements.

Other site improvements consist of providing twenty-seven (27) on-site parking stalls, including two (2) handicap stalls as well as overflow grass parking. In addition, a new public restroom building measuring 600 sq. ft. will be constructed near the southwest corner of the property.

The project site will be landscaped with appropriate trees and plants which will blend with surrounding land uses as well as provide a visual screen from Kaahumanu Avenue and surrounding properties. See Figure 3.

The two canoe (2) hales will be identical except for minor variation in locations of non-structural wall elements.

II. DESCRIPTION OF THE EXISTING ENVIRONMENT

A. PHYSICAL SETTING

1. Surrounding Land Uses

The project site is located within Kahului, the Island of Maui's center of commerce. Kahului is home to Kahului Harbor, the Island's only deep water port, and the Kahului Airport, the second busiest airport in the State. With its proximity to the Harbor and Airport, the Kahului region has emerged as the focal point for heavy industrial, light industrial and commercial activities and services such as warehousing, baseyard operations, automotive sales and maintenance, and retailing for equipment and materials suppliers. The region is considered Central Maui's commercial retailing center with the Kaahumanu Shopping Center, the Maui Mall, and the Kahului Shopping Center located within a mile of the project site.

Surrounding this commercial core is an expansive residential area comprised principally of single-family residential units. Residential uses encompass the area extending from Maui Memorial Hospital to Puunene Avenue.

The surrounding land uses specific to the project site are reflective of the urban setting of Kahului. The ocean front project site is bordered by the Kahului Chart House Restaurant to the east and First Hawaiian Bank to the southeast. The abutting property to the west of the site is vacant and is used for park purposes, while further west is the Maui Seaside Hotel. A car rental company is located south of the site as well as a vacant lot which is often used for fundraising activities ("Huli Huli Chicken Lot").

2. Climate

Like most areas of Hawaii, Maui's climate is relatively uniform year-round. Characteristic of Hawaii's climate, the project site experiences mild and uniform temperatures year round, moderate

humidities and a consistent northeasterly tradewinds. Variations in climate on the Island is largely left to local terrain.

Average temperatures at the project site (based on temperatures recorded at Kahului Airport) range from lows in the 60's to highs in the 80's. August is historically the warmest month, while January and February are the coolest. Rainfall at the project site averages approximately 20 inches per year. Winds in the Kahului region are predominantly out of the north-northeast and northeast.

3. Topography and Soil Characteristics

The project site is located on Maui's flat Central isthmus at an approximate elevation of 7-ft. to 10-ft. and gently slopes at an average of 1.5% from the northern and southeastern section of the property to the eastern and southwestern boundaries of the property. The subject property has been cleared and graded for use as a park. There are no significant topographic constraints within the project site.

Underlying the proposed site and surrounding lands are soils belonging to the Pulehu-Ewa-Jaucas Association. This soil association is characteristically deep and well-drained and located on alluvial fans and in basins. The Soil Erosion Control Report (Gholkar & Associates, Inc. May 1995) prepared for the project notes that the soil type specific to the project site is Fill Land (FD). FD soils consists of areas filled with "material from dredging, excavation from adjacent uplands, garbage, and bagasse and slurry from sugar mills".

4. Flood Hazard

The subject property is located in an area that has been designated by the Flood Insurance Rate Map as Zone V23, an area of 100-year coastal flood with wave velocity (wave action) and the base flood elevation determined to be 17 feet MSL.

5. Flora and Fauna

The project site is situated in the midst of the urbanized commercial center of Kahului. Natural environment features, such as plant and animal life, therefore, are reflective of this urban setting. Existing vegetation within the site include a large Banyon tree, milo, Hau, palm, and monkey pod trees as well as Beach Naupaka, various weeds and grasses. There are no rare, endangered or threatened species of plants at the site.

Animal life in the project vicinity similarly reflects the urban character of the region. Avifauna typically found in the urbanized Wailuku-Kahului area include the common myna, several species of dove, cardinal, house finch, and house sparrow. Mammals common to this area include cats, dogs, rodents, mongoose.

6. Air Quality

Air quality in the Wailuku-Kahului region is considered good as point sources (e.g., Maui Electric Power Plant, HC&S Mill) and non-point sources (e.g., automobile emissions) of emission are not significant to generate high concentration of pollutants. The relatively high quality of air can also be attributed to the regions constant exposure to winds which quickly disperse concentrations of emissions. This rapid dispersion is evident during burning of sugar cane in fields located to the southeast of the Kahului residential core.

7. Noise Characteristics

Traffic noise and shipping activities associated with Kahului Harbor are the predominant sources of background noise in the vicinity of the project site.

8. Visual Resources

The subject property is located between the shoreline of the Kahului Harbor and Kaahumanu Avenue. Kahului Harbor and a portion of Kahului Bay can be seen from the project site as well as

from Kaahumanu Avenue. Further west, the east facing slopes of the West Maui Mountains are visible.

9. Archaeological Resources

The areas proposed for the construction of the hales have been previously graded and disturbed. There are no features of historic or cultural value in close proximity to the project site.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population

The population of the County of Maui has exhibited relatively strong growth over the past decade with the 1990 population estimated to be 100,504, a 41.9% increase over the 1980 population of 70,847. Growth in the County is expected to continue, with resident population projections to the year 2000 and 2010, estimated to be 124,561 and 138,378, respectively.

The Wailuku-Kahului Community Plan region follows the Countywide pattern of population growth, with the region's 1990 population of 32,816, expected to rise to 40,119 by the year 2000 and to 44,876 by the year 2010.

2. Economy

As noted previously, the Kahului region is the Island's center of commerce. Combined with neighboring Wailuku, the region's economic character encompasses a broad range of commercial, service, and governmental activities. In addition, the region is surrounded by large agricultural acreage which include sugar cane fields, pineapple fields, and macadamia nut orchards. The vast expanse of agricultural lands managed by HC&S and Wailuku Agribusiness Company, is considered a key component of the local economy.

C. PUBLIC SERVICES

1. Recreational Facilities

The Wailuku-Kahului region encompasses a full range of recreational opportunities, including shoreline and boating activities at the Kahului Harbor and adjoining beach parks, and individual and organized athletic activities offered at numerous County parks and the War Memorial Complex. The project site was until recently a privately owned park utilized by the public. A portion of the park

(Parcel 17) was recently conveyed to the County to be used for recreational purposes with a provision that the uses include Hawaiian canoeing activities. The project site is in close proximity to the Kahului Community Center and the County's Kanaha Beach Park.

2. Police and Fire Protection

Police protection for the Wailuku-Kahului region is provided by the County Police Department headquartered at the Wailuku Station, approximately 1.5 miles from the project site. The region is served by the Department's Central Maui patrol which includes approximately 100 full-time personnel.

Fire prevention, suppression, and protection services for the Wailuku-Kahului region is provided by the County Department of Fire Control's Wailuku Station, located in Wailuku Town, approximately 3 miles from the subject area. The Wailuku Station is staffed by 27 full-time personnel. In addition, the Department has recently completed construction of the new Kahului Station (located on Dairy Road approximately 2 miles from the site).

3. Solid Waste

Single-family residential solid waste collection service is provided by the County of Maui on a once-a-week basis. Residential solid waste collected by County crews are disposed at the County's 55-acre Central Maui Landfill, located four miles southeast of the Kahului Airport. In addition to County-collected refuse, the Central Maui Landfill accepts commercial waste from private collection companies.

Solid waste collection service for the present canoe hale facilities is provided by private collection companies.

4. Health Care

Maui Memorial Hospital, the only major medical facility on the island, services the Wailuku-Kahului region. Acute, general and

emergency care services are provided by the 145-bed facility. In addition, numerous privately operated medical/dental clinics and offices are located in the area to serve the region's residents.

5. Schools

The Wailuku-Kahului region is served by the State Department of Education's public school system as well as several privately operated schools accommodating elementary, intermediate and high school students. Department of Education facilities in the Kahului area include Lihikai and Kahului Schools (Grades K-6), Maui Waena Intermediate School (Grades 7-8) and Maui High School (Grades 9-12). The University of Hawaii's Maui Community College is located on Kaahumanu Avenue, approximately 1 mile away from the subject area. Kaahumanu Hou Schools of Maui (grades K-12), a private school run by the First Assembly of God church, is located on Kane St. directly across from Foodland.

D. INFRASTRUCTURE

1. Roadways

The Wailuku-Kahului region is served by a roadway network which includes arterial, collectors and local roads. Major roadways include Kaahumanu Avenue, the principal linkage between Wailuku and Kahului, Lower Main/Beach Road, Hana Highway, and Puunene Avenue.

Access to the project site is provided via an access easement off of Kaahumanu Avenue.

2. Wastewater

Domestic wastewater generated in the Wailuku-Kahului region is conveyed to the County's Wailuku-Kahului Wastewater Reclamation Facility located one-half mile east of Kahului Harbor. The design capacity of the facility is 7.9 million gallons per day (MGD). Average daily flow currently processed through the plant is approximately 5.3 MGD.

A 8-inch sewer line runs from the southern border of the project site to a collector sewer line on Kaahumanu Avenue.

The sewer line traverses along Kaahumanu Avenue which connects to an 18-inch line through the Maui Mall. Sewage from the 18-inch line enters the Kahului Sewer Pumping Station on Hana Highway. The pumping station transports sewage through a 20-inch force main to the Wailuku-Kahului Wastewater Reclamation Facility.

3. Water

The Wailuku-Kahului region is served by the Board of Water Supply's (BWS) domestic water system. Water drawn from the Iao Aquifer System is conveyed to this region for distribution and consumption. The Iao Aquifer, which serves the Central Maui region, has a sustainable yield of 20 MGD. Recent estimates place the average withdrawal from the aquifer at over 18 MGD (Council of the County of Maui, December 21, 1990).

Water service to the project site is provided via a 4-inch waterline which is connected to a 8-inch waterline that is connected to a 12-inch waterline located along Kaahumanu Avenue. A 2.0 million gallon reservoir located on Waiinu Road in Wailuku feeds the distribution system serving Kahului.

4. Drainage

Runoff generated at the project site currently sheet flows across the site from the high points along the northern and southeastern section of the property to the low points along the eastern and southwestern boundaries of the property.

Existing onsite surface runoff peak volume generated during the 10-year 1-hour rainstorm is calculated to be 3.46 cfs. See Appendix A, Hydrology Analysis.

III. PROJECT IMPACT ASSESSMENT

A. PHYSICAL ENVIRONMENT

1. Surrounding Uses

The project site is located within the midst of Kahului's commercial center. Immediate surrounding land uses include the Kahului Chart House Restaurant, First Hawaiian Bank, Maui Seaside Hotel, and a car rental company. The proposed project is intended to provide *park improvements and canoe support facilities*. The project is viewed as a positive enhancement to Ho'aloa Park and will provide it with a strong identity and purpose. The proposed project is not anticipated to have any adverse impacts upon surrounding land uses.

2. Flora and Fauna

There are no known significant habitats of rare, endangered or threatened species of flora and fauna located on the project site. Siting of structures and facilities were done to minimize tree removal, however some existing trees will be removed in order to construct the Hales and the parking stalls. A large banyon tree and some Monkey Pod trees adjacent to the parking area will remain. Additional shade trees and Naupaka hedges will be provided.

3. Air Quality

Air quality impacts attributed to the project will include dust generated by short-term, construction-related activities. Site work such as grading and utilities and construction of the hales, for example, will generate airborne particulates. Dust control measures such as regular watering and sprinkling will be implemented as needed to minimize wind-blown emissions.

The proposed project will result in a increase in the volume of traffic being attracted to the project site on canoe practice days and on regatta (race) days. However, since canoe-related traffic represents

a small portion of overall traffic activity in the Kahului region, the proposed project is not anticipated to be detrimental to local air quality.

4. Noise

As with air quality, ambient noise conditions will be impacted by construction activities. Heavy construction equipment, such as bulldozers, front end loaders, and materials-carrying trucks and trailers, would be the dominant source of noise during the site construction period. However, once completed, it is anticipated that the project will not have an adverse impact upon existing noise characteristics.

5. Visual Resources

The proposed landscape concept plan for the project includes native plants and trees which will enhance the project site as well as provide visual screening and blending of surrounding land uses. The proposed Hales have been designed with Hawaiian style split-pitch roofs and will compliment the existing architecture in the vicinity (e.g. First Hawaiian Bank). A majority of the view planes from Kaahumanu Avenue to Kahului Harbor will be maintained. Through appropriate landscape planting and building design the project should enhance the visual character of the area.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Local Economy and Population

On a short-term basis, the project will support construction and construction-related employment.

On a long-term basis, the construction of the of the canoe club hales will not have an impact on employment opportunities, nor will it have an impact upon local population levels.

C. PUBLIC SERVICES

The proposed project is not anticipated to adversely affect public services such as police or fire protection or medical services in terms of service area. Solid Waste collection service for the proposed project site will be provided by private collection companies.

The proposed project will enhance a central Maui park as well as provide a permanent facility which will promote Hawaiian culture via Hawaiian outrigger canoeing activities. While there are numerous sports activities and organizations that meet the needs of adults and young athletes, the opportunities are limited with regards to Hawaiian outrigger canoe paddling for Central Maui and Upcountry residents. Hawaiian Canoe Club and Na Kai Ewalu are two of the County's largest canoe clubs, both recognized for their sizable keiki membership and with a specific history of serving thousands of residents on the island each year through active paddling competition, leisure sport activities and introductory lessons. Thus, the proposed project will provide increased recreational opportunities for Maui residents and will have a positive impact upon the region's public services.

D. INFRASTRUCTURE

1. Traffic

The facilities will be used heaviest during racing season during the summer months of June, July, and August. Practices are held in the afternoons Monday thru Friday. Crews and age divisions practice on alternate schedules in order to make best use of limited number of canoes. On normal practice days the trips will be generated between 3:00 p.m. and 7:00 p.m. with an estimated peak hour between 5:00 p.m. and 6:00 p.m. During evening "Peak Hour" vehicle counts are estimated between 35-45 vehicles.

The 1995 Hawaii State Legislature recently appropriated \$100,000 for improvements to Kaahumanu Avenue which will include the

lengthening of the left turn storage lane which provides access to the project site.

Based on the low level, seasonal usage of the site and with the lengthening of the left turn storage lane on Kaahumanu Avenue, it is anticipated that the project will not have an adverse effect on traffic operations on adjacent streets.

2. Wastewater System

During peak usage the proposed project is expected to generate 350 gallons/day of wastewater (based on estimate of 100 people per day at 3.5 gal/person) . The County has recently constructed reliability and expansion improvements at the Wailuku-Kahului Wastewater Reclamation Facility, which increased the plant's design capacity from 6.0 MGD to 7.9 MGD. The slight increase generated by the proposed project represents a fraction of the increase in capacity which can be accommodated by the plant.

3. Water System

The proposed project will not result in a significant increase in water demand relative to existing usage by the two canoe clubs. The project's Landscape Planting Plan has incorporated Xeriscape principles to minimize the impact of water usage for new landscape irrigation. In addition, overflow from shower areas will be directed to planted areas. The project is not expected to have a significant net impact upon the water source, storage and transmission system in Kahului.

4. Drainage

The development of the project is expected to increase the onsite runoff by approximately 0.81cfs. It is proposed to retain all of the runoff onsite by constructing two earth berms (top elevation 9.0 ft.) along and within the east and south-and-west property lines. The parking lot will slope away from the south embankment at about 2.0% toward the low area of detention created at the lot's center by the berms. The three buildings would be placed on elevated (9.0 ft.)

pads within the detention basin. The capacity of the detention basin would be greater than the expected total increase in runoff resulting from the project and future runoff would be prevented from following the driveway to Kaahumanu Avenue.

The proposed project is not anticipated to have a negligible impact upon the existing hydrologic conditions and adjoining or downstream properties.

IV. SPECIAL MANAGEMENT AREA OBJECTIVES AND POLICIES

Pursuant to Chapter 205A, Hawaii Revised Statutes, and the Rules and Regulations of the Planning Commission of the County of Maui, projects located within the SMA are evaluated with respect to SMA objectives, policies and guidelines. This section addresses the project's relationship to applicable coastal zone management considerations, as set forth in Chapter 205A and the Rules and Regulations of the Planning Commission.

A. RECREATIONAL RESOURCES

Objective: Provide coastal recreational resources accessible to the public.

Policies:

1. Improve coordination and funding of coastal recreation planning and management; and
2. Provide adequate, accessible and diverse recreational opportunities in the coastal zone management area by:
 - a. Protecting coastal resources uniquely suited for recreation activities that cannot be provided in other areas;
 - b. Requiring replacement of coastal resources having significant recreational value, including, but not limited to, surfing sites and sandy beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;
 - c. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
 - d. Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

- e. Encouraging expanding public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value;
- f. Adopting water quality standards and regulating point and non-point sources of pollution to protect and, where feasible, restore the recreational value of coastal waters; and
- g. Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits, and crediting such dedication against the requirements of Section 46-6 of the Hawaii Revised Statutes.

Response:

In recognition of the County's shoreline setback requirements the proposed structures are located approximately 80 feet from the shoreline. The project will encourage the recreational use of County owned shoreline land and will enhance accessibility to shoreline areas. The project will not have an adverse affect upon coastal resources. In addition, Erosion control measures will be guided by Maui County Code, Chapter 20.08 "Soil Erosion and Sedimentation Control".

B. HISTORICAL/CULTURAL RESOURCES

Objective: Protect, preserve and, where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management areas that are significant in Hawaiian and American history and culture.

Policies:

1. Identify and analyze significant archaeological resources;
2. Maximize information retention through preservation of remains and artifacts or salvage operations; and

3. Support state goals for protection, restoration, interpretation and display of historic resources.

Response:

The proposed project site has been previously cleared and graded for use as a park. There are no historic or cultural features within or in close proximity to the of the project site.

C. SCENIC AND OPEN SPACE RESOURCES

Objective: Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

1. Identify valued scenic resources in the coastal zone management area;
2. Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural land forms and existing public views to and along the shoreline;
3. Preserve, maintain and, where desirable, improve and restore shoreline open space and scenic resources; and
4. Encourage those developments which are not coastal dependent to locate in inland areas.

Response:

The proposed landscape concept plan for the project will include native plants and trees which will enhance the project site as well as provide visual screening and blending of surrounding land uses. The proposed Hales have been designed with Hawaiian style split-pitch roofs and will compliment the existing architecture in the vicinity (e.g. First Hawaiian Bank). A majority of the view planes from Kaahumanu Avenue to Kahului Harbor will be maintained. Through appropriate landscape planting and building design the project should enhance the visual character of the area.

D. COASTAL ECOSYSTEMS

Objective: Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

1. Improve the technical basis for natural resource management;
2. Preserve valuable coastal ecosystems of significant biological or economic importance;
3. Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and
4. Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

Response:

The completion of the proposed project will not disrupt or impact coastal ecosystems. Appropriate soil erosion mitigation measures will be implemented during the construction of the project to protect downstream properties.

E. ECONOMIC USES

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

1. Concentrate in appropriate areas the location of coastal dependent development necessary to the state's economy;

2. Insure that coastal dependent development such as harbors and ports, visitor facilities, and energy-generating facilities are located, designed, and constructed to minimize adverse social, visual and environmental impacts in the coastal zone management area; and
3. Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:
 - a. Utilization of presently designated locations is not feasible,
 - b. Adverse environmental effects are minimized, and
 - c. Important to the state's economy.

Response:

The proposed canoe clubs and associated activities require that they be located within close proximity to the coast. From a safety standpoint, Kahului Harbor is protected from powerful wave action and is the only suitable location on Maui's North Shore which provides safe conditions on a regular basis for the canoe clubs.

The State Department of Transportation will be utilizing the existing canoe club sites for future harbor expansion area, and as such the canoe clubs are proposing to relocate to Ho'aloaha Park.

F. COASTAL HAZARDS

Objectives: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion and subsidence.

Policies:

1. Develop and communicate adequate information on storm wave, tsunami, flood, erosion and subsidence hazard;
2. Control development in areas subject to storm wave, tsunami, flood, erosion and subsidence hazard;

3. Ensure that developments comply with requirements of the Federal Flood Insurance Program; and
4. Prevent coastal flooding from inland projects.

Response:

The subject property is located in an area that has been designated by the Flood Insurance Rate Map as Zone V23, an area of 100-year coastal flood with wave velocity (wave action) with base flood elevation determined to be 17 feet MSL. Accordingly, the proposed project will be designed to meet the National Flood Insurance Program Requirements by locating the second floor above the base flood elevation and through the incorporation of "breakaway" walls on the ground floor level. In addition, Erosion control measures will be guided by Maui County Code, Chapter 20.08 "Soil Erosion and Sedimentation Control".

From a safety standpoint, Kahului Harbor is protected from powerful wave action and is an appropriate and safe location for the canoe clubs.

G. MANAGING DEVELOPMENT

Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazard.

Policies:

1. Effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development;
2. Facilitate timely processing of application for development permits and resolve overlapping of conflicting permit requirements; and
3. Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.

Response:

Representatives from both of the canoe clubs have taken an active role in the input and direction for the relocation and proposed construction of the hales. A committee consisting of members from both clubs' Board of Directors has been established and have assisted in coordination efforts as well as directing and implementing the development plans.

Development of the proposed project will be conducted in accordance with applicable State and County requirements. Opportunity for review of the proposed action is provided through the environmental impact review process established in Chapter 343, Hawaii Revised Statutes and the County's Special Management Area permitting process.

V. FINDINGS AND CONCLUSIONS

The proposed project will provide a facility for adults and children to experience Hawaiian outrigger canoeing as a recreational sport, for personal growth and character development, and as a vehicle for education and awareness of Hawaiian cultural values. The construction of the two new hales and public restrooms will enhance the character of Ho'aloa Park which has been recently conveyed to the County.

The proposed project will involve earthwork and building construction activities. In the short-term, these activities may generate nuisances normally associated with construction activities. All construction activities are anticipated to be limited to normal daylight working hours. Impacts generated from construction activities are not considered adverse.

From a long-term perspective, the proposed project is not anticipated to result in adverse environmental impacts. The proposed project site is located in Zone V23 and will be designed to meet the National Flood Insurance Program Requirements. The project will have "no effect" on significant historic sites.

The project will not have an impact on employment opportunities, nor will it have an impact upon local population levels. Public service needs such as police, medical facilities and schools will not be adversely impacted by the project. Impacts upon roadways, water, wastewater, drainage, and other infrastructure systems are not considered significant.

In light of the foregoing findings, it is concluded that the proposed action will not result in any significant impacts.

VI. LIST OF AGENCIES CONSULTED DURING PREPARATION OF DRAFT ENVIRONMENTAL ASSESSMENT

COUNTY OF MAUI

Department of Parks and Recreation

Department of Planning

Department of Public Works and Wastewater Management, Land Use and Codes Division

Department of Public Works and Wastewater Management, Wastewater Division

Department of Water Supply

STATE OF HAWAII

Department of Transportation, Highways Division

REFERENCES

REFERENCES

- Community Resources, Inc., Maui County Community Plan Update Program Socio-Economic Forecast Report, March 1992.
- County of Maui, Department of Public Works and Wastewater Management, Telephone Discussion with Staff, May 1995.
- Federal Emergency Management Agency, Flood Insurance Rate Map, Community Panel Map Number 150003 0190D.
- State of Hawaii, Department of Business and Economic Development, Data Book, 1990.
- U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, 1972.
- University of Hawaii, Land Study Bureau, Detailed Land Classification - Island of Maui, L.S.B. Bulletin No.7, May 1967.
- University of Hawaii, Department of Geography, Atlas of Hawaii, Second Edition, 1983.

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FIGURES

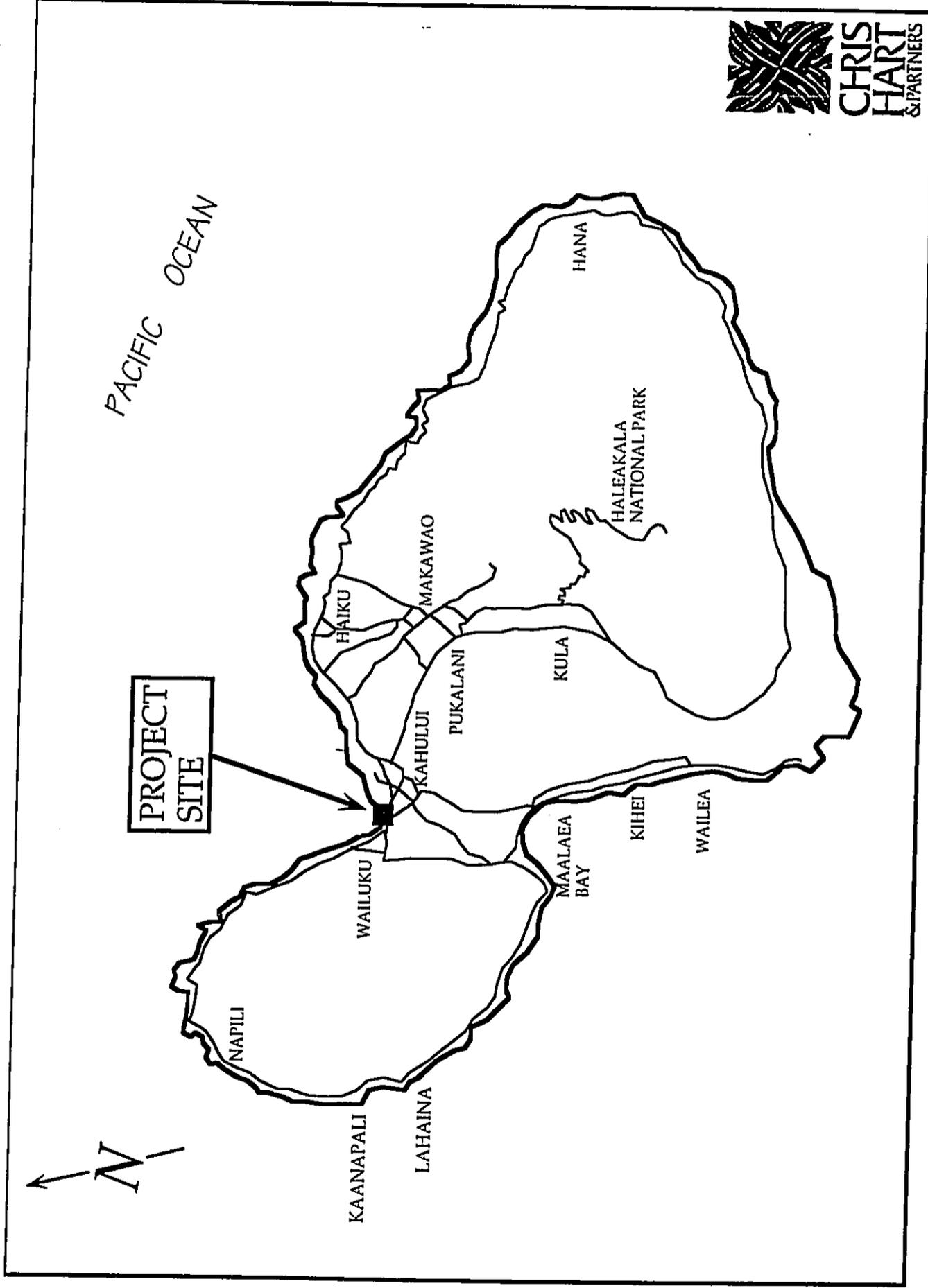


FIGURE 1 - REGIONAL LOCATION MAP
New Canoe Club Hales

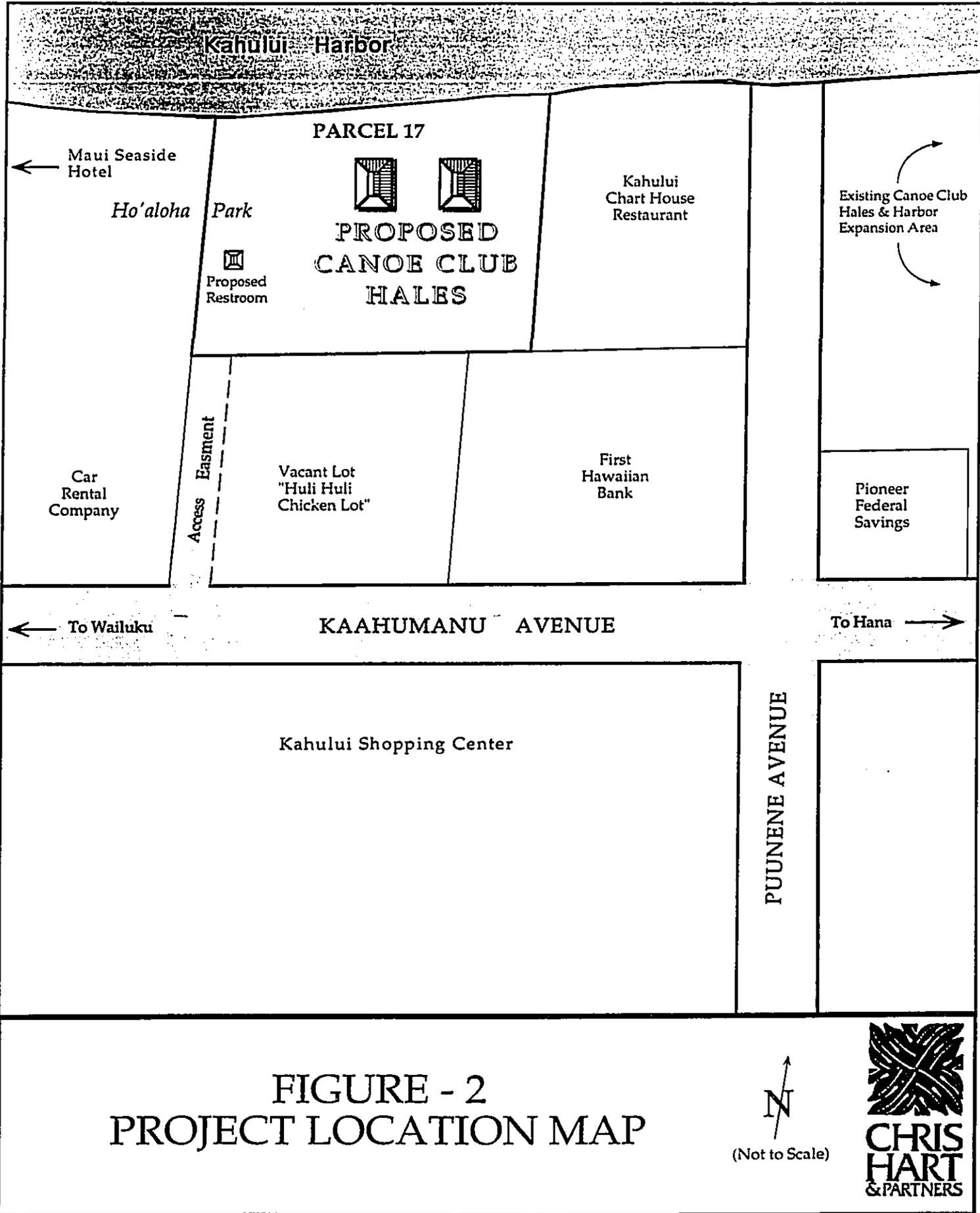
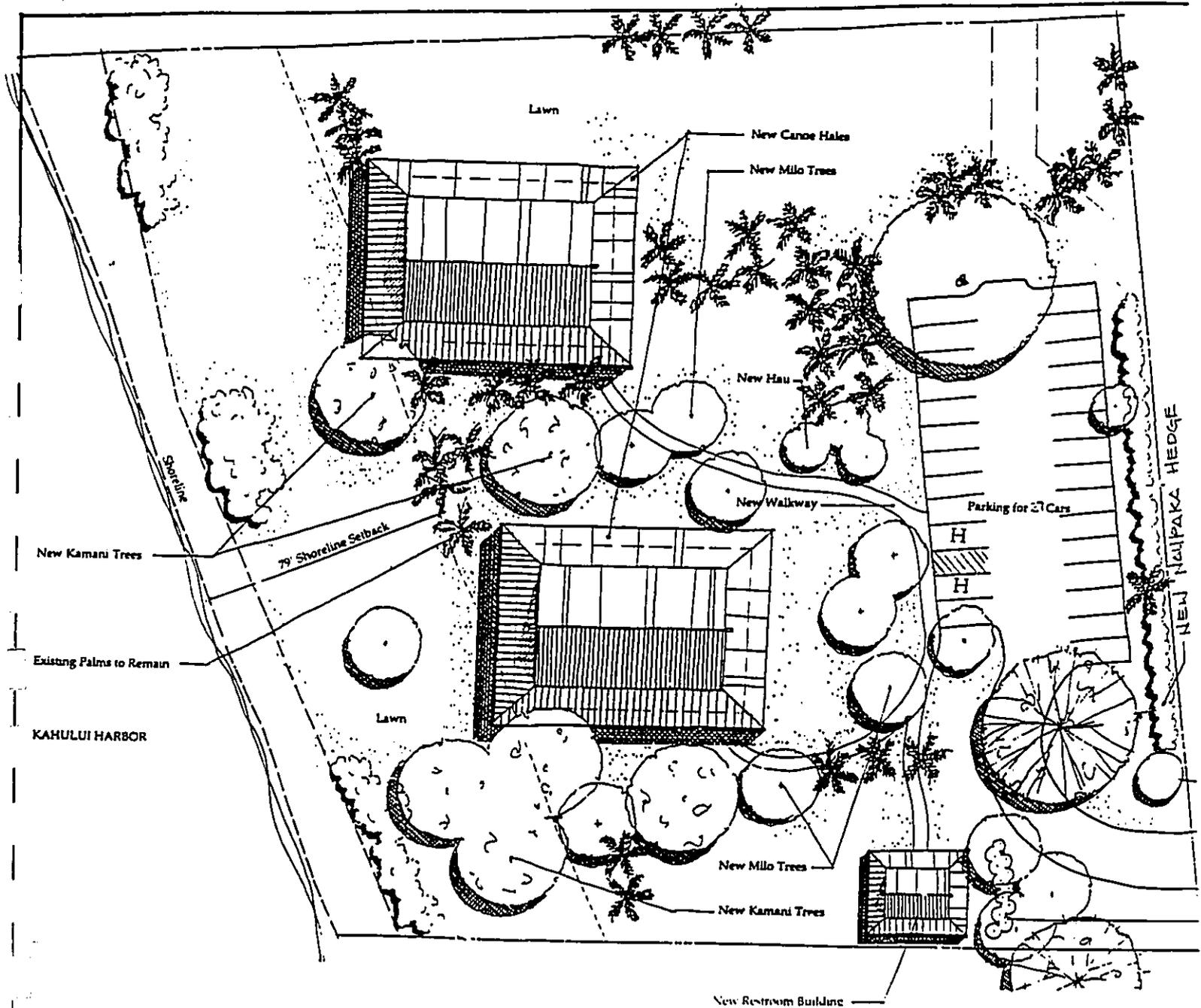


FIGURE - 2
PROJECT LOCATION MAP

N
(Not to Scale)





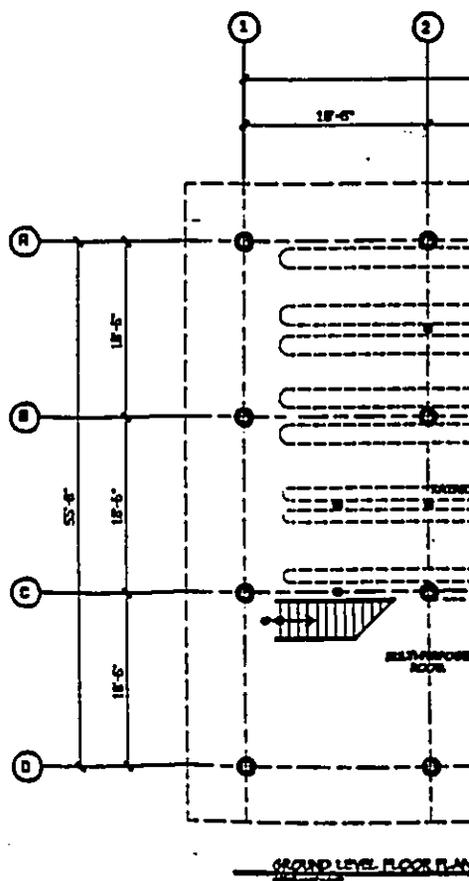
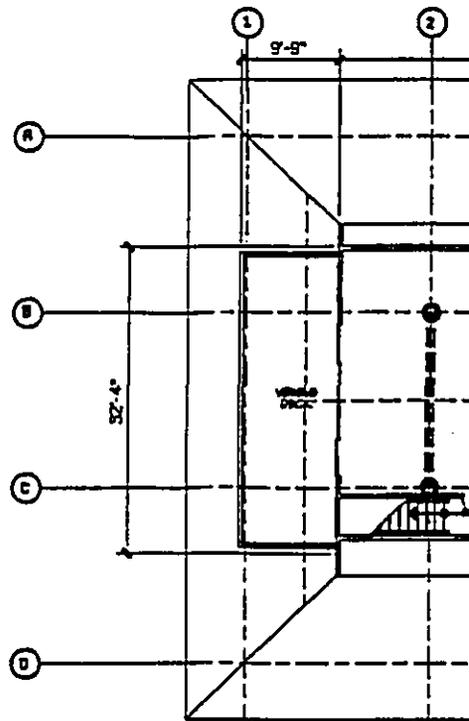
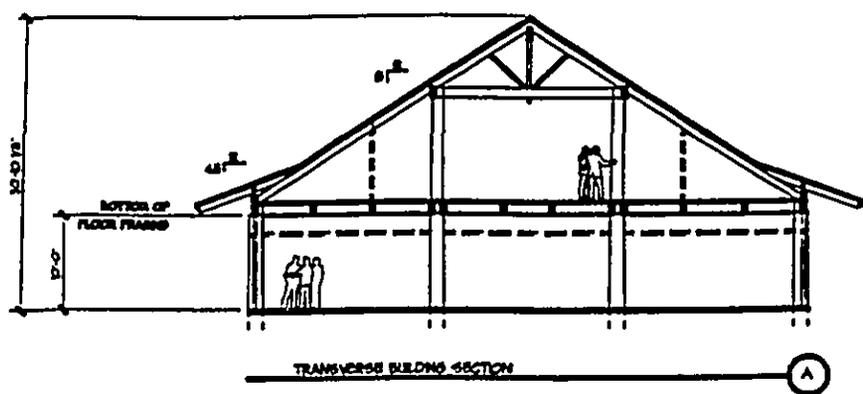
SITE &
LANDSCAPE CONCEPT PLAN

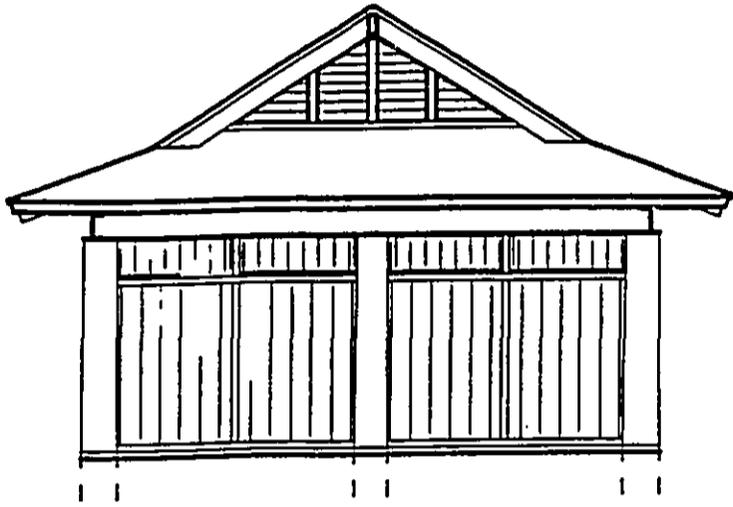
5-18-95 HJS

HO' ALOHA PARK
CANOE CLUB HALES
KAHULUI HARBOR
KAHULUI, MAUI, HAWAII
TMK: 3-7-08: 17

FIGURE 3

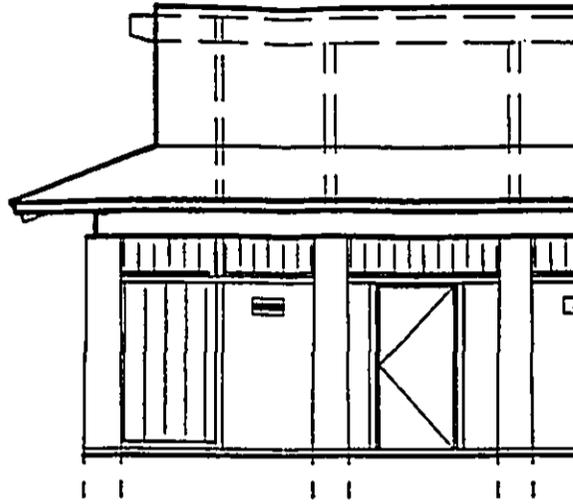




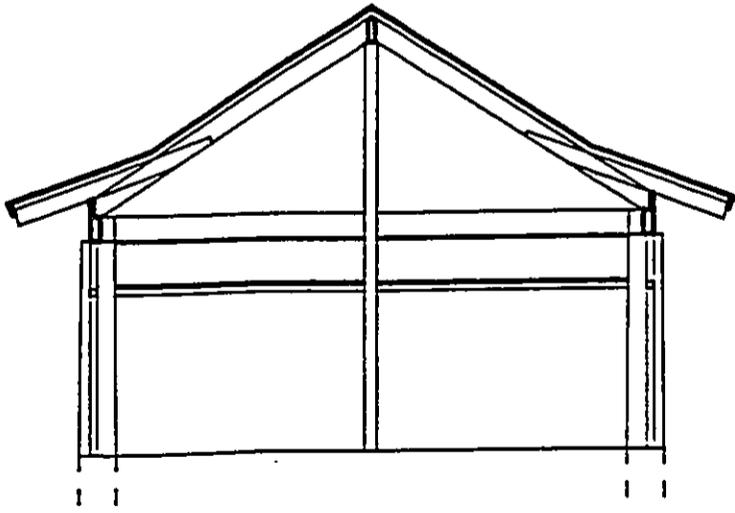


SIDE ELEVATION

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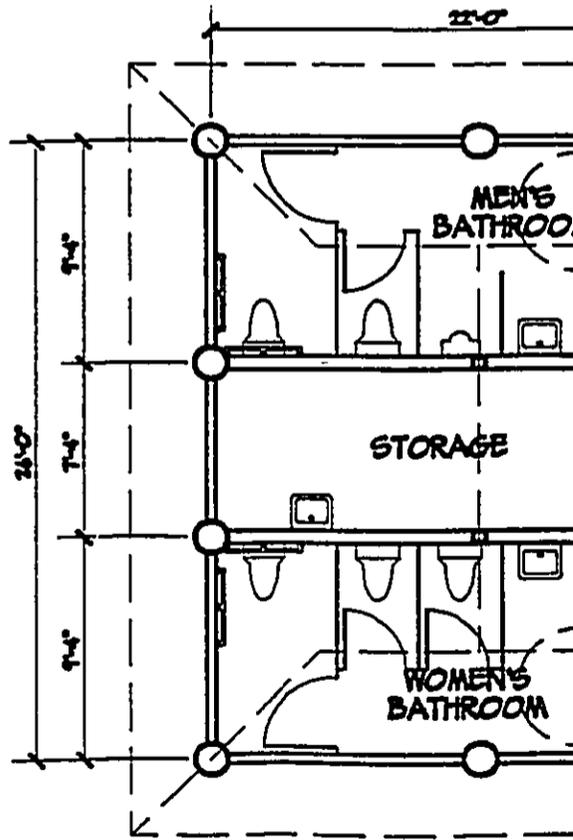


ENTRY ELEVATION



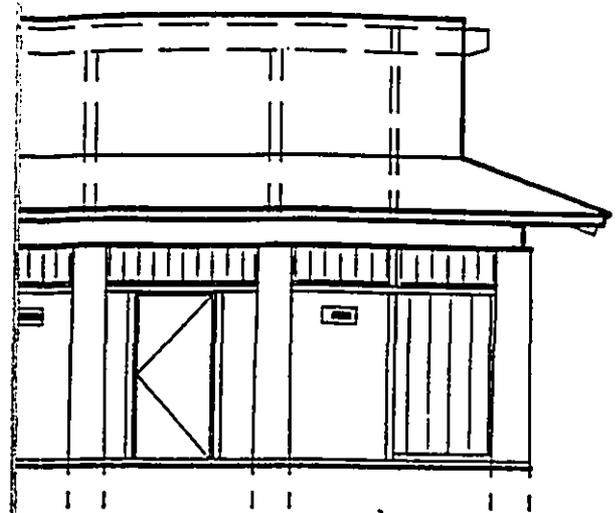
BUILDING SECTION

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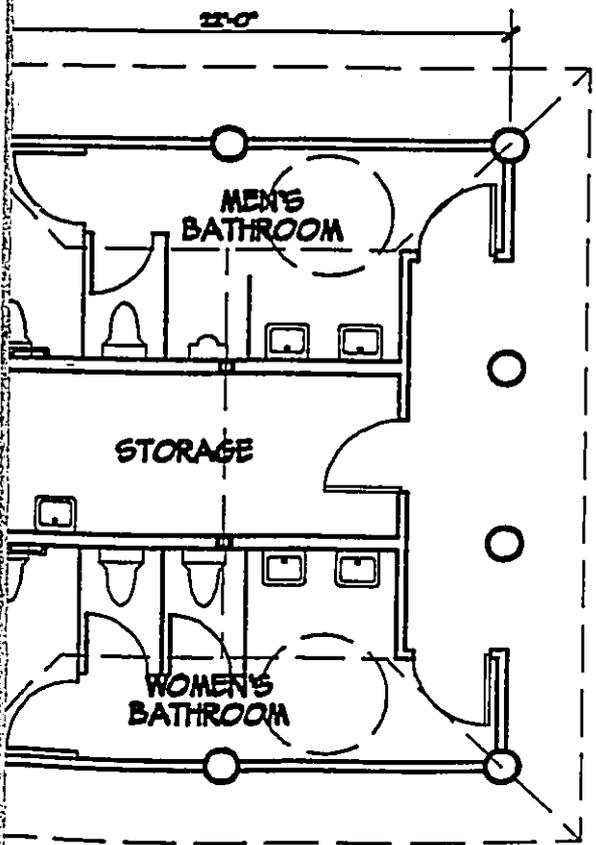
PRELIMINARY FLOOR PLAN

SCALE: 1/8" = 1'-0"



ELEVATION

3



FLOOR PLAN

FLOOR AREA = 510 SF.

1


LEW AND ASSOCIATES INC.
 ARCHITECTS AND DESIGNERS
 2000 2ND STREET, SUITE 2000, HONOLULU, HAWAII

HO'ALOHA PARK PUBLIC RESTROOMS

HO'ALOHA PARK
 KAHULUI MAUI HAWAII

REVISIONS

SHEET TITLE
 FLOOR PLANS
 BUILDING SECTION
 EXTERIOR ELEVATIONS

DRAWN
 DATE APRIL 24, 1975
 CHECKED
 PRELIMINARY
A-1
 1 of 1 SHEETS

FIGURE 6

APPENDIX - A
HYDROLOGY ANALYSIS
AND
SOIL EROSION
CONTROL REPORT

HYDROLOGY ANALYSIS
and
SOIL EROSION CONTROL REPORT

for the proposed

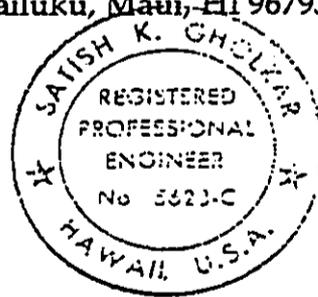
Ho'aloaha Park
Canoe Club Hales

at Kahului, Maui, Hawaii

T.M.K. (2) 3-7-08:17

Prepared for:
Kamali'i Incorporated
c/o Chris Hart & Partners
1955 Main Street
Wailuku, Maui, HI 96793

Prepared by:
Gholkar & Associates, Inc.
48 Market Street
Wailuku, Maui, HI 96793



This report was prepared by
or under my supervision.

Satish K. Gholkar
Satish K. Gholkar

May 1995

INTRODUCTION

The following report presents results of a hydrology analysis for proposed building and parking additions at Ho'aloa Park at Kahului, Maui, Hawaii, also described as T.M.K. (2) 3-7-08:17. It is situated at elevation 7 to 10 feet on the shoreline of Kahului Harbor and is bound by the Chart House Restaurant on the east, First Hawaiian Bank and parking lot on the south, and an open lawn area belonging to Maui Hukilau Hotel on the west. The parcel contains approximately 2.234 acres and is accessed by an easement across parcel 8 from Kaahumanu Avenue. The proposed improvements will include paved parking for 27 vehicles including 2 handicap stalls as well as a loading bay, and three buildings: a 600 sf building housing restrooms adjacent to the proposed parking lot and two 4100 sf canoe club buildings abutting the 80-ft shoreline setback line.

The purpose of this analysis is to prepare hydrologic calculations for existing and future conditions, to establish any storm water impacts resulting from the proposed subdivision improvements, and to outline mitigative measures as indicated. The report details the methodology, existing and future site conditions and calculated runoffs, and hydrologic conclusions.

Reference Figure 1 for proposed site and vicinity plan.

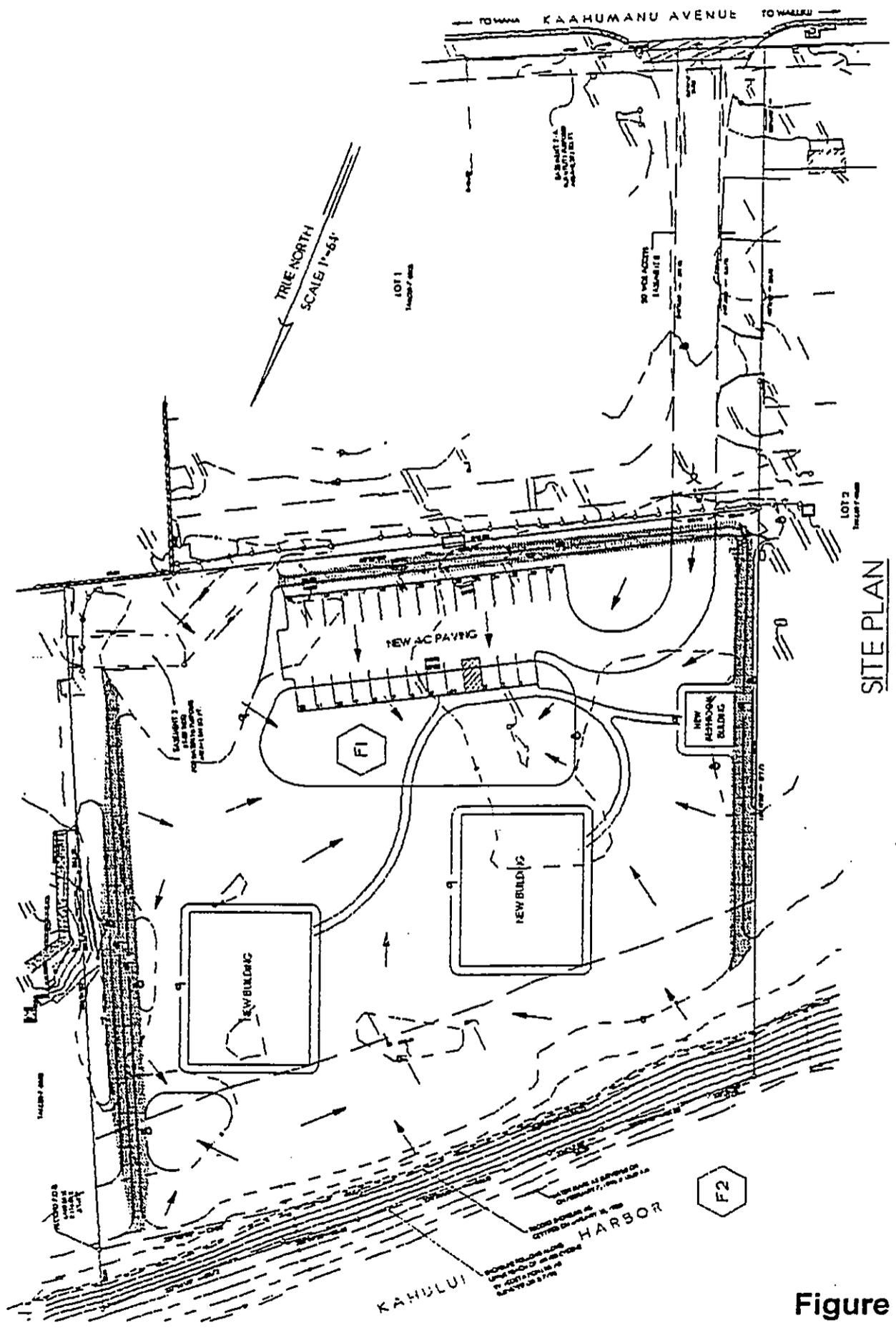
METHOD OF ANALYSIS

The hydrology for the drainage area will be computed by the Rational Method as specified in the Interim Drainage Standards for County of Maui, January 1994.

The Rational Method gives the resultant of the storm water runoff as a peak discharge amount at a point. For sheet flow runoff, this peak discharge amount is the total over the entire surface area. The Rational Method utilizes four hydrologic and watershed characteristics for its analysis which are:

- 1) Time of concentration (T_c)
- 2) Rainfall intensity (I)
- 3) Runoff coefficient (C)
- 4) Drainage area (A)

DOCUMENT CAPTURED AS RECEIVED



SITE PLAN
SCALE 1" = 64'

Figure 1

The Rational Method calculates the peak discharges with the following equation:

$$Q = CIA$$

where:

Q = Peak discharge, cubic feet per second (cfs)

C = Runoff coefficient

I = Rainfall intensity, inches per hour (in./hr.)

A = Total contributing area, acres (ac.)

The time of concentration (T_c) for the design storm is developed by estimating the travel time for the various overland flow watercourses. The watercourses for existing conditions consist mainly of overland surface flow areas while the future developed condition watercourses shall remain the same. The time of concentration for the flow through each watercourse is determined upon the following parameters:

- 1) Watercourse as a percent of total tributary area
- 2) Length of run of watercourse in feet
- 3) Type of watercourse

The design storm required by the Interim Drainage Standards is the 10-year 1-hour storm event and is considered in the analyses of both the existing and future developed surface water runoff conditions. The design storm event is determined by the Rainfall-Frequency Atlas of the Hawaiian Islands prepared by the U.S. Weather Bureau, dated 1962. The time of concentration (T_c) and the design storm are used to develop the rainfall intensity (I) needed for the rational equation.

The runoff coefficient (C) is basically a percent of the land covered by an impervious surface. Weighted runoff coefficients are developed by using C values for different land uses and types given in the Storm Drainage Standards. The following equation is used to determine the weighted average runoff coefficient:

$$C \text{ weighted} = \frac{A_1C_1 + A_2C_2 + A_3C_3 \dots}{A_1 + A_2 + A_3 \dots}$$

where A_n is the area of contribution.

The drainage area (A) is determined by calculating the area, in acres, upstream of the point where the peak discharge is to be determined.

After all the hydrologic parameters are found, a hydrograph can be generated to determine the volume of storm water runoff. The volume of storm water runoff is used to calculate the storage volumes needed in the design of any storm water systems such as dry wells and detention/retention basins. The modified Rational Method gives a good approximation of the storm water runoff volume.

SOIL TYPE

The "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii (August, 1972), page 31," describes the soil at the site and surrounding vicinity as Fill Land (Fd), which consists mostly of "material from dredging and bagasse and slurry from sugar mills."

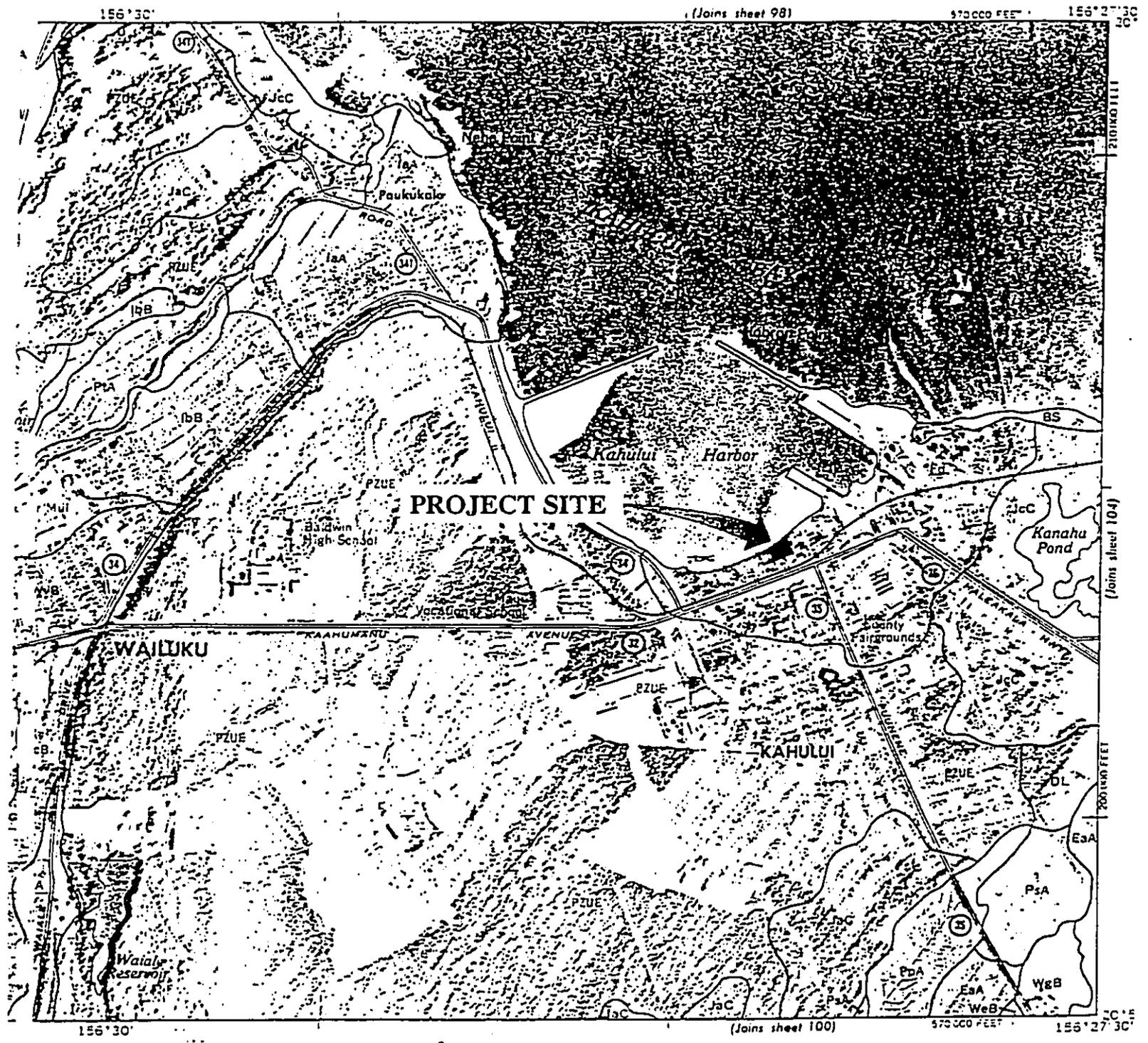
Reference Figure 2 soil map Sheet Number 99.

ELEVATION AND FLOOD ZONE

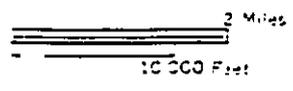
The site lies at approximately 7 to 10 feet above mean sea level and is within Zone V23 (area of 100-year coastal flood with velocity (wave action); base flood elevation determined to be 17 feet MSL).

Reference Figure 3, Federal Emergency Management Agency Community Panel Map Number 150003 0190D.

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SOILS MAP
1" = 2,000'



FIGURE

EXISTING DRAINAGE CONDITION

The subject parcel is concave (dish-shaped), with raised sides facing its neighbor to the southeast and the harbor on the north, and low spots on the east boundary and at the center near the southwest. The site terrain slopes gently at an average 1.5% toward these two low areas and also toward the southwest corner and the driveway leading to Kaahumanu Avenue. Existing runoff follows this route by sheet flow.

The existing onsite surface runoff peak volume generated during the 10-year 1-hour design rainstorm is calculated to be 3.46 cfs.

Reference Figure 4, Existing Drainage Plan.
Reference Appendix A for hydrologic calculations.

FUTURE DRAINAGE CONDITION

The future increase in onsite surface runoff peak volume generated during the 10-year 1-hour design rainstorm is calculated to be 0.81 cfs. This would generate an additional 2,916 cu ft or 15,372 cu ft total runoff.

It is proposed to retain all of the future runoff onsite by constructing two earth berms (top elevation 9.0 ft) along and within the east and south-and-west property lines. The parking lot would slope away from the south embankment at about 2.0% toward the low area of detention created at the lot's center by the berms. The three buildings would also be placed on elevated (9.0 ft) pads within the detention basin and would be connected by walkways following the established grade. The capacity of this detention basin would be greater than the total future runoff from the 10-year 1-hour design storm, and future runoff would be prevented from following the driveway to Kaahamanu Avenue.

Reference Figure 6, Future Drainage Plan.
Reference Appendix A for hydrologic calculations.

CONCLUSION

It is our professional opinion that the proposed improvements will have negligible impact on the existing hydrology and adjoining properties.

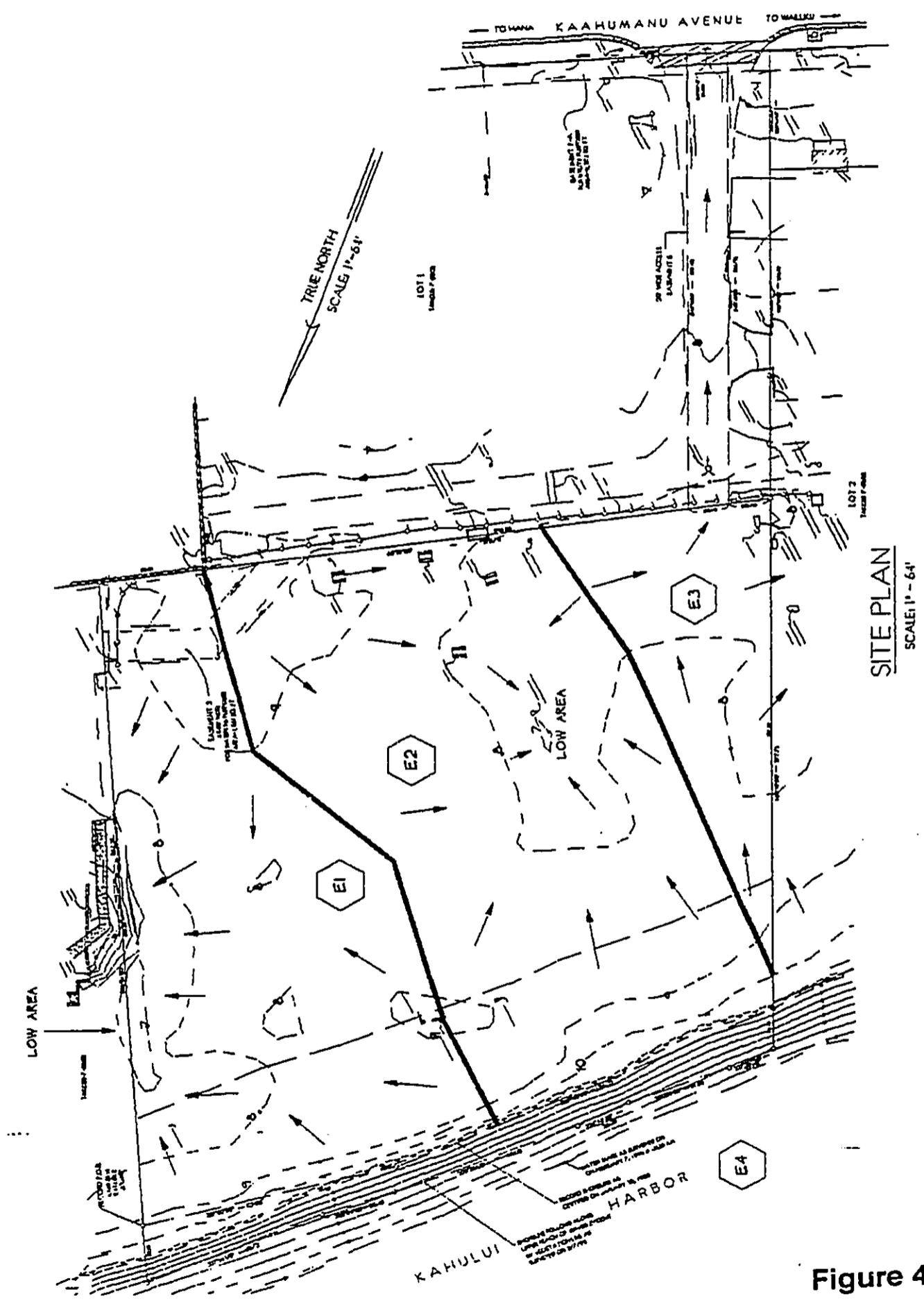


Figure 4

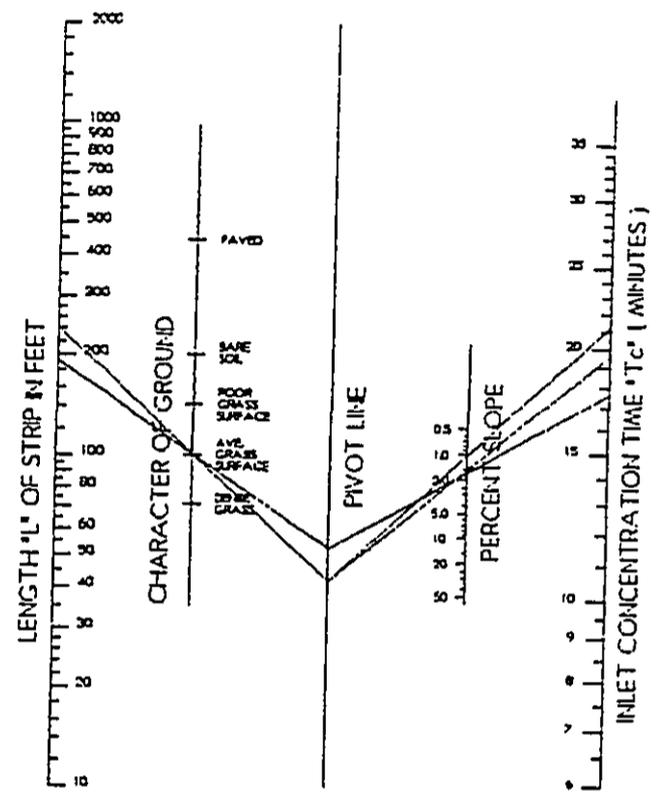


Plate 3
Overland
Flow
Chart

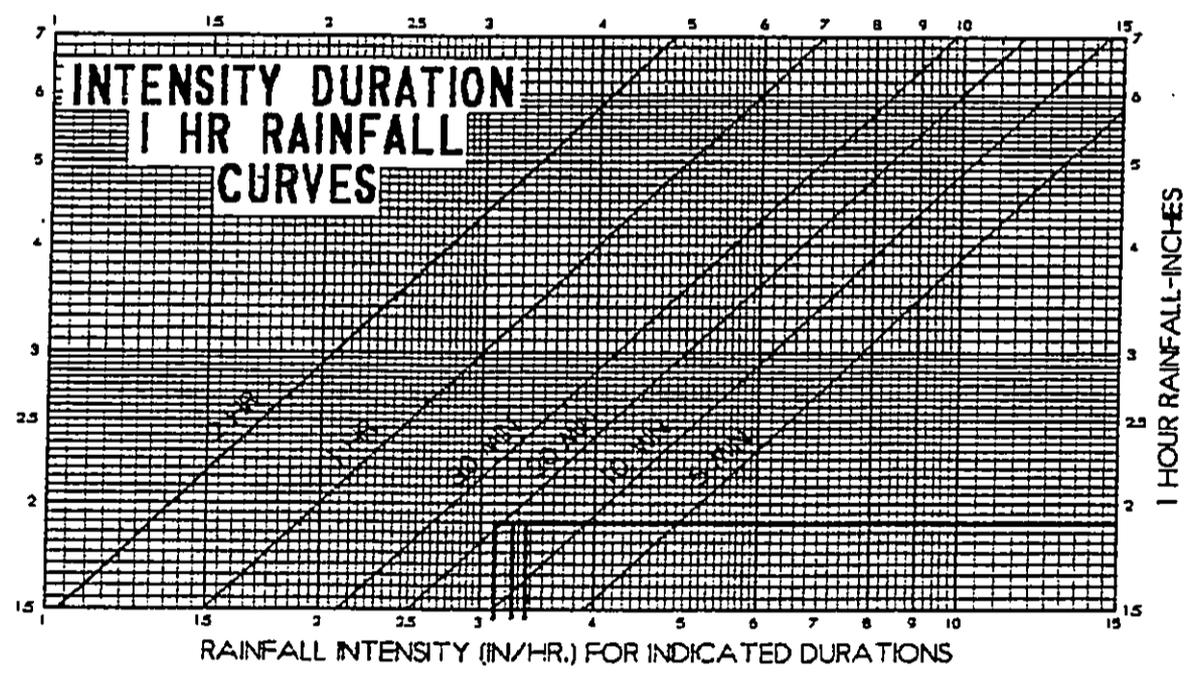


Plate 4

FIGURE :

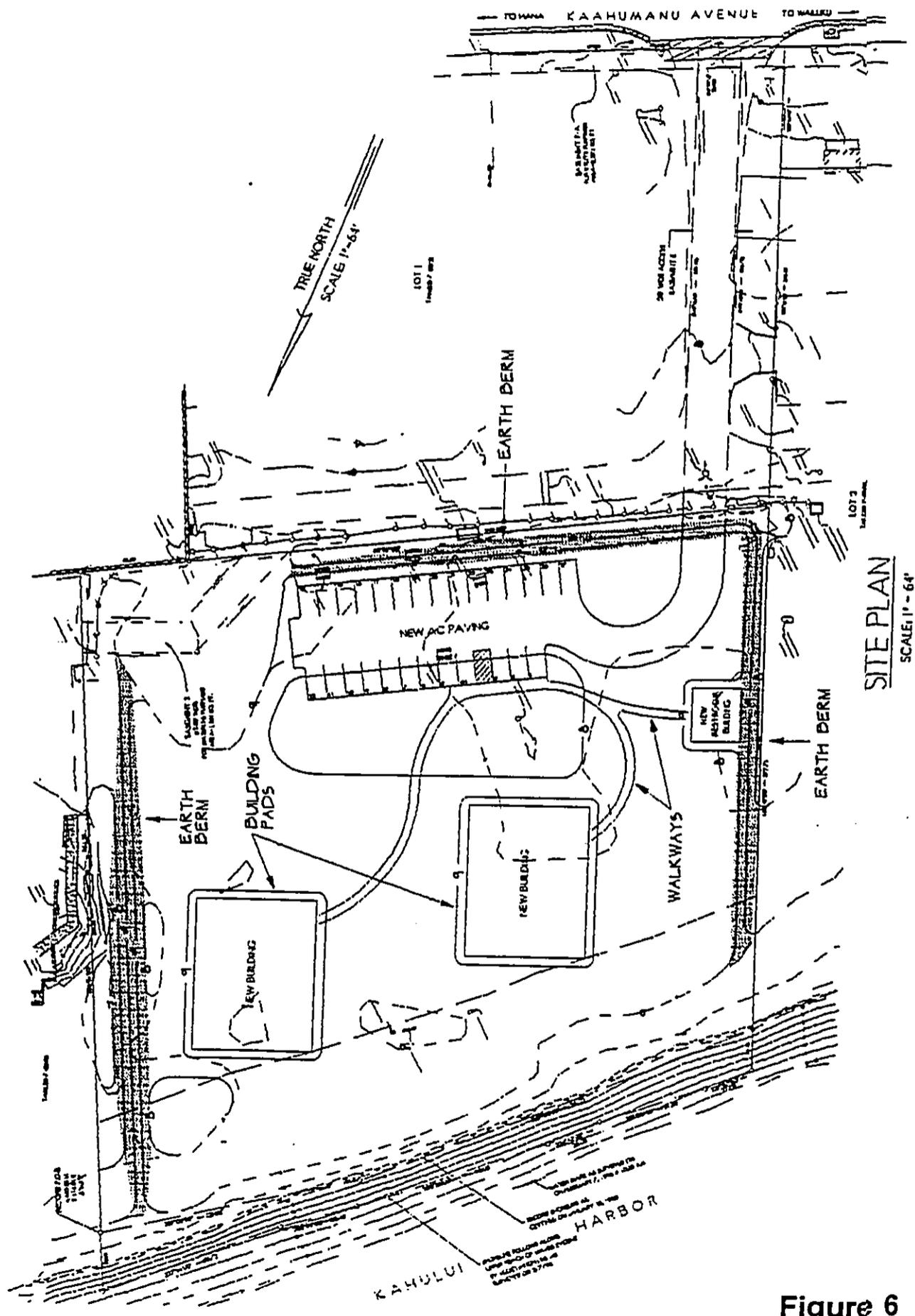


Figure 6

EROSION CONTROL STUDY

As indicated above, the soils at the project sites and surrounding vicinity consists of Fill Land (Fd), which consists mostly of "material from dredging and bagasse and slurry from sugar mills." These soils have a soil erodibility factor (K) of 0.17 according to the "Erosion and Sediment Control Guide for Hawaii, SCS (March, 1981)."

The Universal Soil Loss Equation (USLE) is used to estimate the maximum average annual soil loss during construction. This equation is stated as follows:

$$E = R K L S C P, \text{ where}$$

R = Rainfall Factor = 180 tons/acre/year

K = Soil Erodibility Factor = 0.17

(L = Grade Length = 250)

(S = Grade Slope = 1.5%)

LS = Slope Length Factor = 0.217

C = Cover Factor = 1.00 (Bare Soil)

P = Control Practice Factor = 1 (Non-agricultural)

$$E = 180 \times 0.17 \times 0.217 \times 1 \times 1 = 6.64 \text{ tons/acre/year}$$

Allowable Erosion Rate:

Maximum erosion rate x construction area = 5,000 tons/year

Graded site area = 2.0 acres

Allowable Erosion Rate (E) = 5,000/2.0 = 2,500 tons/acre/year

Severity Rating Number:

$$H = (2 F T + 3 D) A E, \text{ where}$$

H = Severity Rating Number

F = Downstream Hazard = 4

D = Coastal Water Hazard = 1

T = Duration of Site Work in Years = 0.5

A = Construction Area in Acres = 2.0

E = Uncontrolled Erosion Rate in Tons/Acre/Year = 6.64

$$H = (2 \times 4 \times 0.5 + 3 \times 1) (2.0 \times 6.64) = 93.0,$$

less than the maximum allowable value of 50,000.

EROSION CONTROL PLAN

Erosion control measures will be guided by Chapter 20.08, "Soil Erosion and Sedimentation Control", of the Maui County Code. Specific measures shall include where appropriate:

1. Replanting exposed areas as soon as practicable following any clearing, grading or excavation.
2. Construction of berms, swales, or pits to intercept runoff from exposed areas.

APPENDIX A

HYDROLOGY CALCULATIONS

From Rainfall-Frequency Atlas of Hawaiian Islands:
 10-year 1-hour rainfall for subject property = 1.8 inches

EXISTING CONDITION

1. Existing area:

Total area = 2.234 acres total area
 Shoreline area = 0.099 acre
 Net area for consideration (from top of bank inland) = 2.135 acres, divided into three tributary areas as follows:
 E1 = 0.792 acres (max length of run = 240 ft; aver slope = 1.5%)
 E2 = 1.038 acres (max length of run = 190 ft; aver slope = 1.7%)
 E3 = 0.275 acres (max length of run = 240 ft; aver slope = 1.0%)

2. Runoff coefficient (C), (ref. Drainage Master Plan for the County of Maui, Oct. 1971, p.121, Table 1):

Pervious (grass, open areas, etc., 2.234 acres, 100%)
 Infiltration (moderate to rapid) 0.07
 Relief (flat, 0-5%) 0.00
 Vegetal cover (good) 0.03
 Development type (residential) 0.40
 0.50

3. Time of concentration (Tc), (Ibid., p.122, Plate 3), reference Figure 5:

Tributary	Length of Run	Cover	Slope	Tc
E1	240 feet	aver grass	1.5%	19.6 minutes
E2	190 feet	aver grass	1.7%	17.6 minutes
E3	240 feet	aver grass	1.0%	21.2 minutes

4. Rainfall intensity (I), (Ibid., Plate 4), reference Figure 5:

E1 I₁₀ = 3.25 in/hr
 E2 I₁₀ = 3.35 in/hr
 E3 I₁₀ = 3.10 in/hr

5. Peak runoff (Q):

Q = CIA = cfs existing
 E1: Q = 0.50 (3.25) (0.792) = 1.29 cfs existing
 E2: Q = 0.50 (3.35) (1.038) = 1.74 cfs existing
 E3: Q = 0.50 (3.10) (0.275) = 0.43 cfs existing
 Total Q = 3.46 cfs existing

FUTURE CONDITION

1. Future area:

Total area = 2.234 acres total area
Shoreline area = 0.099 acre
Net area for consideration (from top of bank inland) = 2.135 acres,
considered as a whole.

2. Runoff coefficient (C), (ref. Drainage Master Plan for the County of Maui, Oct. 1971, p.121, Table 1):

Pervious (grass, open areas, etc., 1.850 acres, 79.2%)	
Infiltration (moderate to rapid)	0.07
Relief (flat, 0-5%)	0.00
Vegetal cover (good)	0.03
Development type (residential)	<u>0.40</u>
	0.50

Impervious (parking, buildings, etc., 0.384 acre, 20.8%)	
Infiltration (negligible)	0.20
Relief (flat, 0-5%)	0.00
Vegetal cover (none)	0.07
Development type (residential)	<u>0.40</u>
	0.67

Weighted C = 0.54

3. Time of concentration (Tc), (Ibid., p.122, Plate 3), reference Figure 7:

Length of run = 260 feet
Cover = mixed (use poor grass)
Slope = 1.1%
Tc = 13.6 min.

4. Rainfall intensity (I), (Ibid., Plate 4), reference Figure 7:

I₁₀ = 3.70 in/hr

5. Peak runoff (Q):

Q = CIA = cfs future
= 0.54 (3.70) (2.135) = 4.27 cfs future

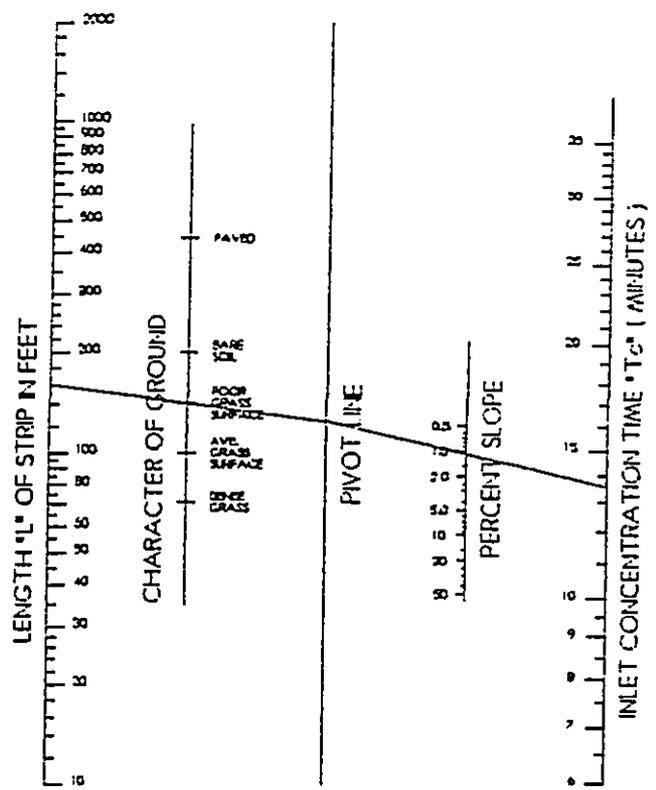


Plate 3

Overland
Flow
Chart

Plate 4

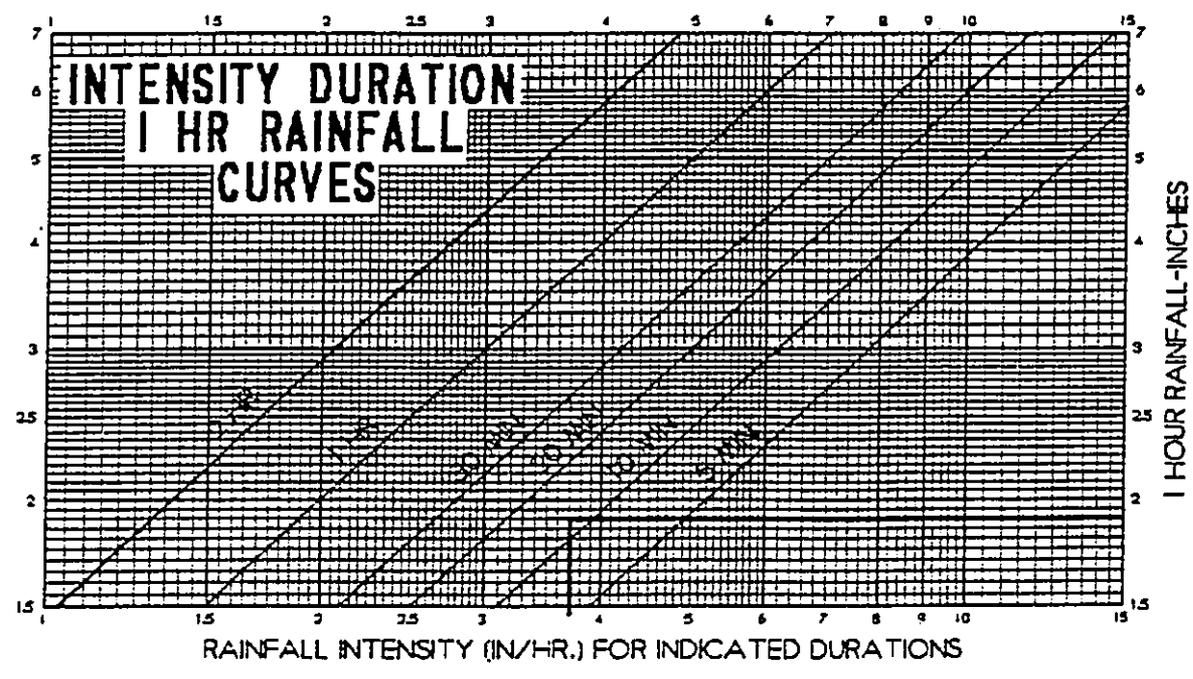


FIGURE 7

Runoff Summary

4.27 cfs future runoff rate
-3.46 cfs existing runoff rate
+0.81 cfs net increase

Detention Capacity

Required detention capacity = $4.27 \times 60 \times 60 = 15,372$ cu ft

Basin capacity:

Net area below 9.0 ft elev = 57,600 sq ft

Net area below 8.0 ft elev = 9,000 sq ft

Net area below 7.0 ft elev = 200 sq ft

Basin capacity = $(57,600 + 9,000)/2 + (9,000 + 200)/2$
= $33,300 + 4,600$
= 37,900 cu ft >15,372 cu ft required