

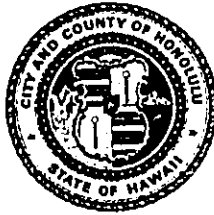
DEPARTMENT OF PARKS AND RECREATION  
**CITY AND COUNTY OF HONOLULU**

850 SOUTH KING STREET  
HONOLULU, HAWAII 96813

RECEIVED

'93 FEB -8 AM 11:21

FRANK F. FASI  
MAYOR



OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

WALTER M. OZAWA  
DIRECTOR

ALVIN K.C. AU  
DEPUTY DIRECTOR

February 5, 1993

Mr. Brian J. J. Choy, Director  
State of Hawaii  
Office of Environmental Quality Control  
220 South King Street, 4th Floor  
Honolulu, Hawaii 96813

Dear Mr. Choy:

Subject: Hanauma Bay Nature Park  
Final Environmental Assessment (Final EA)  
Tax Map Key 3-9-12: Por. 2, 12, 14 & 16  
Honolulu, Oahu, Hawaii

We have reviewed the draft environmental assessment for the Hanauma Bay Nature Park and have determined that it will not have a significant impact on the environment. We, herewith, file four copies of the Hanauma Bay Nature Park Final EA (Negative Declaration) in compliance with Chapter 343, HRS. A completed OEQC Bulletin Publication form is also included. We respectfully request that notice of this filing be published in the February 23, 1993 OEQC Bulletin.

If you have any questions, please contact Earl Matsukawa of Wilson Okamoto & Associates, EA consultant, at 531-5261 or Michael Creagh of our Facilities Development Division at 523-4885.

Thank you for your attention to this matter.

Sincerely,

For

  
WALTER M. OZAWA, Director

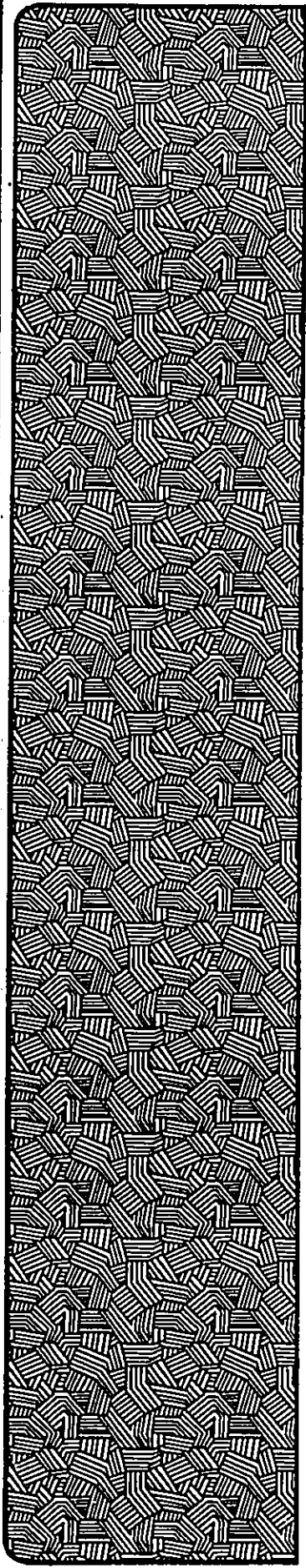
WMO:ei

Attachments

cc: Earl Matsukawa, Wilson Okamoto & Associates

DOCUMENT CAPTURED AS RECEIVED

1993-02-23-0A-PEA-Hanauma Bay Nature Park Master Plan Approval FEB 23 1993



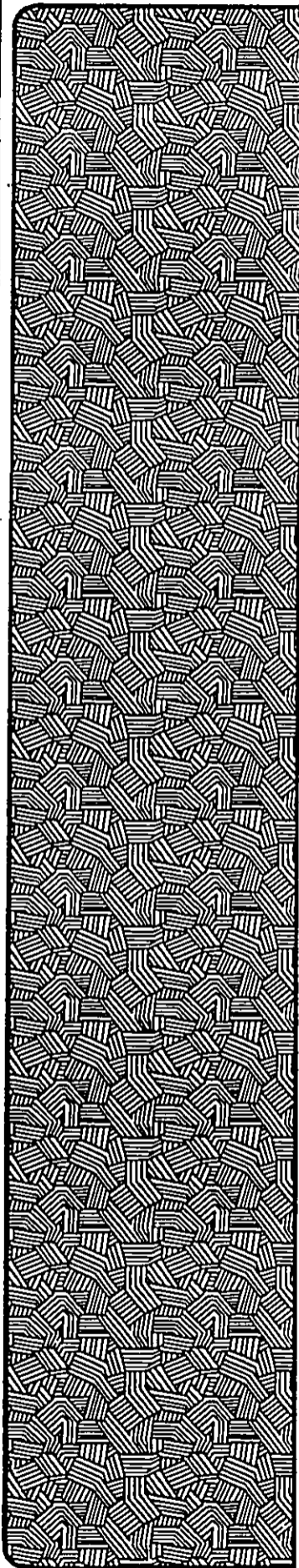
**HANAUMA BAY NATURE PARK  
FINAL ENVIRONMENTAL  
ASSESSMENT**

*(Negative Declaration)*

*Department of Parks and Recreation*

*City and County of Honolulu  
FRANK F. FASI, MAYOR*

*January 1993*



**HANAUMA BAY NATURE PARK  
FINAL ENVIRONMENTAL  
ASSESSMENT**

*(Negative Declaration)*

*Department of Parks and Recreation*

*City and County of Honolulu  
FRANK F. FASI, MAYOR*


*January 1993*

**HANAUMA BAY NATURE PARK**  
**FINAL ENVIRONMENTAL ASSESSMENT**  
**(NEGATIVE DECLARATION)**

This environmental document is prepared pursuant  
to Chapter 343, Hawaii Revised Statutes

**Prepared for:** Department of Parks and Recreation  
City and County of Honolulu

**Responsible  
Official:**

  
Walter M. Ozawa, Director  
Department of Parks and Recreation  
City and County of Honolulu

JAN 15 1993  
Date

**Accepting  
Authority:** Mayor Frank F. Fasi  
City and County of Honolulu

**Prepared by:** Wilson Okamoto and Associates, Inc.  
Engineers, Architects and Planners  
1150 South King Street, Suite 800  
Honolulu, Hawaii 96814

January 1993

**HANAUMA BAY NATURE PARK  
FINAL ENVIRONMENTAL ASSESSMENT**

**(NEGATIVE DECLARATION)**

**HONOLULU, HAWAII**

Prepared for:  
**Department of Parks and Recreation  
City and County of Honolulu**

Prepared by:  
**Wilson Okamoto and Associates, Inc.  
Engineers, Architects and Planners  
1150 South King Street, Suite 800  
Honolulu, Hawaii 96814**

January 1993

**TABLE OF CONTENTS**

	<u>Page</u>
<b>Preface</b> .....	ii
<b>Summary</b> .....	iii
<b>I. PROJECT DESCRIPTION</b> .....	I-1
<b>A. Introduction</b> .....	I-1
<b>B. Development Proposal</b> .....	I-1
1. Phase I .....	I-1
2. Phase II .....	I-3
3. Phase III .....	I-4
4. Phase IV .....	I-5
<b>C. Justification</b> .....	I-5
1. Purpose .....	I-5
2. Need .....	I-6
3. Objectives and Policies .....	I-6
<b>D. Development Cost Schedule</b> .....	I-8
<b>E. Project Site</b> .....	I-9
1. Location .....	I-9
2. Ownership .....	I-9
3. Park Resources and Facilities .....	I-9
<b>II. PHYSICAL ENVIRONMENT</b> .....	II-1
<b>A. Terrestrial Conditions</b> .....	II-1
1. Climate .....	II-1
2. Geology and Soils .....	II-1
3. Topography .....	II-3
4. Flood Hazard .....	II-3
5. Vegetation .....	II-3
6. Wildlife .....	II-3

---

B.	Nearshore Water Conditions . . . . .	II-3
1.	Shoreline . . . . .	II-3
2.	Tsunami and Storm Wave Hazard . . . . .	II-3
3.	Nearshore Oceanography . . . . .	II-4
4.	Coastal Water Quality . . . . .	II-4
5.	Marine Life Habitat . . . . .	II-6
C.	Roadways and Utilities . . . . .	II-6
1.	Roadway Access . . . . .	II-6
2.	Water . . . . .	II-7
3.	Electric and Telephone Service . . . . .	II-7
4.	Wastewater . . . . .	II-7
5.	Drainage . . . . .	II-7
III.	<b>SOCIO-ECONOMIC ENVIRONMENT . . . . .</b>	<b>III-1</b>
A.	Residents . . . . .	III-1
B.	Non-Residents . . . . .	III-4
C.	Commercial Operators . . . . .	III-4
D.	Staff . . . . .	III-4
IV.	<b>PLANS, POLICIES, AND PERMITS . . . . .</b>	<b>IV-1</b>
A.	State of Hawaii . . . . .	IV-1
1.	Hawaii State Plan . . . . .	IV-1
2.	State Functional Plans . . . . .	IV-2
3.	State Land Use Law . . . . .	IV-6
B.	City and County of Honolulu . . . . .	IV-6
1.	Oahu General Plan . . . . .	IV-6
2.	Development Plan (DP) . . . . .	IV-7
3.	Land Use Ordinance (LUO) . . . . .	IV-8
4.	Hanauma Bay Nature Park Master Plan . . . . .	IV-8
5.	Special Management Area Permit (SMA) . . . . .	IV-9
6.	Shoreline Setback Variance (SSV) . . . . .	IV-9

---

<b>V. PROBABLE IMPACTS AND MITIGATIVE MEASURES . . .</b>	<b>V-1</b>
<b>A. Short-Term Impacts . . . . .</b>	<b>V-1</b>
1. Noise . . . . .	V-1
2. Air Quality . . . . .	V-1
3. Public Health and Safety . . . . .	V-1
4. Traffic and Parking . . . . .	V-2
5. Vegetation . . . . .	V-2
6. Archaeological . . . . .	V-2
7. Water Quality . . . . .	V-2
<b>B. Long-Term Impacts . . . . .</b>	<b>V-2</b>
1. Noise . . . . .	V-2
2. Air Quality . . . . .	V-3
3. Public Health and Safety . . . . .	V-3
4. Traffic and Parking . . . . .	V-3
5. Vegetation . . . . .	V-3
6. Displacement . . . . .	V-3
7. Social . . . . .	V-4
8. Marine Life . . . . .	V-4
9. Storm Water Runoff . . . . .	V-4
10. Park Usage . . . . .	V-4
11. Coastal Views . . . . .	V-4
<b>VI. ALTERNATIVES TO THE PROPOSED ACTION . . . . .</b>	<b>VI-1</b>
<b>VII. DETERMINATION . . . . .</b>	<b>VII-1</b>
<b>VIII. CONSULTATION . . . . .</b>	<b>VIII-1</b>
<b>REFERENCES</b>	
<b>ATTACHMENT</b> <i>Hanauma Bay Nature Park Site Development Plan</i>	

---



**LIST OF FIGURES**

<u>Figure Number</u>		<u>Page</u>
1.	Location Map . . . . .	I-10
2.	Hanauma Bay Nature Park . . . . .	I-11
3.	Existing Facilities . . . . .	I-12
4.	Geologic Formations . . . . .	II-2
5.	Major Current Flows at East Oahu . . . . .	II-5
6.	Annual Visitor Count . . . . .	III-2
7.	Residents vs. Non-Residents . . . . .	III-3
8.	Zoning and Special Management Area (SMA) . . . . .	IV-10

**PREFACE**

This final environmental assessment is prepared pursuant to Chapter 343, Hawaii Revised Statutes, and Title 11, Chapter 200, Administrative Rules, Department of Health, State of Hawaii. Proposed is an agency action by the Department of Parks and Recreation, City and County of Honolulu.

**I. PROJECT DESCRIPTION****A. Introduction**

Hanauma Bay Nature Park plays several key roles within the Island of Oahu's system of parks and recreation areas. Visitors to the park are offered a recreational opportunity unlike any other in the State of Hawaii. The park has long been one of Oahu's most popular natural attractions. It ranks second only to Waikiki Beach as Oahu's most popular beach park and is a major sightseeing stop for many tour groups.

In 1967, the waters of Hanauma Bay were declared the first Marine Life Conservation District (MLCD) in Hawaii. The shoreline area and supporting park facilities were then known as the City and County of Honolulu Hanauma Bay Beach Park, providing valuable shoreline recreational opportunities. In 1990, however, the educational and interpretive value of the bay was officially recognized and controls over excessive recreational uses were established through the adoption of the Hanauma Bay General Plan. During this time, the name of the park was changed to Hanauma Bay Nature Park, promoting the concept of a true living museum for the appreciation of marine life by the general public.

**B. Development Proposal**

Hanauma Bay Nature Park can be divided into two distinct parts, the upper park area atop the crater rim and the lower park area which extends from the rim down to the shore. Park improvements are proposed for both the upper and lower park. See the *Hanauma Bay Nature Park Site Development Plan* in attached jacket.

Four phases of development are proposed to improve the existing park site in terms of access, safety and support facilities. The specific improvements are described below.

**Phase I:**

Phase I focuses on accommodating increased usage of the upper park for sightseeing and controlling access into the lower park.

1. Construct visitor center/concession facility and shuttle turnaround (Upper Park).

*This is the first step in establishing the upper park as the focal point for sightseeing, promoting the educational aspect of the nature park theme, and controlling lower park use. All park users entering the lower park will need to go through the visitor center,*

*thus allowing park management to control access into the lower park.*

2. Reconfigure Parking Lot (add handicapped stalls, new loading/unloading zone).

*Reconfiguration of the parking lot is necessary to comply with parking standards and to relocate the loading/unloading zone.*

3. Convert existing unloading zone into Moped/Bicycle Parking.

*Conversion of the existing unloading zone into a parking area for mopeds and bicycles is proposed to move such parking out of an area near the cliff where runoff from exposed soil contributes to siltation in the bay.*

4. Replace Upper Comfort Station

*Upgrading of facilities is necessary to service the high volumes of visitors who will be encouraged through management policies to remain in the upper park area for sightseeing.*

5. Renovate Comfort Station #2 (located in lower park ewa of comfort station #1).

*Facilities are inadequate, poorly lit, and cramped.*

6. Renovate Comfort Station #3 (located in lower park at extreme ewa end).

*Facilities are poorly lit and cramped.*

7. Relocate caretaker's quarters.

*The caretaker's quarters will be constructed before the existing facilities in the lower park are demolished. This is a key improvement in establishing better access control and security at the upper park. The quarters will be designed so that surveillance can be provided while the structure is not obtrusive as seen from the lower park.*

8. Construct employees' parking lot.

*The employees' parking lot supports staff of the shuttle service, maintenance services, the new visitor center/concession facility, park security and lifeguards. Construction of the employee's parking lot will coincide with construction of the new caretaker's quarters, thus minimizing nuisances associated with construction activities in the upper park.*

Phase II:

Phase II addresses improvements to the lower park, including the relocation of some major facilities, promotion of public safety, and continuation of the public education theme of the nature park.

1. Demolish old Visitor Center/Concession Facility.

*The old visitor center/concession facility will need to be demolished before improvements can be made to the shuttle turnaround area.*

2. Reconstruct Comfort Station #1 (located at the base of the Access Road).

*Comfort Station #1 will be redesigned since existing facilities are inadequate, poorly lit, and cramped. It will be relocated further west to accommodate the new shuttle turnaround area and expanded because this comfort station will continue to be the most heavily used. Provisions will be made for the storage of water safety/lifeguard equipment as needed.*

3. Construct shuttle turnaround area with Emergency Ramp.

*Design will comply with standards to accommodate all emergency vehicles (i.e. fire engines).*

4. Construct Auxiliary Beach Information Pavilion/Snorkel Gear Rental Concession.

*Design will reflect that this facility is accessory to the main visitor center located in the upper park. The purpose of this facility is to*

*provide beach information and house a snorkeling gear rental concession. A lifeguard office will be accommodated. No food will be served at this concession.*

Phase III:

The primary objective of Phase III is to implement the proposed improvements needed to formalize existing control over vehicular access into the park and improve pedestrian safety on access roads.

1. Reconstruct Entrance (Restripe, construct islands, add gate).

*At the park's entrance, current vehicular access management activities will be formalized and facilitated through well-designed traffic control.*

2. Construct Pedestrian Walkway from Kalaniana'ole Highway.

*A pedestrian walkway from the highway is needed for safety because the existing informal trails are unsafe and their use cannot be effectively deterred.*

3. Construct Traffic Management Kiosks.

*Kiosks are needed to provide shelter from the sun for personnel to maintain vehicular traffic control throughout the day.*

4. Construct Separate Beach Access Pedestrian Walkway

*The walkway is intended to remove pedestrian traffic from the beach access road for safety reasons. Use of the existing beach access road will be limited to shuttles and other authorized vehicles.*

Phase IV:

Phase IV will complete the improvements to Hanauma Bay Nature Park as envisioned in the Master Plan.

2. Construct Pedestrian Promenade/Maintenance Path from Shuttle Turnaround area to bench trails at both ends of the beach.

*The Promenade/Maintenance Path is intended to facilitate maintenance, provide access for emergency vehicles to the extreme ends of the park and accommodate pedestrian traffic.*

3. Construct Water Safety Observation Post in the upper park along cliff's edge in the upper park.

*A Water Safety Observation Post will be provided as a safety measure. It will be designed to allow beach surveillance with minimal visual impact as seen from the lower park.*

4. Complete Landscaping Improvements.

*Appropriate groundcover, irrigation and planting will be provided as required throughout the improved park areas.*

C. Justification

1. Purpose

Three goals are outlined as the continuing end toward which planning efforts are directed. They reflect public concern about Hanauma Bay and the vision of the City administration regarding its long-term future. The purpose of the proposed improvements is to move toward realization of these goals. They are expressed as follows:

1. *Continue to preserve and enhance the natural qualities and opportunities unique to Hanauma Bay and its environs.*
2. *Optimize the use of Hanauma Bay as an important recreational resource for the people of the State of Hawaii.*
3. *Promote public education and appreciation of Hanauma Bay Nature Park's natural environment by providing opportunities for the safe enjoyment of park resources.*

## 2. Need

In 1975, Hanauma Bay Nature Park attendance was estimated at over a half million visitors. The popularity of Hanauma Bay continued to increase with trends suggesting a yearly rate of more than 3 million people visiting the park by 1987. The increasing level of park usage was generally perceived as causing overcrowded beach areas, overtaxed park facilities, reduced pedestrian safety on the access road, increased exposure of visitors to hazards on the bay rim trails, litter problems, and a degraded marine environment.

In 1990, the Department of Parks and Recreation (DPR) adopted its *Hanauma Bay - General Plan* with the corresponding *1990 Hanauma Bay Rules and Regulations* to address problems associated with the intensity of park usage. The rules included closure of the park every Wednesday until 12 noon, and limitation of commercial operator visits to 15 minutes in the upper level, for example. Subsequent surveys indicated a significant reduction in park usage. A reduction of almost 40% in the first 6 months of 1991, as compared to the same time frame in 1990, translates into approximately 3,000 fewer visitors to the park on a daily basis in 1991.

Having established control over park usage, all proposed improvements are intended to maintain this level of usage rather than accommodate as many visitors as possible. Restructuring of the park will make management more efficient by emphasizing expanded use of the upper park and decreased use of the lower park.

## 3. Objectives/Policies

Seven sets of objectives with supporting policies were recommended in the 1992 *Hanauma Bay Nature Park Master Plan*. These objectives and policies establish guidelines for the proposed physical park improvements, as well as for park management and are stated below:

**Objective 1:** *Limit overall park user volumes as a means of controlling impacts on natural resources and park facilities.*

### Policies:

*Continue to limit the number of park users by controlling access in a manner which favors public use of the park over commercially promoted uses.*

*Continue to limit park hours and days of operation, again favoring public use over commercially promoted uses.*

*Design park facilities to accommodate appropriate levels of usage in the various parts of the park.*



**Objective 2: *Better match intensities of park usage with available park resources.***

**Policies:**

*Provide facilities to better accommodate sightseeing in the upper park, including commercially promoted sightseeing tours which do not offer activities in the lower park.*

*Design park facilities in the lower park to accommodate limited park usage and to encourage shorter stays.*

*Use design features, including roads, pathways and landscaping, to maintain the desired distribution of park users and to optimize the match between the intensity of use and capacity of resources to accommodate such use.*

*Establish a public information program with a broad coverage to inform park users of the range of activities and locations to accommodate them as an alternative to "following the crowd".*

**Objective 3: *Provide new park facilities and improve existing facilities to reduce their impact on natural park resources.***

**Policies:**

*Reduce the potential for storm runoff and erosion through roadway, parking lot, shower facility and drainage improvements.*

*Provide walkways to reduce trampling of plants and erosion associated with foot traffic over unimproved areas.*

*Connect all park sewage systems with the sewage collection, treatment, and disposal system serving the area.*

*Design all park facilities to complement scenic resources.*

**Objective 4: *Achieve safer participation in park activities.***

**Policies:**

*Establish a public information program with a broad coverage to inform park users of park hazards and safety tips.*

*Continue to improve the sign warning system to dissuade park users from engaging in potentially hazardous activities.*

*Provide permanent and temporary facilities to separate park users from vehicular traffic and restrict access to hazardous areas of the park.*

*Provide improved facilities and continue to improve the functions of the lifeguard system.*

**Objective 5: Foster park user respect for natural resources and park facilities.**

**Policies:**

*Establish a public information program with a broad coverage to inform park users of sound conservation practices in park usage.*

*Develop and enforce park rules governing activities with potentially adverse impacts on the park's natural resources.*

**Objective 6: Develop informational bases on which to formulate future park policy.**

**Policy:**

*Conduct studies to answer persistent questions on the role of Hanauma Bay Nature Park, the effects of park usage on its natural ecosystems, and coordination of diverse management responsibilities over its natural resources.*

**Objective 7: Establish public education and awareness as a primary purpose of park policy.**

**Policies:**

*Provide facilities and supporting services for public awareness and education-related activities uniquely suited to the resources of Hanauma Bay Nature Park, including its geology, terrestrial biology and marine ecosystems.*

*De-emphasize provision of facilities and services for recreational activities such as picnicking, sunbathing, and swimming which can be accommodated at other public parks.*

#### **D. Development Cost Schedule**

Phase I is scheduled to commence in 1993, with construction over a period of approximately 6 months. Actual timing of subsequent phases will be determined by public need and the availability of funding. The cost estimate for all four phases is \$3.6 million.

**E. Project Site****1. Location**

Hanauma Bay Nature Park is located about 12 miles from downtown Honolulu on the southeast point of Oahu. See figures 1 and 2. It is part of a 1,265-acre regional park area which includes Koko Head District Park, Halona Blowhole, Koko Crater Botanical Garden, Koko Head Rifle Range, and Sandy Beach Park.

**2. Ownership**

Hanauma Bay Nature Park is owned by the City and County of Honolulu, Department of Parks and Recreation (DPR). Within the park, GTE Hawaiian Telephone and American Telephone and Telegraph Company (AT&T) own two adjacent parcels which comprise 42,501 square feet of land. The submerged land within the bay is owned by the State, while the waters of the bay between Palea and Paioluolu Points are designated and managed by the State as a State Underwater Park and Marine Life Conservation District (MLCD). All improvements will be located on DPR property.

**3. Park Resources and Facilities**

The park's natural resources include the sandy beach, the bay rim trails, scenic vantage points along the crater rim, and access to the waters of Hanauma Bay which are excellent for marine life viewing, snorkeling and SCUBA diving. The calm and clear nearshore waters are protected by fringing reefs, and fish are abundant because they are protected by the bay's designation as an MLCD.

The park's facilities include the access road, two public parking lots, a bus/van staging area, food and snorkel concessions, four comfort stations (three of which are located at the beach and have showers, and two of which have park maintenance storage rooms), caretaker's quarters and lifeguard facilities. See figure 3.



**HANAUMA BAY NATURE PARK  
MASTER PLAN**

**Fig. 1  
LOCATION MAP**

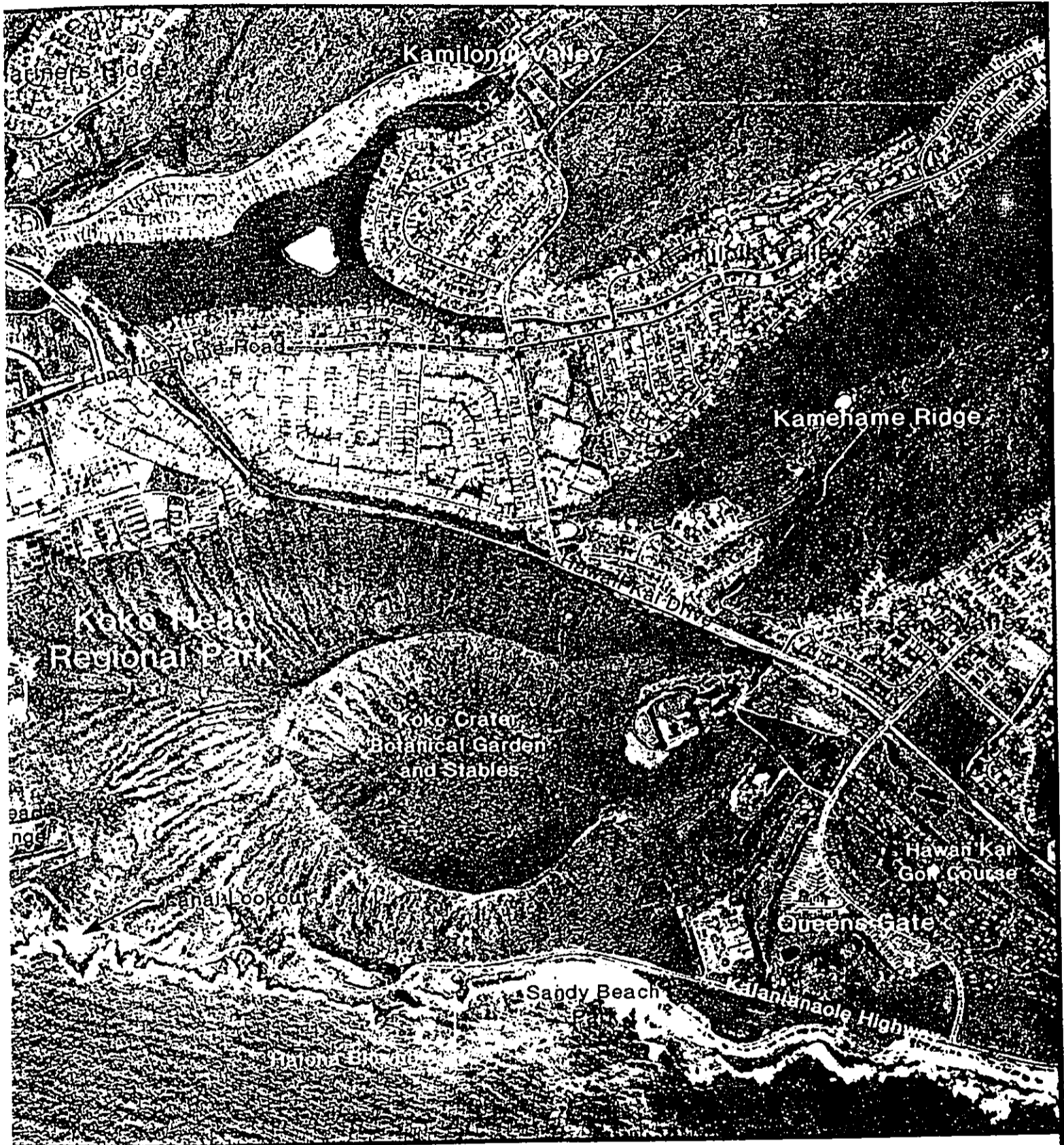


Fig. 1  
**CATION MAP**

Prepared For: City and County of Honolulu  
Department of Parks and Recreation  
Prepared By: Wilson Okamoto & Associates, Inc.

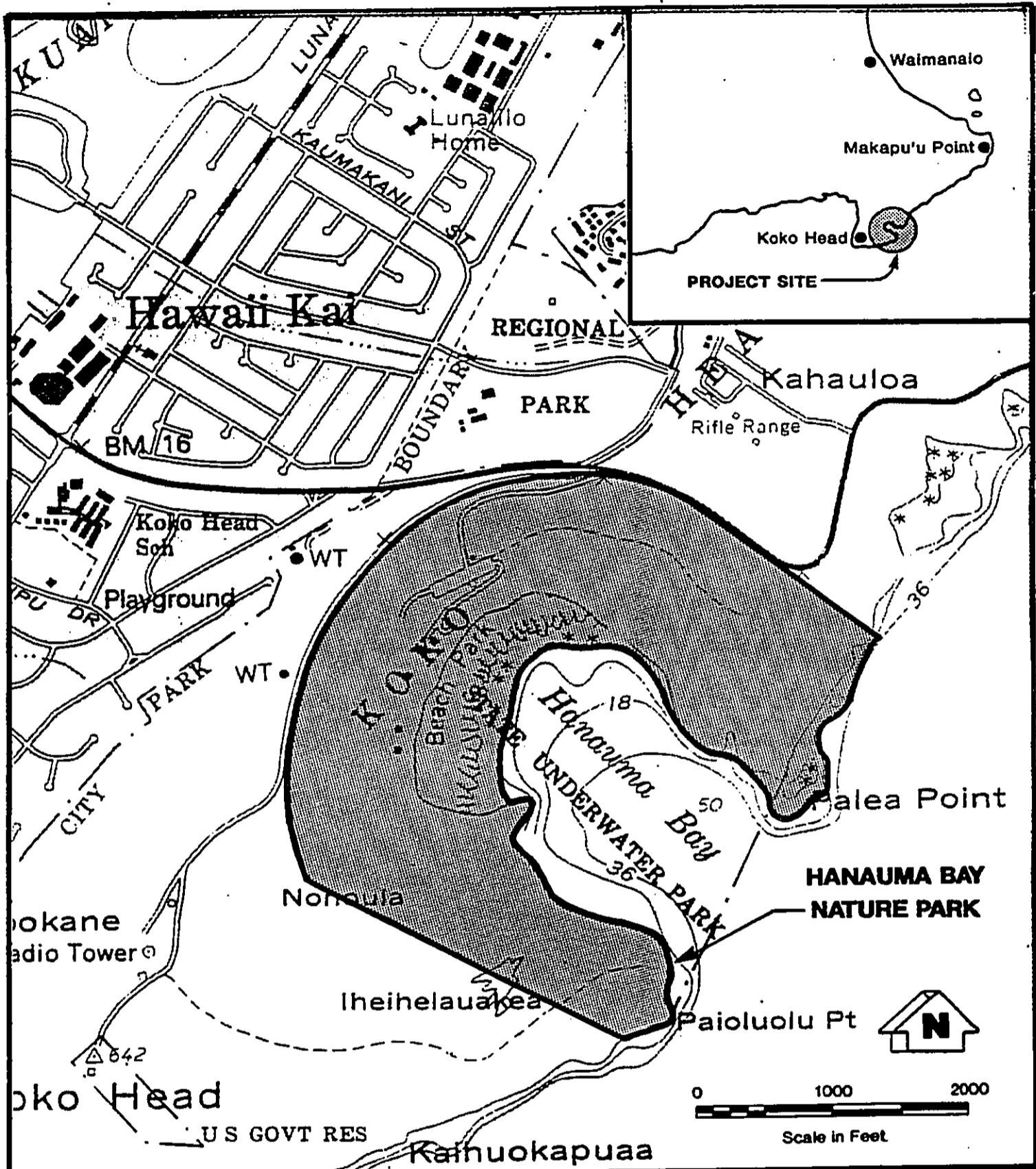


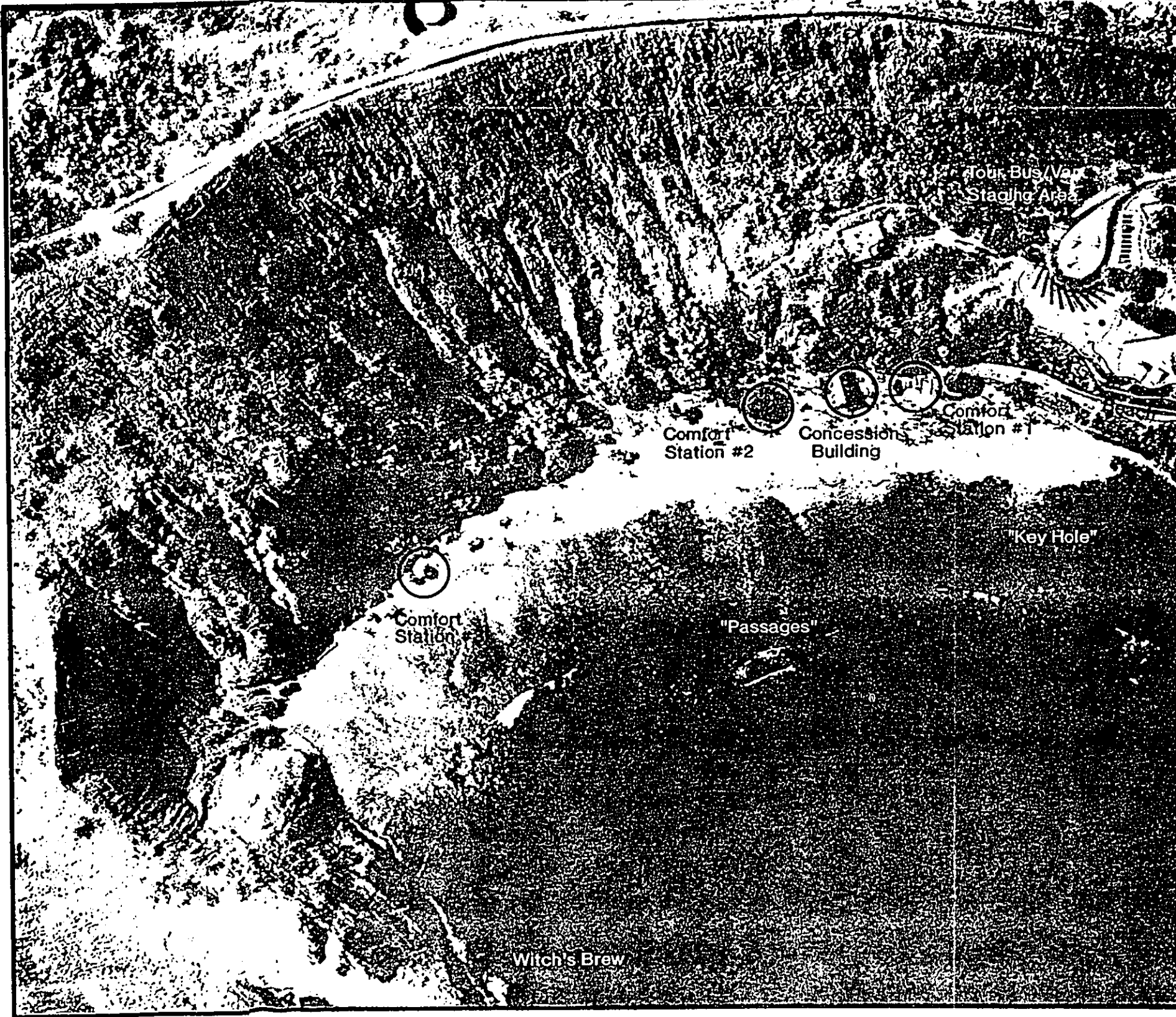
Fig. 2 Hanauma Bay Nature Park

**HANAUMA BAY NATURE PARK  
MASTER PLAN**

Prepared for:  
CITY AND COUNTY OF HONOLULU  
DEPARTMENT OF PARKS AND RECREATION

Prepared by:  
Wilson Okamoto & Associates, Inc.





**HANAUMA BAY NATURE PARK  
MASTER PLAN**

Fig. 3  
**EXISTING FACILITIES**

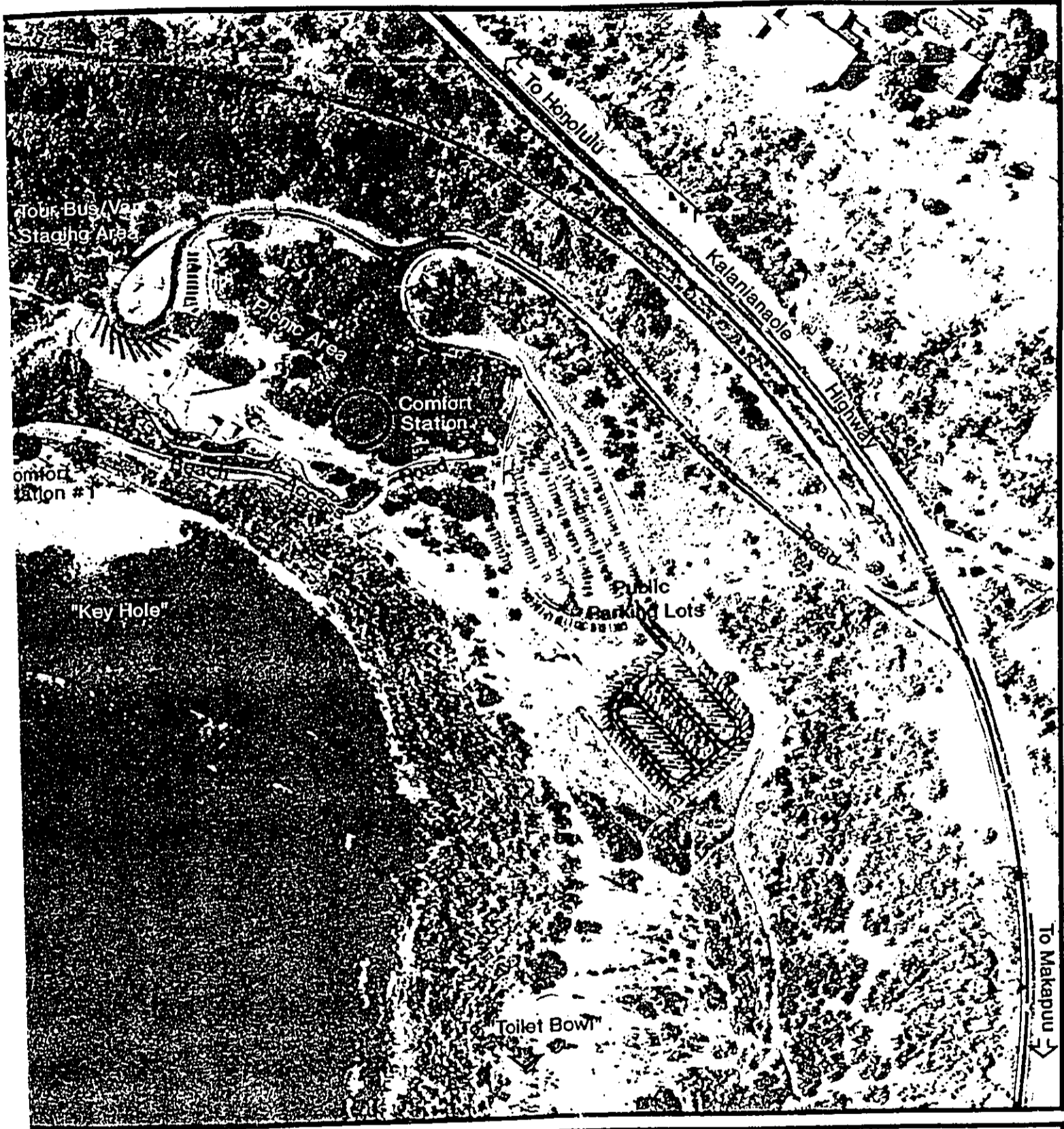


Fig. 3  
**EXISTING FACILITIES**

Photo Source : R.M. TOWILL

Prepared by : WILSON OKAMOTO  
& ASSOCIATES, INC.



## II. PHYSICAL ENVIRONMENT

### A. Terrestrial Conditions

#### 1. Climate

The Hawaiian Islands lie in the northern fringe of the Tropic of Cancer, placing them within the belt of northeasterly tradewinds which persist for the major part of the year. On Oahu, trade winds are prevalent for 90 percent of the time between May and October. During these conditions, the subject area in the lee of Koko Head has very little wind. From November to April, Hawaii's winter season, the trades drop in frequency to about 50 percent.

The warmest month in the subject area is September, with average daily temperatures ranging from the low 80s to the mid-90s. The coolest month is February, with average daily temperatures ranging from the low 60s to the upper 70s.

#### 2. Geology and Soils

The Koko Rift is part of a landscape that was added to the southeastern edge of the Ko'olau Range about 30,000 years ago. It is one of the last areas of volcanic activity on Oahu. From an aerial perspective, the Koko Rift is an easily discernible linear chain of tuff cones which extends from Koko Head to the offshore islands of Kaohikaipu and Manana. See figure 4. Consolidated ash from explosive eruptions formed huge tuff cones makai of the then existing shoreline at Koko Head, Hanauma Bay, and Koko Crater. The crescent-shaped park borders the bay formed by the ocean-breached cinder cone known as Hanauma Bay Crater.

According to the US Soil Conservation Service, the crater rim and walls of the site are classified as rock land (rRK). Rock land is defined as an area in which 25 to 90 percent of the surface is exposed rock. The rock outcrops are mainly basalt and andesite. The soil material associated with rock land is very sticky and plastic and has high shrink-swell potential.

Part of the upper park (parking lot and access road) is classified as Koko silt loam (KsB, KsD), varying in slope from 6 to 25 percent. Runoff is medium and the erosion hazard is moderate on soil of the 6 to 12 percent slope range. Soil of the 13 to 25 percent range has medium to rapid runoff characteristics and the erosion hazard is moderate to severe. The beach is composed of sand, a porous granular composite of coral, shells and calcareous deposits.

**OVERSIZED  
DRAWING/MAP**

**PLEASE SEE  
35MM ROLL**

00081

RECEIVED AS  
FOLLOWS



00081

### 3. Topography

From mean sea level (MSL) at the waters of Hanauma Bay, the beach rises gradually to approximately 10 feet above MSL at a slope of 0% to 10%. A steep cliff borders the beach, rising to an elevation of approximately 160 feet above MSL at the parking lots. At the access road near the Kalaniana'ole Highway entrance/exit, the elevation is 225 feet above MSL.

### 4. Flood Hazard

Hanauma Bay Nature Park lies within Zone D on the Federal Emergency Management Agency's Flood Insurance Rate Map dated September 1987. Flood hazards have not been determined in areas designated Zone D.

### 5. Vegetation

Vegetation within the property consists mainly of introduced Australian saltbush, Bermuda grass, kiawe, haole koa, coconut palms, banyans and hialoa. Native ilima and naupaka also thrive at the park.

### 6. Wildlife

The existing fauna observed or known to frequent this area include field mice, rats, mongoose, insects, and lizards. Common birds include pigeons, mynahs, doves, sparrows and cardinals. There are no known threatened or endangered species on the site.

## B. Nearshore Water Conditions

### 1. Shoreline

The shoreline along Hanauma Bay is a combination of rocky coastline and sandy beach. The rocky coastline begins abruptly at each end of the beach, extending past Witch's Brew to Paioluolu Point, and past Toilet Bowl to Palea Point. See figure 1.

### 2. Tsunami and Storm Wave Hazard

According to the Civil Defense Tsunami Inundation maps, the entire lower park area, up to the access road, could be inundated in the event of a tsunami. The area includes the sandy beach, the existing food and snorkel concessions, three comfort stations and lifeguard facilities.

### 3. Nearshore Oceanography

In deep water around the Hawaiian Islands, tradewinds generally drive surface currents westward at 0.4 to 0.6 knots. Nearshore currents are dominated by the tides. During flood tides, nearshore currents are usually to the south or southwest at 0.1 to 0.4 knots. During ebbing tides, nearshore currents significantly slow down and sometimes reverse. The net southwesterly nearshore current flow is strongest during the winter. Southerly nearshore currents frequently exceed 2 knots and have been nicknamed the "Molokai Express". See figure 5 for typical directions of current flows around East Oahu.

### 4. Coastal Water Quality

Water quality in the bay may be declining due to increased siltation, freshwater runoff and litter. As early as 1970, the quantity and quality of runoff from the upper park were identified as a concern. In 1988, turbidity, trash and oil films were observed during user survey studies conducted by Wilson Okamoto and Associates, Inc. Soil from the unpaved trafficked areas has been implicated as a possible cause of increased turbidity in the bay.

While no chemical analysis of water quality was conducted, potential threats to water quality observed in 1988 included:

- Siltation from storm and shower runoff;
- Freshwater mixed with soaps and lotions from open showers;
- Sewage from periodically overflowing cesspools; and
- Cooking oils and other waste from the concession which leach into the bay through cesspools.

The latter two items no longer spoil the water quality of the bay since activation of a new sewage pump system in 1990, which is discussed in greater detail in item C.5. of this section.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

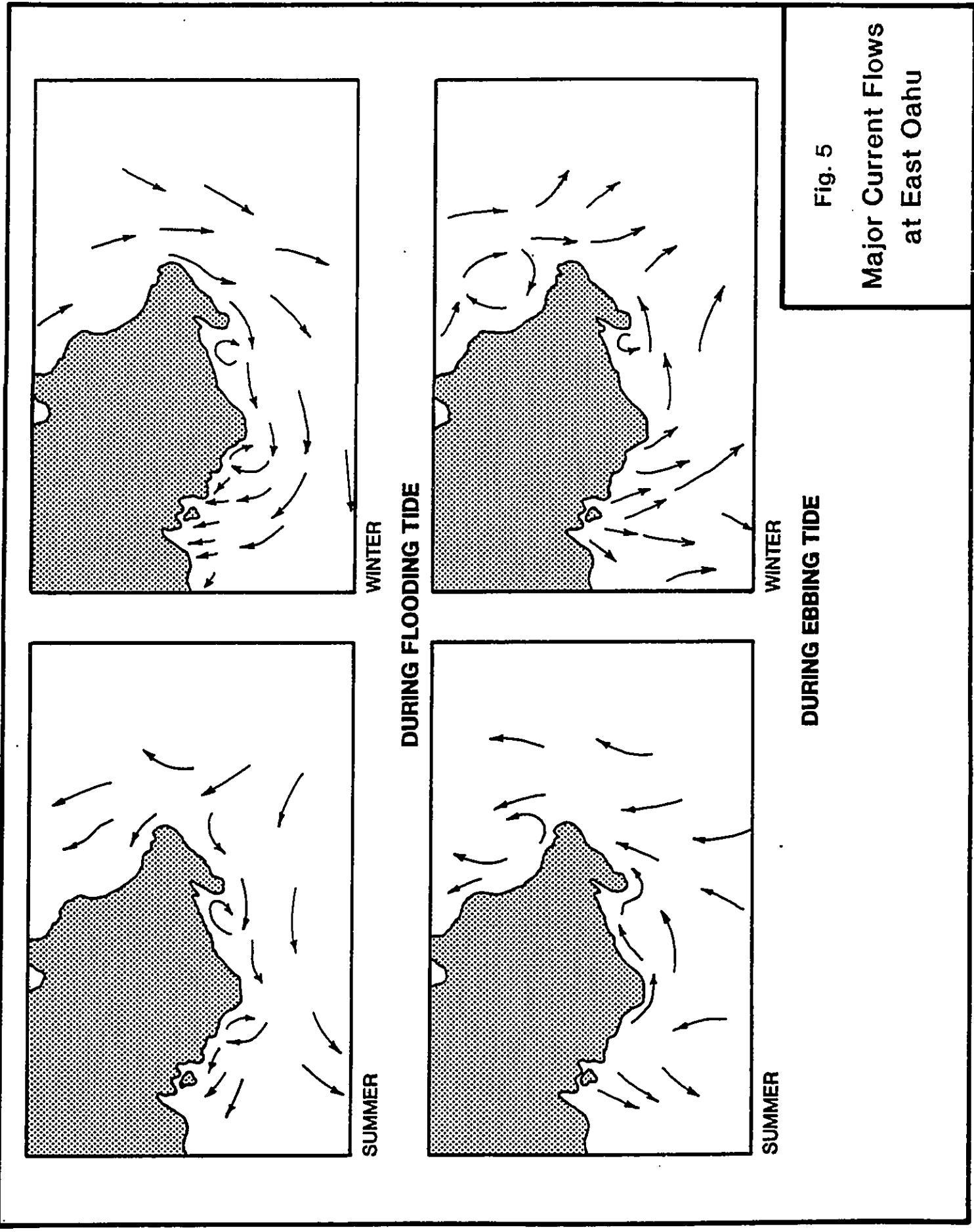


Fig. 5  
Major Current Flows  
at East Oahu

## 5. Marine Life Habitat

## a. Coral

Corals account for a very small percentage of the bottom cover within the nearshore waters of the fringing reef. The consolidated limestone portion of the reef flat is dominated by red coralline alga (*Hydrolithon reinboldii*) and the pink variety (*Porolithon onkodes*), which live among rock surfaces in the backreef depressions. The only coral present in any abundance is the common star coral (*Cyphastrea ocellina*).

Coral cover increases in the -6 to -25 foot range, with total coral cover reaching about 45%. At depths of -25 feet and beyond, corals dominate the bottom, with total coral cover approaching 80%. Dense thickets of finger coral (*Porites compressa*) predominate at these depths, but lobe coral (*Porites lobata*) is fairly abundant.

## b. Fauna

Diverse and abundant fauna inhabit waters of all depths at and behind the fringing reef margin. Common species include butterfly fish (*kikakapu*, *lau-wili-wili*, etc), surgeonfish (*manini*, *palani*, *pualu*), parrotfish (*uhu*), goatfish (*weke*, *moano*), moorish idols (*kihikihi*), wrasse (*hinalea*), damselfish (*'alo'ilo'i*), mullet (*'ama'ama*, *uo-uo*), trumpetfish (*nuhu*), milkfish (*awa*), threadfin (*moi*), rudderfish (*nenu*), jacks (*papio*, *omilu*) and triggerfish (*humu-humu*). The population of fish species accustomed to the presence of humans in the marine habitat continues to flourish.

Several varieties of sea urchin are present, including the long-spined urchin (*wana*) and the rock-boring urchin (*ina*). Also, sea cucumbers (*lohi*) are found in all areas of the bay, but most notably in quiet flat sections along the reef.

## C. Roadways and Utilities

## 1. Roadway Access

The single roadway into Hanauma Bay Nature Park is off of Kalaniana'ole Highway. The highway is the main traffic arterial which serves East Honolulu. It is designated as a Federal Aid Primary Highway. Where it intersects the access road, the highway is a two-lane undivided road. Use of the highway is

generally higher during weekends, holidays and special events such as bodysurfing or body boarding contests at Makapuu or Sandy Beach Parks.

2. Water

Koko Head 405 Reservoir, with a capacity of 0.2 million gallon, services Hanauma Bay Nature Park, as well as sections of the Portlock community. Water is supplied to the park's facilities via an 8-inch line, approximately 2,400 feet long, which transects the west ridge of Hanauma Bay.

3. Electric and Telephone Service

Both telephone and electric service are available at the Nature Park. Overhead power lines run down the cliff from the upper park to the concession building. They provide service to all buildings and comfort stations. There are three public phone booths at the park; one at the top of the access road in the upper park and two near Comfort Station #1 at the base of the access road in the lower park. There are four business telephones; one at the snorkel concession, one at the lifeguard station, one in the caretaker's house, and one at the food concession.

4. Wastewater

A collection system connecting wastewater lines from the park's three lower and one upper park comfort stations has recently been constructed and put into operation in 1990. The wastewater system pumps sewage up the cliff to Kalaniana'ole Highway where it is directed into the regional wastewater system to be processed at the Hawaii Kai Sewage Treatment Plant located mauka of Sandy Beach. Following secondary treatment, effluent from the plant is discharged through an outfall 3,000 feet offshore in 35 feet of water.

5. Drainage

Storm runoff at the upper park is directed into retention basins in the picnic area where it percolates into the ground or evaporates. During heavier storms, overflow from the retention basins enters drains which direct flows over the cliff into the lower park where the runoff percolates into the porous sand behind Comfort Station #1. This is the natural drainage course from the upper park into the lower park. During the heaviest storms, the runoff may flow overland to the shore, eroding gullies through the beach.



### III. SOCIO-ECONOMIC ENVIRONMENT

Hanauma Bay Nature Park serves the entire island of Oahu and is a worldwide visitor attraction. The following discussion focuses on park users since they are the most likely to be affected by the proposed park improvements.

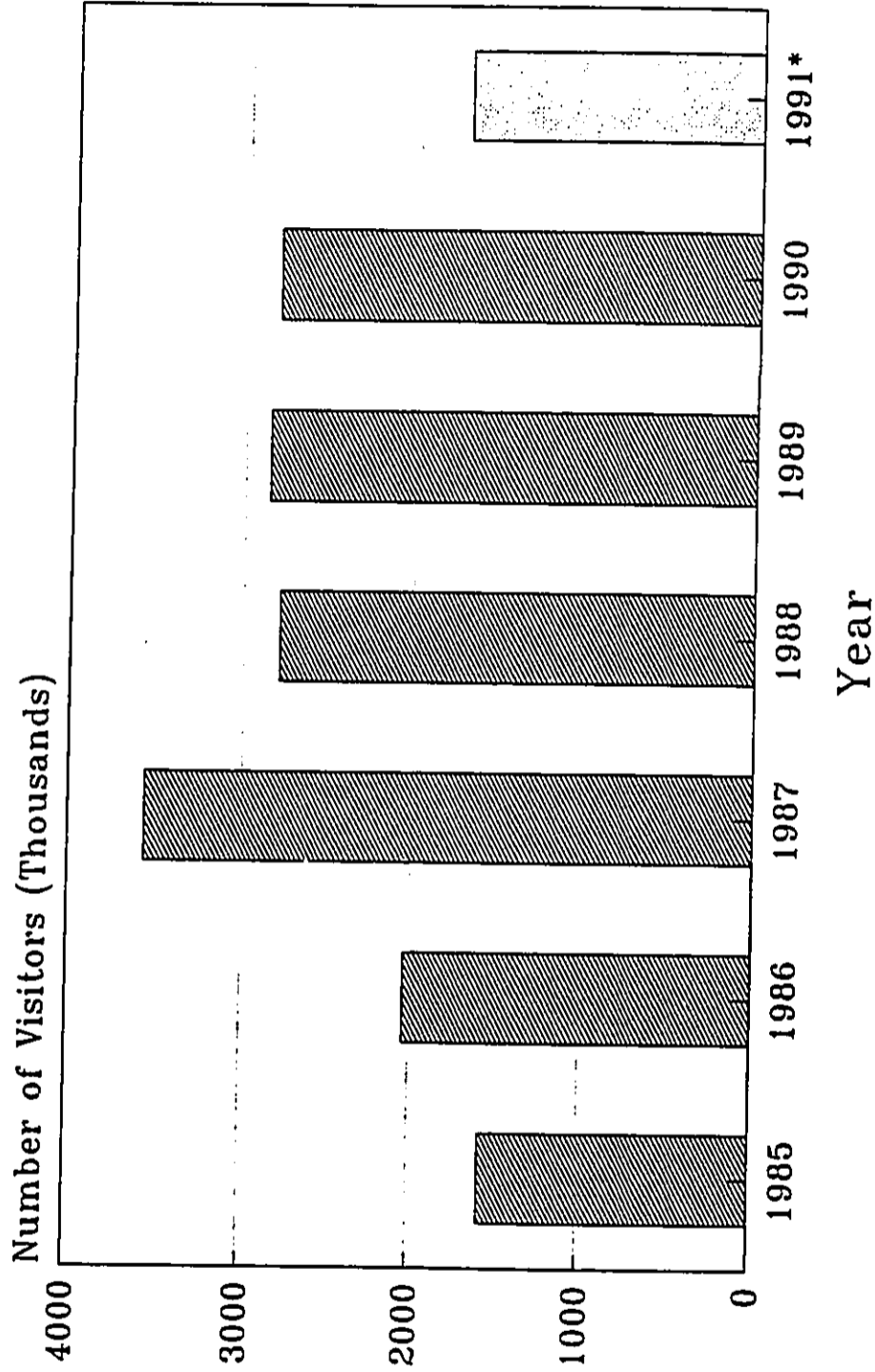
Park visitors can generally be classified into four categories: residents, non-residents, commercial operators, and staff. In terms of overall park usage, estimated monthly visitor counts in the first six months of 1991 averaged 140,000 as compared to a monthly average of over 230,000 for the first six months of 1990. This indicates a reduction of almost 40%, which translates into approximately 3,000 fewer visitors to the park on a daily basis. The decline in visitor counts results from implementation of new rules pursuant to the 1990 *Hanauma Bay General Plan* and its corresponding *Hanauma Bay Rules and Regulations*. Figure 6 shows the total visitor counts from 1985 to 1991.

Figure 7 contrasts the number of residents visiting the park with non-resident visits in 1975 and 1990. It is based on the annual visitor counts for those years combined with the estimated percentages of residents vs. non-residents from the surveys taken during these years. Although the annual visitor count has increased by as much as a factor of six between 1985 and 1991, Figure 7 indicates that the number of resident park visitors has remained virtually unchanged since 1975.

#### A. Residents

Residents are park users who reside in the State of Hawaii. Between 1975 and 1990, there was a significant decrease in the proportion of residents who visited the park, based on separate surveys conducted in each respective year. In 1975, 68% of the individuals randomly interviewed were residents of Oahu, as compared to approximately 13% when asked the same question 15 years later. According to the *Hanauma Bay Baseline Users Survey*, completed in 1990 under the University of Hawaii Marine Options Program, the typical Oahu resident lives within the Primary Urban Center, visits the bay monthly, arrives in the morning, on weekends, stays three to five hours, and has no particular preference to the time of year that he (she) visits the bay. Between the 1975 and the 1990 survey, the difference in the typical Oahu resident park user was that in 1975, he (she) came only once a year and averaged a stay of less than four hours. This suggests that residents currently are visiting the park more frequently and are staying slightly longer.

# Annual Visitor Count Hanauma Bay Master Plan



State of Hawaii Data Book (1986-1991)  
DBED

Figure 6

\*Projection based on monthly count

# Residents vs. Non-Residents 1975 vs. 1990

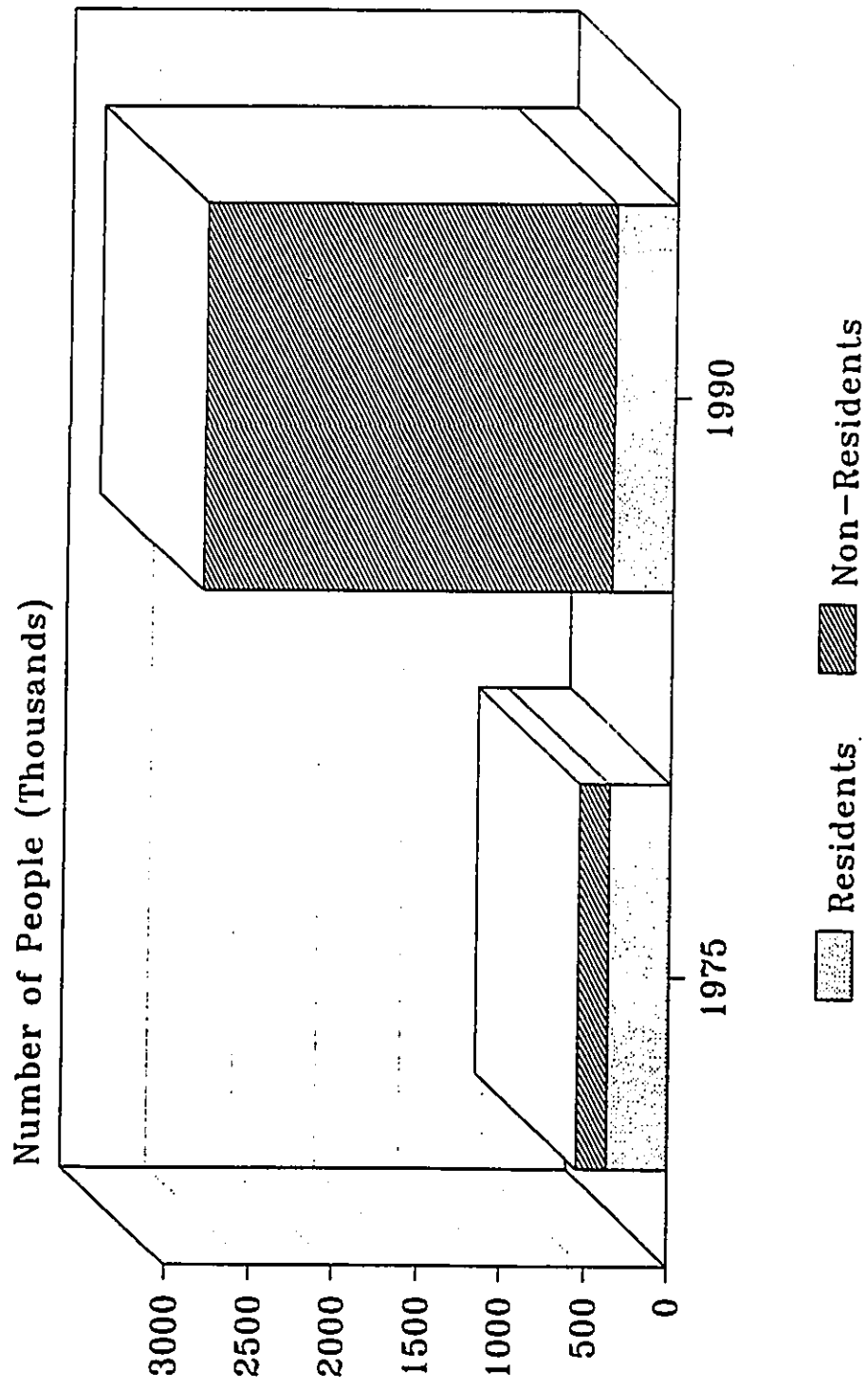


Figure 7

**B. Non-Residents**

Non-residents include tourists, military, and out-of-state college students. According to the 1990 survey, over 96% of the non-residents who answered the questionnaire were tourists. According to the 1977 *Hanauma Bay Beach Park Site Development Plan*, tourists comprised a large majority of the non-residents (72%), while military comprised 18% and out-of-state college students comprised 9%.

Use of the park by non-residents grew dramatically until 1990. Implementation of the *Hanauma Bay Rules and Regulations*, which strictly controls park access by commercial tours, has reduced the numbers of non-resident park users significantly.

**C. Commercial Operators**

The third category of park users are the commercial operators who offer goods and services in the park. These commercial operators profit from offering conveniences that enhance the recreational experience of their clientele. Operators can be grouped under two categories; those operating under contract to the City and County, and those operating under City and County permits. Contracted operators include the food/beverage and the snorkel concessionaires, and the private shuttle service. Permit operators include numerous dive tour (snorkel and SCUBA) companies, photo operators and several religious organizations.

**D. Staff**

The Department of Parks and Recreation staff at Hanauma Bay Nature Park consists of the Hanauma Bay Manager, the resident caretaker, two itinerant park rangers, four full-time groundskeepers, two part-time groundskeepers and five lifeguards. All are City and County of Honolulu employees.

**IV. PLANS, POLICIES, AND PERMITS**

The plans and policies relating to the proposed park improvements range from broad program guidance to land use controls governing the development of a site. The improvements are in consonance with various land use plans, policies and regulatory controls.

**A. State of Hawaii**

A number of State plans, policies and controls provide guidelines for development within the State of Hawaii. These guidelines include the Hawaii State Plan, State Functional Plans, and the State Land Use Law. The Conservation District Use Application is necessary for any development within State Conservation lands.

**1. Hawaii State Plan**

The Hawaii State Plan establishes a statewide planning system that provides goals, objectives and policies which detail priority directions and concerns of the State of Hawaii. The proposed project supports and is consistent with the following State goals, objectives, policies and priority guidelines:

*[§226-23] Objectives and policies for socio-cultural advancement--leisure. (a) Planning for the state's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.*

*(b) To achieve the leisure objective, it shall be the policy of this State to: (3) Enhance the enjoyment of recreational experiences through safety measures, educational opportunities, and improved facility design and maintenance.*

*[§226-11] Objectives and policies for the physical environment--land-based, shoreline, and marine-resources. (a) Planning for the State's physical environment with regard to land-based, shoreline, and marine-resources shall be directed towards achievement of the following objectives: (1) Prudent use of Hawaii's land-based, shoreline and marine resources; and (2) Effective protection of Hawaii's unique and fragile environmental resources.*

*(b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to: (2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems; (3) Take into account the physical attributes of areas when planning and designing activities and facilities; (8) Pursue compatible relationships among activities, facilities, and natural resources, especially within shoreline areas; and (9) Promote greater accessibility and prudent use of the shoreline for public recreational, educational, and scientific purposes.*

*[§226-13] Objectives and policies for the physical environment--land, air, and water quality. (a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives: (1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources; and (2) Greater public awareness and appreciation of Hawaii's environmental resources.*

*(b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to: (2) Promote the proper management of Hawaii's land and water resources; and (3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.*

*[§226-8] Objective and policies for the economy--visitor industry. (a) Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.*

*(b) To achieve the visitor industry objective, it shall be the policy of this State to: (2) Ensure that visitor industry activities are in keeping with the social, economic and physical needs and aspirations of Hawaii's people; (3) Improve the quality of existing visitor destination areas; and (5) Ensure that visitor facilities and destination areas are carefully planned and sensitive to existing neighboring communities and activities.*

## **2. State Functional Plans**

The Statewide planning system requires the preparation of State Functional Plans which are approved by the Governor. The fourteen State Functional Plans

implement the goals, objectives, policies and priority guidelines of the Hawaii State Plan, as mandated by Chapter 226, Hawaii Revised Statutes (HRS). The plans act in a coordinated fashion with County General Plans and Development Plans, thus providing the detailed linkage between State programs and State policy.

i. Conservation Lands Functional Plan

The State Conservation Lands Functional Plan addresses the impacts of population growth and economic development on the natural environment. It provides a framework for the protection and preservation of lands and shorelines. The proposed project, which is located on lands designated as Conservation, is consistent with the following objectives and policies:

Objective IIC:        *Enhancement of natural resources.*

Policy IIC (2):        *Expand and enhance outdoor recreation opportunities and other resource uses.*

Objective IID:        *Appropriate development of natural resources.*

Policy IID (1):        *Develop and expand resources to protect natural shorelines and wilderness recreation areas.*

Policy IID (3):        *Develop recreational and archaeological resources on the shoreline and mauka areas.*

Objective IIIA:        *Expansion and promotion of a public conservation ethic through education.*

Policy IIIA (1):        *Develop and implement conservation education programs for the general public and visitors.*

Policy IIIA (2):        *Develop and implement information and educational programs directed toward specific areas and users of lands and natural resources.*

ii. Recreation Functional Plan

The State Recreation Functional Plan assesses present and potential demand and supply of outdoor recreation resources to guide State and County agencies in acquiring or preserving lands of recreational value, providing adequate recreation facilities and programs, and ensuring public access to recreation areas. The proposed project is consistent with the following objectives and policies:

Objective A: *Achieve a pattern of land and water resources usage which is compatible with community values, physical resources, recreation potential, and recreation uses which support comprehensive public land use policies.*

Policy A (2): *Ensure that intended uses for a site respect community values and are compatible with the area's physical resources and recreation potential.*

Policy A (3): *Emphasize the scenic and open space qualities of physical resources and recreation areas.*

Objective C: *Provide a comprehensive range of opportunities which fulfill the needs of all recreation groups effectively and efficiently.*

Policy C (1): *Maintain an adequate supply of recreation facilities and programs which fulfill the needs of all recreation groups.*

Policy C (2): *Maximize facility and program effectiveness through adequate maintenance and staffing.*

Objective E: *Provide adequate recreation opportunities which meet expressed needs and are available as a result of the cumulative effectiveness and cooperation of recreation suppliers and users.*



*Policy E (3):*      *Coordinate visitor and resident recreation interests to achieve compatible recreation usage.*

iii.      **Tourism Functional Plan**

The State Tourism Functional Plan acknowledges the importance of the visitor industry in Hawaii while at the same time recommending development of other industries to diversify the State's economic base. It also suggests measures for protection of those resources upon which the industry itself depends -- the natural beauty and environment of the islands, the richness and diversity of cultures, the well-being of people and communities and the quality of the physical infrastructure. The proposed project is consistent with the following objectives and policies:

*Objective I.A:*      *Development, implementation and maintenance of policies and actions which support the steady and balanced growth of the visitor industry.*

*Policy I.A.1:*      *Identify and ensure a rate of industry growth that is consistent with the social, physical and economic needs of the residents and the preservation of Hawaii's natural environment.*

*Objective II.A:*      *Development and maintenance of well-designed visitor facilities and related developments which are sensitive to neighboring communities and activities, and adequately serviced by infrastructure and support services.*

*Policy II.A.1:*      *Maintain high standards of overall quality of existing visitor destination and attraction areas.*

*Policy II.A.7:*      *Improve the quality of existing parks and recreational areas, and ensure that sufficient recreational areas -- including scenic byways and corridors -- are available for the future.*

3. State Land Use Law

Pursuant to the Hawaii Land Use Law (Chapter 205, HRS), all lands in the State are classified by the State Land Use Commission (LUC) into four land use districts: Urban, Agriculture, Conservation and Rural. The proposed project is located in a Conservation district.

Any use of lands, including submerged lands within the State's Conservation district is subject to review pursuant to Chapter 183, HRS and Title 13, Chapter 2, Administrative Rules of the Department of Land and Natural Resources (DLNR). Hanauma Bay lies within subzone P, as established by DLNR. Facility improvements may be allowed as a conditional use of the P subzone through the issuance of a Conservation District Use Application (CDUA) Permit.

B. City and County of Honolulu

City and County plans and policies governing the proposed improvements include the Oahu General Plan, Development Plan (DP), and Land Use Ordinance. The Special Management Area (SMA) Use Permit and Shoreline Setback Variance are City and County approvals which may be required for the proposed improvements.

1. Oahu General Plan

The Plan specifies long-range objectives and policies to guide both the quantity and quality of future growth on Oahu. The Plan is a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of the people of Oahu. The General Plan has several objectives and policies pertaining to the Honolulu County's natural environment, culture and recreation. The proposed project is consistent with and supports the following General Plan objectives and policies:

a. Natural Environment

Objective A: *Protect and preserve the natural environment.*

Policy 6: *Design surface drainage and flood-control systems in a manner which will help preserve their natural settings.*

Policy 10: *Increase public awareness and appreciation of Oahu's land, air and water resources.*

Objective B: *Preserve and enhance the natural monuments and scenic views of Oahu for the benefit of both residents and visitors.*

Policy 1: *Protect the Island's well-known resources: its mountains and craters; forests and watershed areas; marshes, rivers, and streams; shoreline, fishponds, and bays; and reefs and offshore islands.*

Policy 4: *Provide opportunities for recreational and educational use and physical contact with Oahu's natural environment.*

b. Culture and Recreation

Objective D: *Provide a wide range of recreational facilities and services that are readily available to all residents of Oahu.*

Policy 2: *Develop and maintain a system of regional parks and specialized recreation facilities.*

Policy 5: *Encourage the State to develop and maintain a system of natural resource-based parks, such as beach, shoreline, and mountain parks.*

Policy 8: *Encourage ocean and water-oriented recreation activities that do not adversely impact on the natural environment.*

Policy 12: *Provide for safe and secure use of public parks, beaches, and recreation facilities.*

2. Development Plan (DP)

Eight DP's were established by the City and County of Honolulu to provide detailed schemes for implementing and accomplishing the objectives and policies of the General Plan. The DP's guide the desired sequence, patterns and characteristics of future development. The project site is located within the East Honolulu Development Plan area which includes the area from Aina Koa Ridge to Makapuu Point and is identified as part of Oahu's urban fringe by the General Plan. The DP Land Use (DPLU) Map for East Honolulu indicates that Hanauma Bay Nature Park lies within the Preservation area.

- Consistency with Common Provisions

The proposed project is consistent with the DP Common Provisions established for general principles and controls governing parks, recreation and preservation areas. The provisions emphasize use of the natural park for medium or low intensity recreation activity.

- Consistency with Special Provisions

The proposed project is consistent with East Honolulu DP area Special Provisions for open space and public views. The building height limit is 25 feet in the Preservation area and the proposed project is in full compliance.

- Consistency with DP Public Facilities (DPPF) Map for East Honolulu

This map identifies public and private proposals for parks, streets and highways, major public buildings, utilities, terminals and drainage. The East Honolulu DPPF identifies Hanauma Bay Nature Park as an area for park modification to be implemented within six years.

3. Land Use Ordinance (LUO)

The LUO and accompanying maps define the allowable uses of land zoned for residential, apartment, business, resort, industrial, agricultural, preservation, and mixed uses. The park is zoned P-1, Restricted Preservation, as are all lands within the State Conservation district. Within this district, all uses, structures, and development standards shall be governed by the appropriate state agency; in this case, DLNR.

4. Hanauma Bay Nature Park Master Plan

The Hanauma Bay Nature Park Master Plan, completed in May 1992, is the most recent effort to guide management of Hanauma Bay toward the protection of the natural resource and fulfillment of its recreational potential. It serves as the guidebook for implementation of the proposed improvements. The plan includes an inventory of existing park resources and facilities, identifies management concerns, and states the goals, objectives and policies for future park management and development. The plan also includes recommendations for park improvements, which are addressed by this environmental assessment.

5. Special Management Area Permit (SMA)

The State Coastal Zone Management (CZM) Law (Chapter 205A, Hawaii Revised Statutes) charged the Counties with designating and administering Special Management Areas (SMA) along the State's coasts. Any "development," as defined by the Law, within the SMA requires an SMA Use Permit. Within the City and County of Honolulu, the SMA Use Permit is administered by the Department of Land Utilization and the decision on its issuance is rendered by the City Council, pursuant to Ordinance No 84-4. Issuance of the SMA Use Permit is based on a development proposal's consistency with the objectives, policies and guidelines of the CZM law which encompass recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, and managing development. Hanauma Bay Nature Park is located within the SMA, thus all proposed improvements will require an SMA permit. See figure 8.

6. Shoreline Setback Variance (SSV)

The City and County Department of Land Utilization administers this variance under its shoreline setback regulations. The shoreline is defined as "the upper reaches of the wash of waves, other than storm and tidal waves, usually evidenced by the edge of vegetation growth, or the upper line of debris left by the wash of waves." The setback area is a 40-foot strip of land mauka of the shoreline. The State's Shoreline Setback Law, (Chapter 205A, HRS, Part III) prohibits virtually any development or related activity including the removal of sand, rocks and soil from the shoreline setback area. However, the county may authorize a variance for construction planned in the setback area when such construction is determined to be in the public interest or when hardship will be caused to the applicant if the request is denied. The proposed improvements within the shoreline setback area will require a variance which will be processed concurrently with the SMA permit.

**OVERSIZED  
DRAWING/MAP**

**PLEASE SEE  
35MM ROLL**

**00081 A**

RECEIVED AS  
FOLLOWS



00081 A

**V. PROBABLE IMPACTS AND MITIGATIVE MEASURES****A. Short-Term Impacts**

Short term impacts are limited to the construction phase of the project. In general, the construction impact of the proposed improvements will be minimal since construction will be conducted in phases and individual projects are relatively small. Given that the project area is a well-used recreational park, construction activity may be perceived as a temporary nuisance. Basic mitigative measures will include dust, noise and soil erosion control measures. To minimize traffic congestion, movement of construction equipment may need to be coordinated to avoid peak traffic hours.

**1. Noise**

Development of the site will involve limited excavation, grading and the construction and relocation of buildings. The various construction phases are expected to generate noise, the actual amount depending upon the methods employed. Mufflers and other noise-attenuating equipment will be required pursuant to Department of Health Administrative Rules, Chapter 11-43, Community Noise Control for Oahu.

**2. Air Quality**

Site preparation work may generate fugitive dust, particularly during dry and windy conditions. Dust emissions will be controlled by watering active work areas and covering open-bodied trucks.

To a lesser extent, exhaust emissions from stationary and mobile construction equipment and workers' vehicles may marginally affect air quality during the construction phase.

**3. Public Health and Safety**

Construction sites can pose various safety hazards to the public, particularly during non-work hours such as weekends and holidays. Necessary mitigative measures to assure public health and safety will be provided throughout all phases of construction. During non-work hours, construction areas will be secured by adequate warning signs and other safety devices as required by State of Hawaii and City and County of Honolulu regulations.



4. Traffic and Parking

Trucks, heavy equipment and other vehicles will occasionally use existing roads to import and export materials and to access construction areas. The increased traffic from construction-related vehicles should not be significant, but may cause some minor inconveniences in the immediate vicinity.

5. Vegetation

There are no known rare or endangered species of flora in or around areas proposed for construction. No short-term impact is anticipated.

6. Archaeological

There are no known archaeological sites within areas proposed for construction. Should archaeological remnants be unearthed, work will halt and the State Department of Land and Natural Resources Historic Preservation Division will be notified.

7. Water Quality

No short-term impacts to marine water quality and marine life are anticipated since all construction will be on land and appropriate measures will be taken to assure that the potential for soil runoff is minimized.

B. Long-Term Impacts

Anticipated long-term impacts are positive, notably pedestrian safety and facilities improvements.

1. Noise

Following construction, noise levels should return to present levels since the level of use will remain the same. Such noise is presently associated with vehicular traffic; particularly bus traffic. There are no residences or other noise-sensitive uses near the park except the park caretaker's quarters.

## 2. Air Quality

Air quality will return to pre-construction conditions since there will be no increase in the level of park usage. Present air quality impacts are those associated with vehicular traffic.

## 3. Public Health and Safety

Public health and safety is expected to improve in two ways. First, traffic and pedestrian safety will improve as a result of modified facilities and pedestrian walkways. Second, water safety will improve because visitors will be kept up-to-date about current park conditions and advised of safety hazards in the park through the visitor center. All visitors to the lower park will pass through the visitor center.

## 4. Traffic and Parking

Traffic and parking is expected to improve as a result of the streamlined parking system. Since no expansion is planned, no increase in traffic is anticipated.

## 5. Vegetation

No rare or endangered species of flora are known to inhabit the project site. Any loss of vegetation during construction will be effectively mitigated by landscaping which emphasizes native species of flora adapted for the local climate.

## 6. Displacement

No private residences will be displaced. The food concession and caretaker's quarters will be relocated from the beach lower level to the upper level of the park.

## 7. Social

A more equitable mix of resident and non-resident visitors is expected. Better monitoring of park user volumes and the ability to control access into the park will increase park user satisfaction and regenerate natural resources, thus augmenting the educational/interpretive value of the park.

#### 8. Marine Life

The long-term impact of the proposed improvements on marine water quality and marine life will be insignificant because all new improvements will include provisions for landscaping and appropriate drainage to minimize soil runoff. Some positive benefit may be achieved since the proposed improvements will facilitate dissemination of information on marine habitats, thereby fostering awareness and respect for marine life at Hanauma Bay.

#### 9. Storm Water Runoff

The proposed park improvements such as new structures, walkways and road way widenings will marginally increase storm runoff by creating a net increase in non-porous surfaces. These improvements will not alter existing drainage patterns and are not anticipated to have a significant impact on runoff quality or quantity.

#### 10. Park Usage

With the construction of facilities supporting traffic management procedures and the visitor center/concession facility, public access into the upper park and into the lower park, respectively, can be better managed. Since park usage is managed based on the capacity of the parking lot, which will not be expanded, impacts related to park usage should not increase.

#### 11. Coastal Views

The proposed improvements to the visitor center/concession facility, comfort stations, caretaker's quarters, auxiliary beach information pavilion/snorkel gear rental concession, and water safety observation post will be designed to minimize intrusion into coastal view planes and blend with the natural textures and tones of the site. Coastal views from the land seaward will be enhanced, and design elements of all structures will complement the natural beauty of the park as viewed from the beach area.

**VI. ALTERNATIVES TO THE PROPOSED ACTION**

The proposed improvements were recommended in the *Hanauma Bay Nature Park Master Plan* (May 1992) and represent the culmination of a planning process involving the review of park user surveys and observations spanning a 15-year period and extensive consultation with the City and County Department of Parks and Recreation. The improvements are proposed within a context of goals, objectives and policies articulated in the master plan which reflects the desires and vision of the City and County administration regarding the future of the park.

Alternatives considered were variations of the proposed improvements. For example, an extended beach access road was considered to direct beach users toward the center of the beach in order to achieve a more even distribution of recreational activities. This could potentially relieve the intensity of impact on resources near the eastern end of the beach. However, it was decided that park resources would be better protected by confining activities to areas already impacted instead of dispersing them to other areas of the park. Similarly, alternative building locations and functions within structures were considered during refinement of the proposed improvements. It is anticipated that further adjustments to building locations and alignment of maintenance paths and walkways will be made as design plans are formulated upon review of detailed topographic surveys which have yet to be prepared.

The "no action" alternative is not considered viable within the context of achieving the established goals and objectives of the nature park as articulated in the master plan.

**VII. DETERMINATION**

A draft environmental assessment was prepared and distributed for review in accordance with the consultation process of chapter 343, Hawaii Revised Statutes. Based on the significance criteria set forth in section 11-200-12 of Title 11 Chapter 200, the City and County of Honolulu Department of Parks and Recreation (DPR) has determined that the improvements will have no significant adverse impact on the environment, and that an Environmental Impact Statement is not required.

**Findings and Reasons Supporting the Determination**

The effect of the proposed improvements on the environment is determined to be insignificant. Construction and use of the Park in its improved condition will not:

- o Involve a loss or destruction of any natural or cultural resource;
- o Curtail the range of beneficial uses of the environment;
- o Conflict with the State's long-term goals or guidelines as expressed in Chapter 344, HRS;
- o Substantially affect the economic or social welfare of the community or state;
- o Substantially affect public health;
- o Involve substantial secondary effects, such as population changes or infrastructure demands;
- o Involve a substantial degradation of environmental quality;
- o Have a considerable effect on the environment, or involve a commitment to larger actions;
- o Substantially affect a rare, threatened or endangered species or its habitat;
- o Detrimentally affect air or water quality or ambient noise levels; or
- o Affect an environmentally sensitive area, such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, freshwater area, or coastal waters.

DOCUMENT CAPTURED AS RECEIVED

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

EA CONSULTATION

**VIII. CONSULTATION**

**A. Pre-Assessment Consultation**

City and County of Honolulu  
Department of General Planning  
Department of Public Works

State of Hawaii  
Department of Land and Natural Resources  
Department of Health

**B. EA Consultation**

Asterisks (\*) indicate agencies which provided written comments.

City and County of Honolulu

- \* Board of Water Supply
- \* Building Department
- (8) \* Department of General Planning
- \* Department of Land Utilization
- \* Department of Public Works
- (3) \* Department of Transportation Services
- (7) \* Police Department

State of Hawaii

- Department of Business, Economic Development and Tourism
- (5) \* Department of Education
- (1) \* Department of Health
- \* Department of Health -- Environmental Management
- \* Department of Land and Natural Resources
- \* Department of Land and Natural Resources -- Historic Preservation
- \* Department of Transportation -- Harbors
- (2) \* Department of Transportation -- Highways
- \* Office of Hawaiian Affairs
- \* Office of State Planning
- \* University of Hawaii -- Water Resources Research Center
- \* University of Hawaii -- Environmental Center

Federal Agencies

Commission on Persons with Disabilities

National Park Service

(6) \*

US Department of Agriculture -- Soil Conservation Service

(4) \*

US Army Corps of Engineers -- Pacific Ocean

US Department of the Interior -- Fish and Wildlife Services

Other Agencies

GTE Hawaiian Tel

Hawaii Kai Neighborhood Board

Sea Grant Extension Service

Sea Life Park Hawai'i



**BOARD OF WATER SUPPLY**

CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA STREET

HONOLULU, HAWAII 96843




November 20, 1992

FRANK F. FASI, Mayor

WALTER O. WATSON, JR., Chairman  
MAURICE H. YAMASATO, Vice Chairman  
SISTER M. DAVILYN AH CHICK, O.S.F.  
JOHN W. ANDERSON, JR.  
REX D. JOHNSON  
MELISSA Y.J. LUM  
C. MICHAEL STREET

KAZU HAYASHIDA  
Manager and Chief Engineer

**TO: WALTER M. OZAWA, DIRECTOR  
DEPARTMENT OF PARKS AND RECREATION**

**FROM: FOR KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER  
BOARD OF WATER SUPPLY** 

**SUBJECT: YOUR LETTER OF OCTOBER 13, 1992 REGARDING THE DRAFT  
ENVIRONMENTAL ASSESSMENT (DEA) FOR THE PROPOSED  
HANAUMA BAY NATURE PARK IMPROVEMENTS, TMK: 3-9-12: 2, 12, 14  
AND 16**

Thank you for giving us the opportunity to review and comment on the Hanauma Bay Nature Park Improvements Project.

We have the following comments to offer:

1. There are two meters currently serving the project site, one domestic and one fire.
2. The availability of additional water will be confirmed when the building permit application is submitted for our review and approval. If additional water is made available, the applicant will be required to pay the prevailing Water System Facilities Charges and any applicable meter installation charges.
3. If a three-inch or larger meter is required to accommodate the project, construction drawings showing the installation of the meter should be submitted for our review and approval.
4. The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.
5. The Department of Parks and Recreation should investigate the use of nonpotable water for all irrigation purposes.



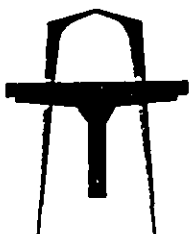
Mr. Walter M. Ozawa  
Page 2  
November 20, 1992

6. A Board of Water Supply approved double check valve (DCVA) backflow prevention assembly should be installed on the domestic water line immediately after the property valve and prior to any branch piping. If a nonpotable water source is proposed for irrigation purposes, an approved reduced pressure principle backflow prevention assembly should be installed in place of the DCVA.
7. Page II-7: Please note that the 36-inch water transmission main on the mauka side of Kalaniana'ole Highway is not in the vicinity of Hanauma Bay. The main diverges from Kalaniana'ole Highway near the Hawaii Kai Golf Course.

If you have any questions, please contact Bert Kuioka at 527-5235.

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5261

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. Kazu Hayashida, Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 South King Street  
Honolulu, Hawaii 96843

Dear Mr. Lee:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 20, 1992 commenting on the subject Environmental Assessment/Negative Declaration Anticipated. We offer the following responses to your numbered comments, respectively:

1. This information will be forwarded to the project designers.
2. The Department of Parks and Recreation acknowledges that the commitment of water for the project will be made when the building permit is submitted to your department for review. The DPR shall also comply with any Water System Facilities Charge requirements.
3. This information will be forwarded to the project designers.
4. The DPR shall require project designers to consult with the Honolulu Fire Department's Fire Prevention Bureau regarding on-site fire protection.
5. The DPR will investigate the use of non-potable water for irrigation during the design phase. Please note that landscaping shall feature plants suited for the dry conditions at the site.
6. These recommendations will be forwarded to the project designers.
7. In the Final EA, we will amend the statement on page II-7 regarding the location of the 36-inch water transmission main.

We hope we have adequately responded to your comments. Your letter, together with this response, will be included in the Final Environmental Assessment.



**WILSON**  
**OKAMOTO**

**& ASSOCIATES, INC.**

2733-01

Letter to Mr. Hayashida

Page 2

December 28, 1992

We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,



Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR

DEPARTMENT OF GENERAL PLANNING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANK P. FASI  
MAYOR

BENJAMIN B. LEE  
CHIEF PLANNING OFFICER  
ROLAND D. LIBBY, JR.  
DEPUTY CHIEF PLANNING OFFICER

ET 10/92-3033

November 9, 1992

MEMORANDUM

*Walt*  
TO: WALTER M. OZAWA, DIRECTOR  
DEPARTMENT OF PARKS AND RECREATION  
FROM: BENJAMIN B. LEE, CHIEF PLANNING OFFICER  
DEPARTMENT OF GENERAL PLANNING  
SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR THE  
HANAUMA BAY NATURE PARK, HONOLULU, OAHU,  
HAWAII, TAX MAP KEY 3-9-12: Por. 2, 12, 14, 16

This is in response to your letter of October 13, 1992. We have reviewed the subject DEA for the Hanauma Bay Nature Park and have the following comments:

1. The Final Environmental Assessment (FEA) should address potential traffic impacts and traffic management concerns. On weekends, and perhaps typically, the available parking is filled early in the day and later arriving vehicles are turned away.

We suggest that the plan include a turn-around area near the entrance of the park to facilitate pedestrian drop-offs and to minimize congestion.

2. The FEA should include a discussion of the width and the type of materials intended for the proposed maintenance paths.

We suggest that the paths be designed to minimize the potential of creating a visual barrier between the beach and the park.

Walter M. Ozawa  
November 9, 1992  
Page 2

Thank you for the opportunity to comment. Should you have any questions, please contact Eugene Takahashi of our staff at 527-3022.



BENJAMIN B. LEE  
Chief Planning Officer

BBL:ft

cc: OEQC  
Wilson Okamoto and Associates, Inc.

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5281

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. Benjamin B. Lee, Chief Planning Officer  
Department of General Planning  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Lee:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 9, 1992 commenting on the subject Environmental Assessment/Negative Declaration Anticipated. We offer the following responses to your numbered comments, respectively:

1. As a Master Plan for Hanauma Bay Nature Park, details of specific facilities have been deferred to the design stage. Thus, the recommended improvements at the park entrance to address traffic flow do not specify how the entrance should be configured. Subsequent studies, including detailed topographic surveys and traffic analysis, will be required to design appropriate facilities. Your suggestion is appreciated, however, and will be taken into consideration during the design phase.
2. Again, details of specific facilities have been deferred to the design stage. The Master Plan recommends that the maintenance path be located far enough inland to avoid shoreline erosion and be capable of accommodating maintenance vehicles (as well as emergency vehicles, if necessary). Additional topographic studies and possibly soil studies will be required to determine path alignment, width and construction material. Your suggestion that paths be designed to minimize visual impacts will be considered in the design phase.

We hope we have adequately responded to your comments. Your letter, together with this response, will be included in the Final Environmental Assessment.

**WILSON**  
**OKAMOTO**  
**& ASSOCIATES, INC.**

2733-01  
Letter to Mr. Lee  
Page 2  
December 28, 1992

We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,



Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR



DEPARTMENT OF LAND UTILIZATION  
**CITY AND COUNTY OF HONOLULU**  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813 • (808) 523-4432

FRANK F. FASI  
MAYOR



DONALD A. CLEGG  
DIRECTOR

LORETTA K.C. CHEE  
DEPUTY DIRECTOR

92-04005 (ask)

November 9, 1992

MEMORANDUM

TO: WALTER M. OZAWA, DIRECTOR  
DEPARTMENT OF PARKS AND RECREATION

FROM: DONALD A. CLEGG, DIRECTOR

SUBJECT: HANAUMA BAY NATURE PARK  
DRAFT ENVIRONMENTAL ASSESSMENT (EA)  
TAX MAP KEY 3-9-12; POR. 2, 12, 14, 16

This responds to your October 13, 1992 letter requesting comments on the Draft EA for the Hanauma Bay Nature Park. We have reviewed the EA and offer the following:

1. As noted in the EA, the project is within the Special Management Area and is subject to an approval of a Special Management Area Use Permit (SMP) and Shoreline Variance.
2. Your SMP application should include a description of all proposed structures including heights and approximate floor area for buildings and approximate areas for increases in paved surfaces. You should indicate if renovations will include additions or expansions. Existing and proposed site plans should be included as part of your EA submitted.
3. The EA application should address the impact of proposed improvements on coastal views, both from the beach area toward land and from the land seaward.
4. As noted in the EA, a Shoreline Setback Variance is required for new structures within the shoreline setback. A certified shoreline survey and description of how the proposal meets the criteria for granting a variance should be submitted as part of your application.

WALTER M. OZAWA  
Page 2

5. Page V-3 states that a more equitable mix of resident and non-resident visitors is expected. The EA should explain how this mix will be achieved. Information on future park usage and how the proposed project will change use patterns should be addressed in the EA.

Should you have questions regarding the above, you may contact Ardis Shaw-Kim of our staff at 527-5349.



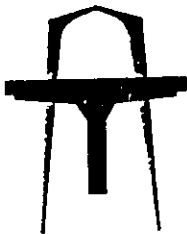
DONALD A. CLEGG  
Director of Land Utilization

DAC:ct

~~XXXXXXXXXX~~

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
ASSOCIATES, INC.



ENGINEERS  
ARCHITECTS  
PLANNERS

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5281

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. Donald A. Clegg, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Clegg:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 9, 1992 commenting on the subject Environmental Assessment/Negative Declaration Anticipated. We offer the following responses to your numbered comments, respectively:

1. No response required.
2. The DPR will be coordinating the preparation of all required plans for the SMP application with your office.
3. As an overall Master Plan for the park, details of specific facilities have been deferred to the design stage. The Project Description introduces preliminary planning considerations to minimize potential impact on coastal views on p. I-2 and I-5. These impacts will be reiterated in the Long-Term Impacts section. The proposed improvements will be designed to minimize intrusion into coastal view planes and blend with the natural textures and tones of the site. In conjunction with the SMP application, the DPR will be coordinating with your office regarding the need for any additional technical studies, including view plane analyses.
4. No response required.
5. As discussed on p. I-6, controls on park usage have already been implemented through the 1990 *Hanauma Bay General Plan* and its corresponding *Hanauma Bay Rules and Regulations*. The proposed facilities are intended to support and facilitate implementation of the park rules, however, no significant change in use patterns is anticipated.

**WILSON**  
**OKAMOTO**  
**& ASSOCIATES, INC.**

2733-01  
Letter to Mr. Clegg  
Page 2  
December 28, 1992

We hope we have adequately responded to your comments. Your letter, together with this response, will be included in the Final Environmental Assessment. We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,



Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANK F. FASI  
MAYOR

C. MICHAEL STREET  
DIRECTOR AND CHIEF ENGINEER  
FELIX B. LIMTIACO  
DEPUTY DIRECTOR

ENV 92-289

November 12, 1992

MEMORANDUM

TO: MR. WALTER M. OZAWA, DIRECTOR  
DEPARTMENT OF PARKS AND RECREATION

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA)  
HANAUMA BAY NATURE PARK  
TMK:3-9-12:POR. 2, 12, 14 & 16

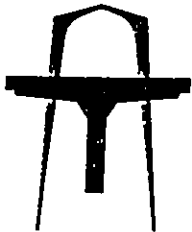
We have reviewed the subject DEA and have the following comments:

1. We have no objection to the proposed park improvements.
2. We understand that wastewater generated from the park will continue to be pumped into the private wastewater system serving the Hawaii Kai area.
3. The DEA should address the impact of storm water discharge associated with construction activities on water quality of the receiving waters.
4. The DEA should also state what structural or non-structural best management practice (BMP) will be provided to control and reduce the discharge of pollutants as outlined in the National Pollutant Discharge Elimination System (NPDES) regulations (40 CFR Part 122, Subpart B for municipal storm sewer systems).

*C. Michael Street*  
C. MICHAEL STREET  
Director and Chief Engineer

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5261

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. C. Michael Street, Director and Chief Engineer  
Department of Public Works  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Street:

Subject: Hanauana Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 12, 1992 commenting on the subject Environmental Assessment/Negative Declaration Anticipated. We offer the following responses to your numbered comments, respectively:

1. No response required.
2. Your understanding is accurate. Wastewater generated from the park will continue to be pumped into the private wastewater system serving the Hawaii Kai area.
3. As stated in the EA, construction activities will be conducted in phases and individual projects are relatively small. Therefore, construction impacts on water quality will be minimal, even with the possibility of inclement weather.
4. As an overall Master Plan for the park, details of construction methods have been deferred to the design stage. The DPR will comply with all Federal, State and County requirements for controlling storm runoff. If necessary for specific improvements, best management practice (BMP) provisions for construction will be prepared.

We hope we have adequately responded to your comments. Your letter, together with this response, will be included in the Final Environmental Assessment.

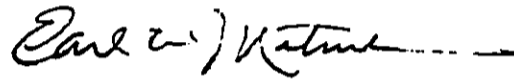
**WILSON**  
**OKAMOTO**

**& ASSOCIATES, INC.**

2733-01  
Letter to Mr. Street  
Page 2  
December 28, 1992

We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,



Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR

DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**

HONOLULU MUNICIPAL BUILDING  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANK F. FASI  
MAYOR

JOSEPH M. MAGALDI, JR.  
DIRECTOR

AMAR SAPPAL  
DEPUTY DIRECTOR

TE-4371  
PL92.1.373

November 13, 1992

MEMORANDUM

TO: WALTER M. OZAWA, DIRECTOR  
DEPARTMENT OF PARKS AND RECREATION

FROM: JOSEPH M. MAGALDI, JR., DIRECTOR

SUBJECT: HANAUMA BAY NATURE PARK  
DRAFT ENVIRONMENTAL ASSESSMENT  
TMK: 3-9-12: PORTION 2, 12, 14, AND 16

This is in response to your letter dated October 13, 1992 requesting our comments on the subject environmental assessment.

Based on our review, we have no comments on the proposed project. However, the State Department of Transportation should be contacted regarding the proposed improvements at the park's entrance in the vicinity of Kalaniana'ole Highway. In addition, the Honolulu Public Transit Authority should be contacted regarding the proposed City bus stop which will be located within the park.

Should you have any questions, please contact Lance Watanabe of my staff at local 4199.

  
\_\_\_\_\_  
JOSEPH M. MAGALDI, JR.

cc: Office of Environmental Quality Control  
Wilson Okamoto & Associates, Inc.



2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5281

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. Joseph M. Magaldi, Jr., Director  
Department of Transportation Services  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Magaldi:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 13, 1992 commenting on the subject Environmental Assessment/Negative Declaration Anticipated. During the design phase for the park entrance facilities, the Department of Parks and Recreation will contact both the State Department of Transportation and the Honolulu Public Transit Authority for their input.

Your letter, together with this response, will be included in the Final Environmental Assessment. We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR

POLICE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

801 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96813 - AREA CODE (808) 528-3111



FRANK F. FASI  
MAYOR

MICHAEL S. NAKAMURA  
CHIEF

HAROLD M. KAWASAKI  
DEPUTY CHIEF

OUR REFERENCE CS-LK

November 9, 1992

TO: WALTER M. OZAWA, DIRECTOR  
DEPARTMENT OF PARKS AND RECREATION


FROM: MICHAEL S. NAKAMURA, CHIEF OF POLICE  
HONOLULU POLICE DEPARTMENT

SUBJECT: HANAUMA BAY NATURE PARK  
DRAFT ENVIRONMENTAL ASSESSMENT (EA)  
TAX MAP KEY 3-9-12: POR. 2, 12, 14, 16  
HONOLULU, OAHU, HAWAII

We have reviewed the subject document and have determined that the proposed action should have no significant impact on the operation of the Patrol District responsible for the area.

Thank you for the opportunity to comment.

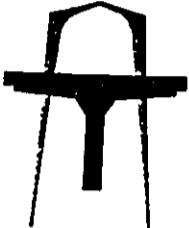
MICHAEL S. NAKAMURA  
Chief of Police

By   
CHESTER E. HUGHES  
Assistant Chief of Police  
Support Services Bureau

cc: Office of Environmental Quality Control  
Wilson Okamoto & Associates, Inc.

2733-01  
December 28, 1992

**WILSON**  
**OKAMOTO**  
**& ASSOCIATES, INC.**



**ENGINEERS**  
**ARCHITECTS**  
**PLANNERS**  
1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5261  
Mailing address:  
P. O. Box 3830  
Honolulu, Hawaii 96811

Mr. Michael S. Nakamura, Chief of Police  
Police Department  
City and County of Honolulu  
801 South Beretania Street  
Honolulu, Hawaii 96813

Attn: Mr. Chester E. Hughes  
Assistant Chief of Police

Dear Chief Nakamura:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 9, 1992 indicating that the proposed project will have no significant impact on police operations. Your letter will be included in the Final Environmental Assessment. We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR

JOHN WAIHEE  
GOVERNOR

CHARLES T. TOGUCHI  
SUPERINTENDENT



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P. O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

October 26, 1992

Mr. Walter M. Ozawa, Director  
Department of Parks and Recreation  
650 South King Street, Tenth Floor  
Honolulu, Hawaii 96813

Dear Mr. Ozawa:

SUBJECT: Hanauma Bay Nature Park  
Draft Environmental Assessment (EA)  
Tax Map Key: 3-9-12: Por. 2, 12, 14, 16  
Honolulu, Oahu, Hawaii

We have reviewed the subject draft environmental assessment and have no comment on the proposed development.

Thank you for the opportunity to respond.

Sincerely,

A handwritten signature in cursive script, appearing to read "Charles T. Toguchi".

Charles T. Toguchi  
Superintendent

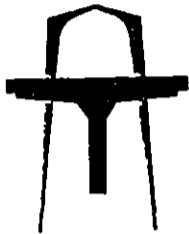
CTT:hy

cc: A. Suga, Asst. Supt.  
J. Kim, HDO  
B. Choy, OEQC  
Wilson Okamoto & Associates, Inc.

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
ASSOCIATES, INC.



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5261

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. Charles T. Toguchi, Superintendent  
Department of Education  
State of Hawaii  
PO Box 2360  
Honolulu, Hawaii 96804

Dear Mr. Toguchi:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of October 26, 1992 indicating that you have no comments on the subject Environmental Assessment/Negative Declaration Anticipated. Your letter will be included in the Final Environmental Assessment. We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR

JOHN WAIHEE  
GOVERNOR OF HAWAII



JOHN C. LEWIN, M.D.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HAWAII 96801

In reply, please refer to:

November 24, 1992

92-382/epo

Mr. Walter M. Ozawa  
Director, Department of Parks and Recreation  
City & County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Ozawa:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment (EA)  
TMK: 3-9-12: Por 2, 12, 14, and 16  
Honolulu, Oahu, Hawaii

Thank you for allowing us to review and comment on the subject project. We have the following comments to offer:

The subject project is located within a private regional sewer service system. As the area is sewered, we have no objections to the proposed various park improvements to upper and lower park areas provided that the project is connected to the regional sewers.

The developer should work closely with the private regional sewer authority to assure the availability of additional treatment capacity and adequacy for the project. Non-availability of treatment capacity will not be an acceptable justification for the use of any private treatment works.

If you should have any questions, please contact Ms. Lori Kajiwara of the Wastewater Branch at 586-4290.

Very truly yours,

A handwritten signature in cursive script, appearing to read "John C. Lewin".

JOHN C. LEWIN, M.D.  
Director of Health

c: Wastewater Branch  
Office of Environmental Quality Control  
Wilson Okamoto & Associates, Inc. (E. Matsukawa)

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5261

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Dr. John C. Lewin, Director of Health  
Department of Health  
State of Hawaii  
PO Box 3378  
Honolulu, Hawaii 96801

Dear Dr. Lewin:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 24, 1992 commenting on the subject Environmental Assessment/Negative Declaration Anticipated.

All proposed wastewater-generating facilities will be connected to the private regional sewer service system. The Department of Parks and Recreation will work closely with the private regional sewer authority to assure that sufficient capacity is available to accommodate proposed park improvements. No on-site treatment works will be utilized.

Your letter together with this response will be included in the Final Environmental Assessment. We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR

JOHN WAIHEE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
P.O. BOX 821  
HONOLULU, HAWAII 96809

REF:OCEA:KCK

WILLIAM W. PATY, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

JOHN P. KEPPELER, II  
DONA L. HANAIKE

AQUACULTURE DEVELOPMENT  
PROGRAM  
AQUATIC RESOURCES  
CONSERVATION AND  
ENVIRONMENTAL AFFAIRS  
CONSERVATION AND RESOURCES  
ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION PROGRAM  
LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

NOV 19 1992

File No.: 93-224  
DOC. ID.: 1773

The Honorable Walter M. Ozawa, Director  
Department of Parks and Recreation  
City and County of Honolulu  
650 So. King Street  
Honolulu, Hawaii 96813

Dear Mr. Ozawa:

SUBJECT: Hanauma Bay Nature Park Draft Environmental Assessment (EA)  
Honolulu, Hawaii, TMK: 3-9-12: 2, 12, 14, 16

Thank you for giving our Department the opportunity to comment on this matter. We have reviewed the submitted EA and have the following comments.

**Brief Discussion:**

The City and County of Honolulu Department of Parks and Recreation proposes major improvements at Hanauma Bay Nature Park to be completed in four (4) phases. The four phases of development are proposed to improve the existing park site in terms of access, safety, and support facilities.

This project must be reviewed pursuant to Chapter 183-41, HRS and Title 13, Chapter 2 (Hawaii Administrative Rules). Specifically, a Conservation District Use Application (CDUA) is required for any improvements within the Conservation District. The CDUA should contain a project master plan for the Hanauma Bay Nature Park improvements including all renovations and additions to be performed within the park area.

**HISTORIC PRESERVATION DIVISION CONCERNS:**

A review of our records shows that there are no known historic sites in the vicinity of the proposed park improvements. The proposed project would modify and replace existing facilities in areas that have been previously developed. Therefore, we believe that this project will have "no effect" on historic sites.



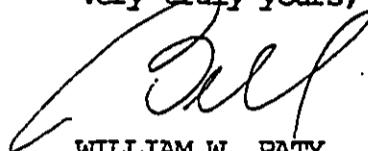
Mr. Ozawa

- 2 -

File No.: 93-224

Thank you for your cooperation in this matter. Please feel free to call Sam Lemmo at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,



WILLIAM W. PATY

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5281

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

William W. Paty, Chairperson  
Department of Land and Natural Resources  
State of Hawaii  
PO Box 621  
Honolulu, Hawaii 96809

Dear Mr. Paty:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 19, 1992 commenting on the subject Environmental Assessment/Negative Declaration Anticipated.

The Department of Parks and Recreation will comply with the requirement for filing a Conservation District Use Application encompassing all new improvements at the park which were not previously authorized. We appreciate the finding of "no effect" on historic sites. Be assured, however, that should any archaeological remains be uncovered, construction will be halted and the State Historic Preservation Division will be notified.

Your letter together with this response will be included in the Final Environmental Assessment. We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR

JOHN WAIHEE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

REX D. JOHNSON  
DIRECTOR  
DEPUTY DIRECTORS  
JOYCE T. OMIKE  
AL PANG  
JEANNE K. SCHULTZ  
CALVIN M. TSUDA

IN REPLY REFER TO:

October 19, 1992

HAR-E 7948.93

Mr. Walter M. Ozawa, Director  
Department of Parks and Recreation  
City and County of Honolulu  
650 South King Street, Tenth Floor  
Honolulu, Hawaii 96813

Dear Mr. Ozawa:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment

Thank you for your letter of October 13, 1992 which provided the subject Draft Environmental Assessment for our comments.

The Harbors Division does not have any interest in the proposed nature park because it will not affect their commercial harbors. For your information, the boating and coastal areas programs were transferred from this department to the Department of Land and Natural Resources on July 1, 1992.

We appreciate the opportunity to provide comments.

Sincerely,

  
Rex D. Johnson  
Director of Transportation

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5281

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. Rex D. Johnson, Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813-5097

Dear Mr. Johnson:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of October 19, 1992 indicating that DOT-Harbors has no comment on the subject Environmental Assessment/Negative Declaration Anticipated. Your letter will be reproduced in the Final Environmental Assessment. Thank you for your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, D.A.K.

JOHN WAIHEE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION

889 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-6087

October 23, 1992

REX D. JOHNSON  
DIRECTOR

DEPUTY DIRECTORS  
JOYCE T. OMINE  
AL PANG  
JEANNE K. SCHULTZ  
CALVIN M. TSUDA

IN REPLY REFER TO:

HWY-PS  
2.4290

Mr. Walter M. Ozawa, Director  
Department of Parks and Recreation  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

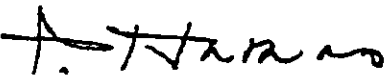
Dear Mr. Ozawa:

Hanauma Bay Nature Park  
Draft Environmental Assessment  
TMK: 3-9-12: por. 2, 12, 14, 16  
Honolulu, Oahu, Hawaii

Thank you for your letter of October 13, 1992, requesting our comments on the subject project.

Construction plans for any work within the State highway right-of-way must be submitted for our review and approval. Kalaniana'ole Highway fronting the project is under State jurisdiction.

Sincerely,

  
Rex D. Johnson  
Director of Transportation

c: OEQC (Brian J.J. Choy)  
WOA (Earl Matsukawa)

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



ENGINEERS  
ARCHITECTS  
PLANNERS

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5287

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. Rex D. Johnson, Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813-5097

Dear Mr. Johnson:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of October 23, 1992 with the comments of DOT-Highways on the subject Environmental Assessment/Negative Declaration Anticipated. As required, construction plans for the park entrance will be submitted to your Department for review and approval, after they have been prepared.

Your letter, together with this response, will be reproduced in the Final Environmental Assessment. Thank you for your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPIOLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813-5249  
PHONE (808) 586-3777  
FAX (808) 586-3799

November 18, 1992

Department of Parks and Recreation  
650 South King Street, Tenth Floor  
Honolulu, Hawaii 96813  
Attn: Walter M. Ozawa, Director

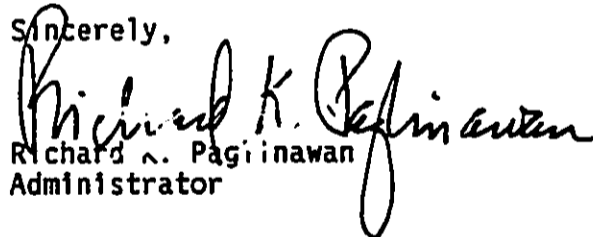
Dear Mr. Ozawa:

RE: Hanauma Bay Nature Park  
Draft Environmental Assessment (EA)  
TMK: 3-9-12: Por. 2, 12, 14 and 16  
Location: Honolulu, Oahu, Hawaii

We have received a copy of the above-referenced Draft Environmental Assessment (EA). Thank you for the opportunity to review this application. At this time, we have no concerns or comments on this matter.

If you have any questions, please contact Lynn J. Lee in our Land and Natural Resources Division at 586-3777.

Sincerely,

  
Richard A. Pagiinawan  
Administrator

cc: Clayton Hee  
Chair, Board of Trustees

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5281

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Richard K. Paglinawan, Administrator  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813-5249

Dear Mr. Paglinawan:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 18, 1992 indicating that you have no comments on the subject Environmental Assessment/Negative Declaration Anticipated. Your letter will be included in the Final Environmental Assessment. We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR



UNITED STATES  
DEPARTMENT OF  
AGRICULTURE

SOIL  
CONSERVATION  
SERVICE

P. O. BOX 50004  
HONOLULU, HAWAII  
96850

November 9, 1992

Mr. Walter M. Ozawa, Director  
Department of Parks and Recreation  
City and County of Honolulu  
650 S. King Street, Tenth Floor  
Honolulu, Hawaii 96813

Dear Mr. Ozawa:

Subject: Draft Environmental Assessment (EA) - Hanauma Bay Nature Park,  
Honolulu, Hawaii

We have reviewed the above Draft EA for the Hanauma Bay Nature Park and  
have no comments to offer at this time.

Thank you for the opportunity to review this draft and would appreciate it  
if we could review the Draft Environmental Impact Statement (DEIS).

Sincerely,



WARREN M. LEE  
State Conservationist

cc:  
Mr. Brian J. Chov. Director, Office of Environmental Quality Control, State  
of Hawaii, 220 S. King Street, 4th Floor, Honolulu, Hawaii 96813  
Mr. Earl Matsukawa, Wilson Okamoto & Associates, Inc., P.O. Box 3530,  
Honolulu, Hawaii 96814

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**  
& ASSOCIATES, INC.



ENGINEERS  
ARCHITECTS  
PLANNERS

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-5261

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. Warren M. Lee, State Conservationist  
U.S. Department of Agriculture  
Soil Conservation Service  
PO Box 50004  
Honolulu, Hawaii 96850

Dear Mr. Lee:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por. 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of November 9, 1992 indicating that you have no comments on the subject Environmental Assessment/Negative Declaration Anticipated.

As indicated on the Draft EA, the Department of Parks and Recreation anticipates filing a Negative Declaration for this project which would mean that no Draft Environmental Impact Statement (EIS) will be forthcoming.

Your letter will be included in the Final Environmental Assessment. We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DPR



DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FORT SHAFTER, HAWAII 96858-5440



REPLY TO  
ATTENTION OF

October 28, 1992

Planning Division

Mr. Walter M. Ozawa, Director  
City and County of Honolulu  
Department of Parks and Recreation  
650 South King Street  
Honolulu, Hawaii 96813

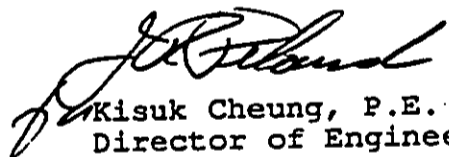
Dear Mr. Ozawa:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for Mauna Bay Nature Park, Oahu, Hawaii (TMK 3-9-12: 2, 12, 14, 16). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. The project does not involve work in waters of the U.S.; therefore, a DA permit is not required.

b. According to the enclosed Federal Emergency Management Agency's Flood Insurance Rate Map, panel number 150001-0125-B, dated September 4, 1987, the project site is located in Zone D (areas in which flood hazards are undetermined).

Sincerely,



Kisuk Cheung, P.E.  
Director of Engineering

Enclosure

Copies Furnished:

Office of Environmental Quality Control  
State of Hawaii  
220 South King Street, 4th Floor  
Attention: Mr. Brian J.J. Choy  
Honolulu, Hawaii 96813

Wilson Okamoto & Associates, Inc.  
P.O. Box 3530  
Attention: Mr. Earl Matsukawa  
Honolulu, Hawaii 96814

## LEGEND

### SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.




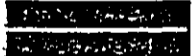


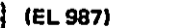

### FLOODWAY AREAS IN ZONE AE

### OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

### OTHER AREAS

- ZONE X** Areas determined to be outside 500-year flood plain.
- ZONE D** Areas in which flood hazards are undetermined.

-  Flood Boundary
-  Floodway Boundary
-  Zone D Boundary
-  Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
-  513  
Base Flood Elevation Line; Elevation in Feet\*
-  Cross Section Line
-  (EL 987)  
Base Flood Elevation in Feet Where Uniform Within Zone\*
-  RM7x  
Elevation Reference Mark

\*Referenced to the National Geodetic Vertical Datum of 1929

## NOTES

## NATIONAL FLOOD INSURANCE PROGRAM

# FIRM FLOOD INSURANCE RATE MAP

CITY AND COUNTY OF  
HONOLULU,  
HAWAII

PANEL 125 OF 135  
(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

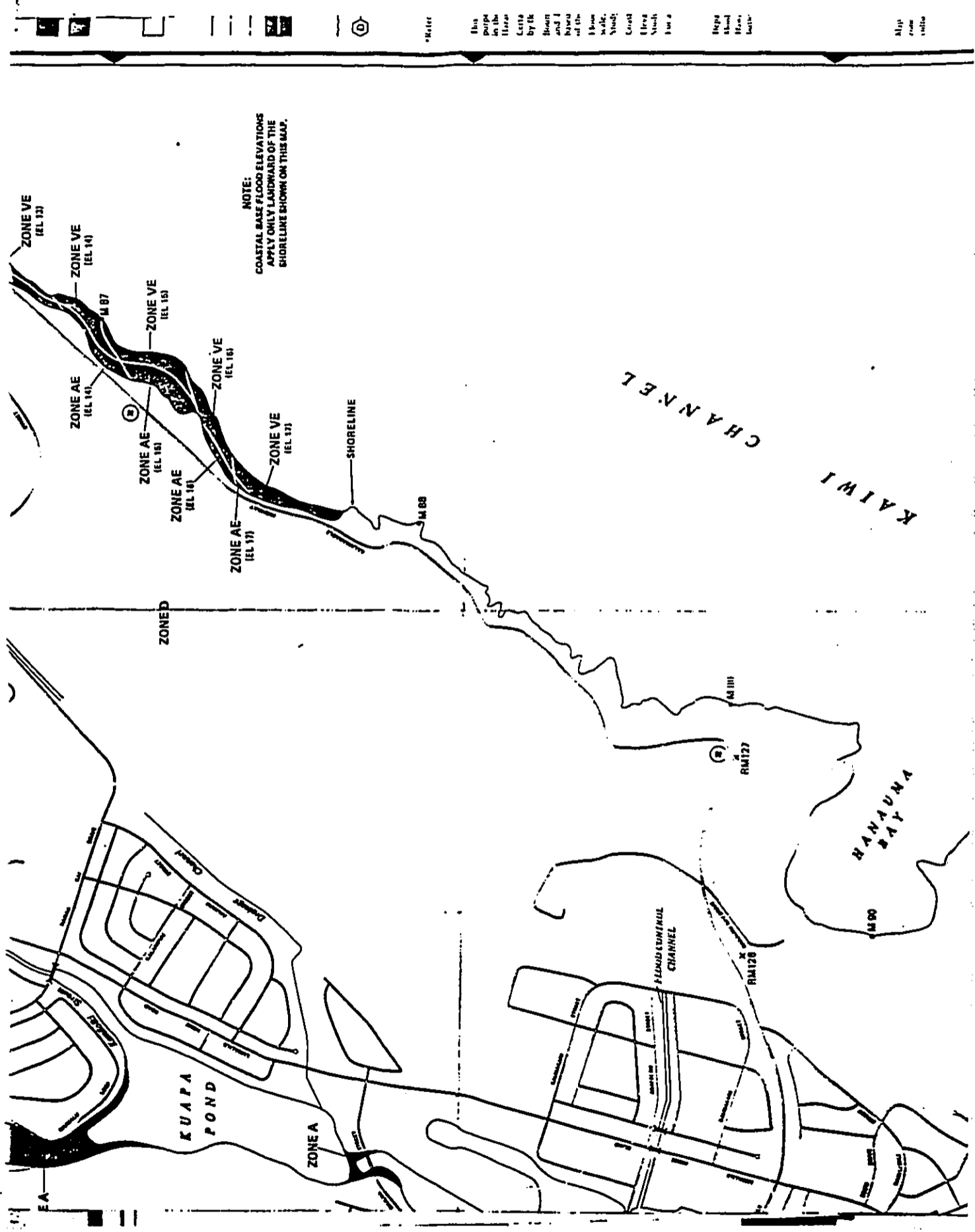
COMMUNITY-PANEL NUMBER  
150001 0125 B

MAP REVISED:  
SEPTEMBER 4, 1987



Federal Emergency Management Agency

CUSTOMER COPY



NOTE:  
 COASTAL BASE FLOOD ELEVATIONS  
 APPLY ONLY LANDWARD OF THE  
 SHORELINE SHOWN ON THIS MAP.

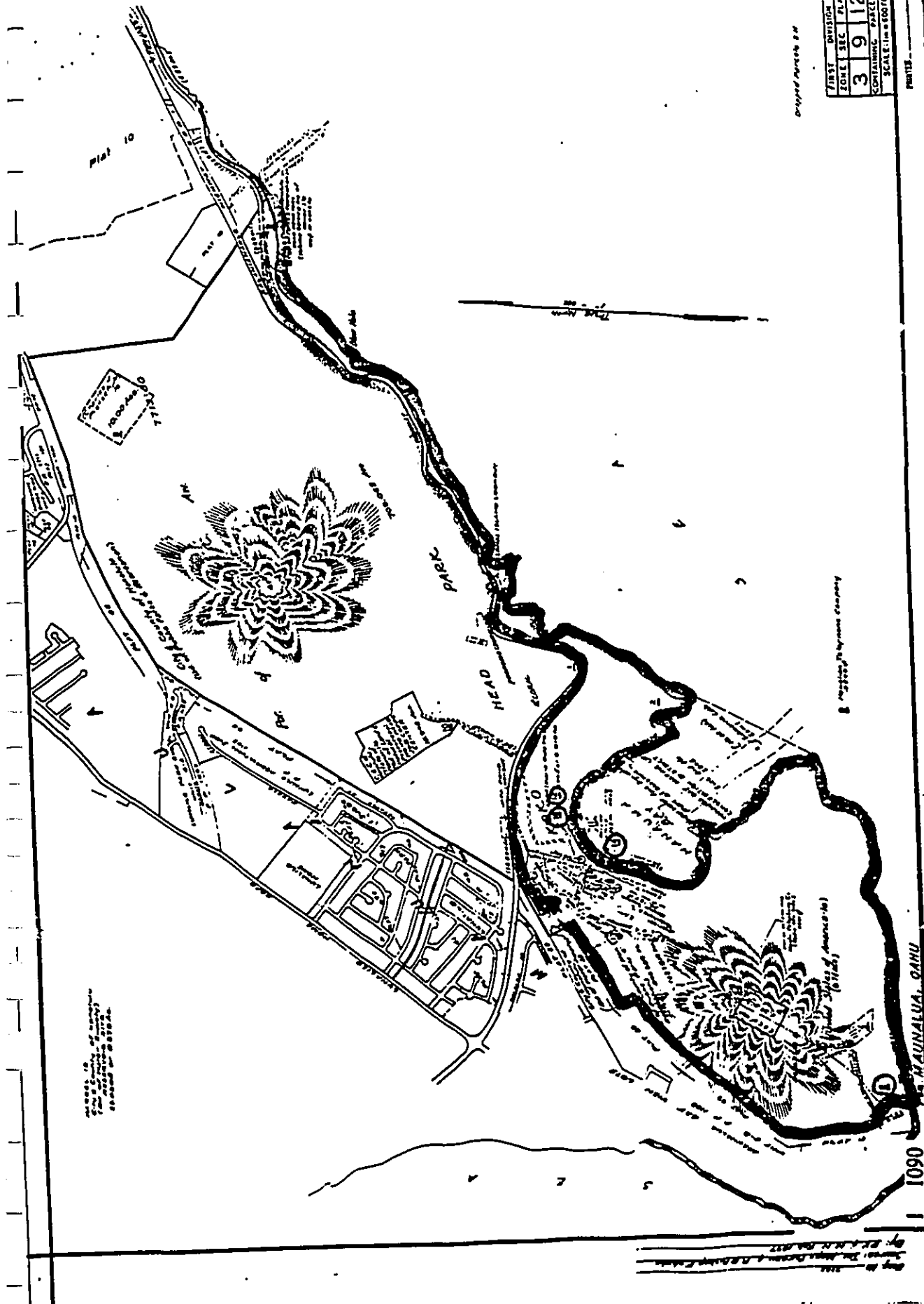
Water

This  
 depth  
 in the  
 area  
 is  
 by the  
 Coast  
 and is  
 based  
 on the  
 mean  
 high  
 water  
 mark  
 used  
 for a

Depth  
 shown  
 here  
 is

Map  
 from  
 scale

DOCUMENT CAPTURED AS RECEIVED



Original March 24

FIRST DIVISION	PL.
ZONE SEC.	PL.
CONTAINING	PAGE
SCALE: 1 in = 500 ft	

1090

1090

MAUNALUA, OAHU

By: [illegible]  
Checked: [illegible]

2733-01  
December 28, 1992

**WILSON  
OKAMOTO**

**& ASSOCIATES, INC.**



**ENGINEERS  
ARCHITECTS  
PLANNERS**

1150 SOUTH KING STREET  
HONOLULU, HAWAII 96814  
PHONE: (808) 531-8200

Mailing address:  
P. O. Box 3530  
Honolulu, Hawaii 96811

Mr. Kisuk Cheung, P.E., Director of Engineering  
U.S. Army Engineer District, Honolulu  
Department of the Army  
Fort Shafter, Hawaii 96858-5140

Dear Mr. Cheung:

Subject: Hanauma Bay Nature Park  
Draft Environmental Assessment  
Tax Map Key: 3-9-12: por 2, 12, 14, 16  
Hanauma Bay, Oahu, Hawaii

Thank you for your letter of October 28, 1992, confirming that a Department of the Army permit will not be necessary for this project, and for verifying the hazard ratings from the Federal Emergency Management Agency's Flood Insurance Rate Map.

Your letter, together with this response, will be reproduced in the Final Environmental Assessment. We appreciate your interest and participation in the consultation phase of the environmental review process.

Sincerely,

Earl K. Matsukawa  
Project Manager

cc: Mr. Walter M. Ozawa, DFR



DOCUMENT CAPTURED AS RECEIVED

REFERENCES

**REFERENCES**

1. City and County of Honolulu. *Development Plan Common Provisions*. Ordinance No. 84-54.
  2. City and County of Honolulu. *Development Plan Special Provisions for East Honolulu*. Ordinance No. 83-6.
  3. City and County of Honolulu Department of General Planning. *General Plan Objectives and Policies*. 1988.
  4. City and County of Honolulu Department of Land Utilization. *Land Use Ordinance*. December 1990.
  5. City and County of Honolulu Department of Parks and Recreation. *Hanauma Bay Beach Park Site Development Plan*. Prepared by Wilson Okamoto and Associates, Inc. 1977.
  6. City and County of Honolulu Department of Parks and Recreation. *Hanauma Bay Nature Park Master Plan*. Prepared by Wilson Okamoto and Associates, Inc. May 1992.
  7. City and County of Honolulu Department of Parks and Recreation. *Hanauma Bay General Plan*. Includes Hanauma Bay Rules and Regulations. June 12, 1990.
  8. Clark, John R.K. *The Beaches of Oahu*. 1977.
  9. Haselwood, E.L. and G.G. Motter. *Handbook of Hawaiian Weeds*. Printed by the Lyon Arboretum Association. June 1970.
  10. St. John, Harold. *List and Summary of the Flowering Plants in the Hawaiian Islands*. Hong Kong: Cathay Press Ltd. 1973.
  11. State of Hawaii Department of Business, Economic Development and Tourism. *The Hawaii State Functional Plan--Tourism*. 1991.
  12. State of Hawaii Department of Business, Economic Development and Tourism. *State of Hawaii Data Book 1991: A Statistical Abstract*. November 1991.
-

13. State of Hawaii Department of Land and Natural Resources. *The Hawaii State Functional Plan--Conservation Lands*. 1991.
  14. State of Hawaii Department of Land and Natural Resources. *The Hawaii State Functional Plan--Recreation*.
  15. State of Hawaii Department of Land and Natural Resources Division of State Parks. *Preliminary Ka Iwi Master Plan*. Prepared by Wilson Okamoto and Associates, Inc. February 1992.
  16. State of Hawaii Office of the Governor, Office of State Planning. *The Hawaii State Plan Chapter 226, Hawaii Revised Statutes 1988*.
  17. United States Department of Agriculture Soil Conservation Service. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. In cooperation with the University of Hawaii Agricultural Experiment Station. August 1972.
  18. University of Hawaii, Sea Grant Extension Service. *Hanauma Bay Baseline Users Surveys*. April 1991.
-

DOCUMENT CAPTURED AS RECEIVED

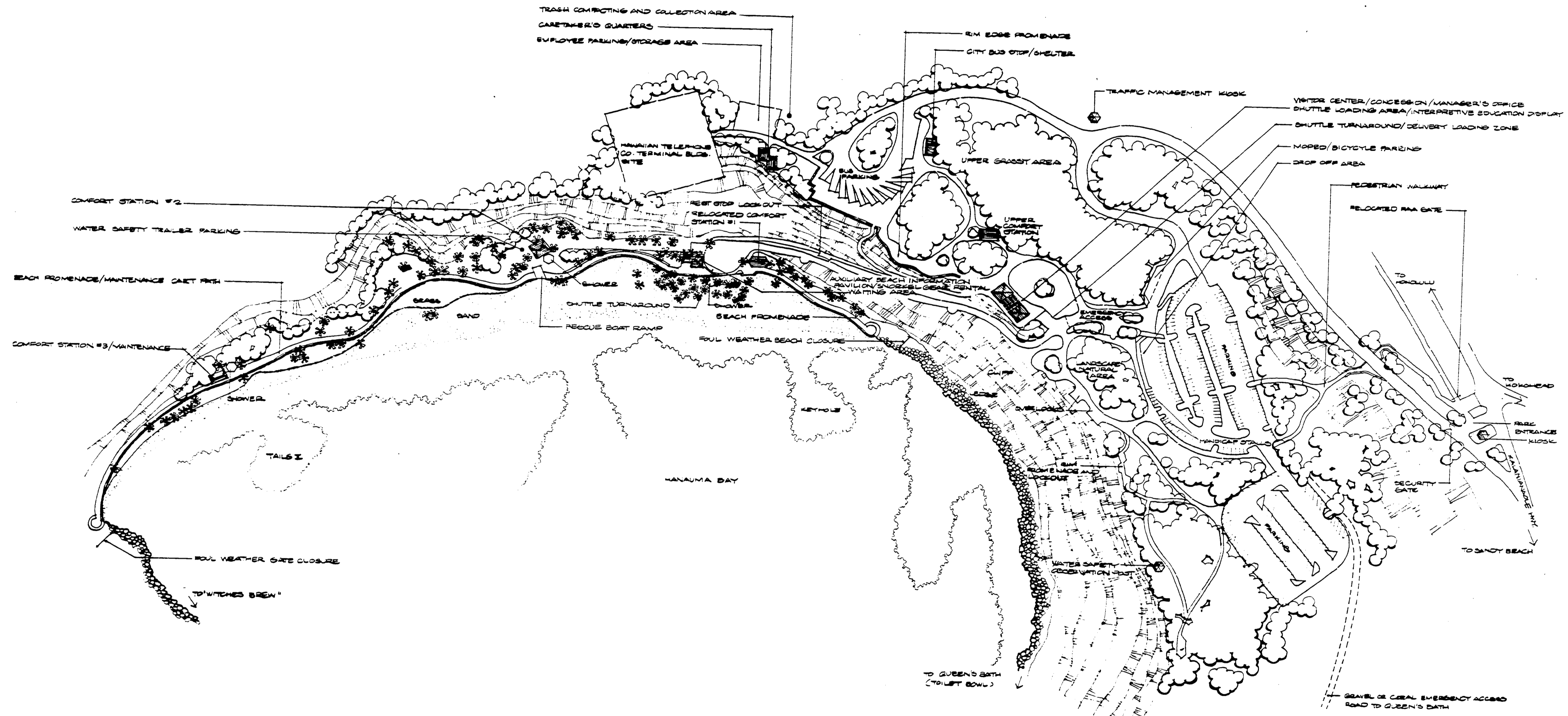
ATTACHMENT

---

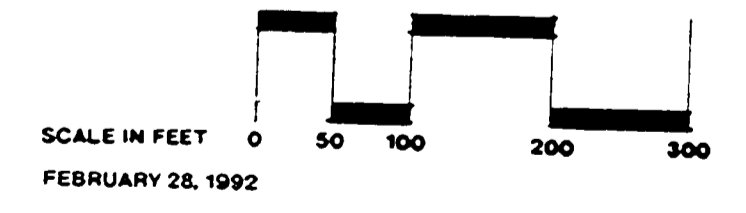
**OVERSIZED  
DRAWING/MAP**

**PLEASE SEE  
35MM ROLL**

**00081 B**



SITE DEVELOPMENT PLAN  
 HANAUMA BAY NATURE PARK



00081 B