DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Website: www.honolulu.gov

MUFI HANNEMANN
MAYOR

WAYNE M. HASHIRO, P.E.
DIRECTOR

EUGENE C. LEE, P.E.
DEPUTY DIRECTOR

131469

December 12, 2005

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

Subject: Finding of No Significant Impact (FONSI) for Kawailoa Beach Park
City and County of Honolulu, Department of Design and Construction
Tax Map Key (1) 6-1-05:14 (por.), 19 (por.) and
Tax Map Key (1) 6-1-08:17, 18, 25 (por.), 26 (por.)
Kawailoa, Island of Oahu, Hawaii

The City and County of Honolulu, Department of Design and Construction, has reviewed the comments received during the 30-day public comment period that began on September 23, 2005. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the next available *Environmental Notice.*

We have enclosed a completed OEQC Publication Form and four copies of the final environmental assessment.

Should there be any questions, please call Gary Doi, Facilities Division, at 527-6699.

Very truly yours,

for Wayne M. Hashiro, P.E.
Director

WMH:ei

Enclosures

Kawailoa Beach Park

TMK (1) 6-1-05: 14 (por.), 19 (por.) & TMK (1) 6-1-08:17, 18, 25 (por.), 26 (por.)
Kawailoa, O'ahu, Hawai'i

Final Environmental Assessment and Application for Special Management Area Use Permit

Proposing Agency:
City and County of Honolulu
Department of Design & Construction

Prepared by:
Group 70 International, Inc.
Architecture • Planning • Interior Design • Environmental Services
925 Bethel Street, Fifth Floor
Honolulu, HI 96813

December 2005

Kawailoa Beach Park

TMK (1) 6-1-05: 14 (por.), 19 (por.) & TMK (1) 6-1-08:17, 18, 25 (por.), 26 (por.)
Kawailoa, O'ahu, Hawai'i

Final Environmental Assessment and Application for Special Management Area Use Permit

This environmental document is prepared in accordance with the requirements of Chapter 343, HRS and Hawai'i Administrative Rules, Title 11, Department of Health.

This application for Special Management Area Use Permit is prepared in accordance with the requirements of Chapter 25, Revised Ordinances of Honolulu (ROH).

Proposing Agency:
City and County of Honolulu
Department of Design and Construction
650 South King Street, 9th Floor
Honolulu, Hawai'i 96813

Prepared by:
Group 70 International, Inc.
Architecture • Planning • Interior Design • Environmental Services
925 Bethel Street, Fifth Floor
Honolulu, HI 96813

December 2005

TABLE OF CONTENTS

To facilitate the readers' ability to distinguish the revisions made from the Draft EA to the Final EA, substantive changes and additions are highlighted. Text that has been deleted is indicated by a ~~strikethrough~~. New, revised and deleted sections, figures and appendices are noted.

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

Section 1.0
Introduction

1.0 INTRODUCTION

1.1 PROJECT INFORMATION SUMMARY

Type of Application:	Environmental Assessment (EA); Special Management Area (SMA) Use Permit
Applicant/Land Owner:	City and County of Honolulu Dept. of Design and Construction 650 South King Street, 9th Floor Honolulu, HI 96813 Contact: Gary Doi, Project Manager Telephone: 808-527-6699
Agent:	Group 70 International, Inc. 925 Bethel Street, 5th Floor Honolulu, Hawaii 96813 Contact: Jeffrey Overton, AICP Telephone: 808-523-5866 x 104
Accepting Authority:	City and County of Honolulu, Department of Design and Construction
Name of Action:	Kawailoa Beach Park Recreation Facilities
Class of Action:	Use of County lands and funds, Project in SMA
Project Location:	Kawailoa (Chun's Reef), North Shore of O'ahu, Hawai'i
Tax Map Key:	TMK: (1) 6-1-08: 17, 18, 25 (por.) & 26 (por.) TMK: (1) 6-1-05: 14 (por.) & 19 (por.)
Land Area:	3.515 acres (152,985 square feet)
State Land Use District:	Urban District (U): TMK: (1) 6-1-08: 17, 18 Agricultural District (A): TMK: (1) 6-1-05: 14, 19 and TMK: (1) 6-1-08: 25, 26
City / County Zoning:	R-5 Residential: TMK: (1) 6-1-08: 17, 18 AG-1 Restricted Agriculture: TMK: (1) 6-1-05:14, 19 and TMK (1) 6-1-08: 25, 26
City / County Development Plan:	North Shore: Park and Agriculture
SMA:	Location in SMA, actions requires an SMA permit.
Flood Zone:	FIRM Zone X and VE

Tsunami Zone: Located in the Tsunami Inundation Zone.

Special Designations: Special Management Area

Anticipated Determination: Finding of No Significant Impact (FONSI)

1.2 OVERVIEW OF PROPOSED PROJECT

The Department of Design and Construction, City and County of Honolulu, proposes to construct improvements at Kawailoa Beach Park located at Chun's Reef on the North Shore, District of Waialua, City and County of Honolulu. New recreational facilities at Kawailoa Beach Park will provide beach-oriented recreation and support facilities for the North Shore community and visitors. The approximate 3.5-acre site is identified as Tax Map Key (1) 6-1-05:14 (por.), 19 (por.) & (1) 6-1-08:17, 18, 25 (por.), 26 (por.). The project site is located within the City and County's Special Management Area (SMA), requiring an SMA permit. Refer to *Figure 1-1* and *1-2*.

The general elements of the proposed project involve planning for beach park amenities including, access and parking improvements, a comfort station and outdoor shower area, and a lifeguard tower and storage area. The park plan includes a restricted access nesting area for Wedge-tailed Shearwaters. Project components will be in compliance with the Americans with Disabilities Act of 1990 (ADA).

No significant impacts are anticipated from the construction or operation of the proposed improvements associated with the Kawailoa Beach Park. Construction-related traffic, air and noise impacts will be short-term in nature. The project will comply with government regulations during construction to mitigate potential impacts. A Finding of No Significant Impact (FONSI) is anticipated.

The subject properties have been designated for park use since the mid-1990's. A beach support park designation was included in the North Shore Sustainable Communities Plan, approved in 1999.

1.3 CONTENT OF ENVIRONMENTAL ASSESSMENT

This report serves dual functions as a Special Management Area Use Permit (SMP) application and an Environmental Assessment (EA) for the proposed project. This EA has been prepared in accordance with the requirements of Chapter 343, Hawai'i Revised Statutes and Hawai'i Administrative Rules, Title 11, Department of Health, as the proposed action involves the use of public land and administered funds. Pursuant to Chapter 25 ROH – Shoreline Management, an Environmental Assessment (EA) including exhibits, drawings and a description of the technical, economic, social and environmental characteristics of the project is required for the SMP application.

This Environmental Assessment report is presented in eight sections. General information on the Kawailoa Beach Park project is summarized in this section. It is followed by Section 2, which presents the proposed project, and Section 3, which describes the environment setting, potential impacts and mitigation measures. Description and an analysis of alternatives is provided in Section 4. Section 5 relates the project to the plans and policies including the Coastal Zone Management (CZM) Program. The anticipated determination and reasons for its believed outcome are given in Section 6. A list of references is provided in Section 7. Section 8 lists the agencies, organizations and individuals that received copies of the EA.

1.4 AGENCIES AND PUBLIC CONTACTED DURING THE PRE-CONSULTATION AND DRAFT EA REVIEW PERIODS

As part of the pre-consultation process, community planning meetings and presentations were conducted in order to involve the community in the planning and development of the Kawailoa Beach Park improvements and recreation facilities.

- March 22, 2005: The preliminary program for the park and very preliminary concept was presented and reviewed by the North Shore Neighborhood Board No. 27 and attending public.
- June 4, 2005: A community site visit meeting was conducted at the proposed Kawailoa Beach Park. The site visit and meeting was held with interested members of the community to discuss the park planning issues and address the potential alternative concepts for the Kawailoa Beach Park improvements.
- June 28, 2005: A presentation to the North Shore Neighborhood Board was conducted to provide an informational update on the community site visit, and to discuss the park planning design concepts and issues. Ideas and insight gathered from the community during the pre-consultation activities have been addressed in the alternative park concepts and the analysis contained in this document.

Listed below are the agencies and other parties contacted for input and comment regarding the proposed project prior to the publication of the Draft EA.

The agencies and organizations contacted during the pre-consultation period include:

Federal Agencies, State of Hawai'i, City and County of Honolulu and Elected Officials
US Fish and Wildlife Service (USFWS)
National Marine and Fisheries Service (NMFS)
State of Hawai'i Department of Transportation
State of Hawai'i Department of Health
City and County of Honolulu Dept. of Planning & Permitting
City and County of Honolulu Dept. of Design & Construction
City and County of Honolulu Dept. of Environmental Services
City and County of Honolulu Ocean Safety and Lifeguard Services Division
Council District Representative, Donovan DelaCruz (Chair), Reed Matsuura (Aide)
State House Representative, Michael Magaoay

Other Parties and Associations
North Shore Neighborhood Board No. 27: Kathleen Pahinui (Chair), Warren Scoville (Sub-district 4 Representative), Gerry Meade and Robert Leinau
North Shore Lifeguards: Bodo VanDerLeeden (Capt.), John Hoogsteden, and Vitor Marcul

Individuals
Luann Casey
Diane Anderson
Susan Hendry
Sally Youngblood
Tinker Blomfield
Joan Gossett
Karen Gallangher
Mary Lacquers
Bruce Casler (Audubon Society)
Marlu West
Esther Poor
Joanne Pettigrew
Gil Riviere
Norris Sandvold
Dave Barter
Bruce Bellows (Surfrider Foundation)

FIGURE 1-1: PROJECT LOCATION MAP

FIGURE 1-2: TAX MAP KEY AND PROPERTY BOUNDARY MAP

Section 2.0
Description of Proposed Project

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 PROJECT LOCATION

Kawailoa Beach Park is located about two miles northeast of Haleʻiwa on the North Shore of Oʻahu in Kawailoa, Hawaiʻi. The proposed project site consists of several parcels along Kamehameha Highway in the Chun's Reef area. The beach front portion includes two vacant residential lots located on the makai side of Kamehameha Highway, owned by the City and County of Honolulu. Portions of four ~~three~~ parcels on the mauka side of the highway are also included in the park project.

Fronted by a wide sandy beach, the park is inshore of Chun's Reef. This popular surf spot extends to the center of the prominent sandy foreland formed to the lee of the reef. Surfers cross the wide sand beach fronting the park to reach several surf sites including Chun's Reef, Pidleys and Jocko's. Public access is located at the very western end near Chun's Reef. A location and property boundary map are provided by *Figures 1-1* and *1-2*.

The Tax Map Key (TMK) information for the site is described by *Figure 1-2*. The parcels located on the makai side of Kamehameha Highway are identified as TMK 6-1-08: 17 and 18. TMK 6-1-08: 17, consists of about 0.69 acres and is owned by the City and County of Honolulu. The smaller makai parcel (Haleʻiwa side) is TMK 6-1-08: 18, which consists of 0.393 acres and is owned by the City and County of Honolulu ~~(City records also show an interest held by Ralston Development Corporation)~~. For the proposed project, Parcels 17 and 18 would be consolidated. Kamehameha Schools owns the beach lands makai of the City parcels and the entire Chun's Reef area.

The remainder of the proposed site is located on the mauka side of the highway. The mauka parcels are identified as a portion of 6-1-05: 14 and 19 and a portion of TMK 6-1-08: 25 and 26. Approximately 1.6 acres of TMK 6-1-05: 14 encompasses the majority of the mauka project site. Fronting Kamehameha Highway, the mauka site includes a portion of TMK 6-1-08: 25, of about 0.459 acres, which is part of a 40-foot linear strip of property consisting of the right-of-way for the old Oʻahu Railroad owned by the BP Bishop Trust Estate (Kamehameha Schools). The remaining northeastern corner of the mauka site is identified as 0.4 acres of TMK 6-1-08: 26, which is owned, in fee, by the State of Hawaiʻi, and 0.13 acres of TMK 6-1-05: 19. The City is planning to acquire the portions of parcels mauka of Kamehameha Highway for the parking area and subdivide the parcels into one lot. Refer to *Table 2-1*.

TABLE 2-1: TMK INFORMATION

TMK	Acres	Sq. Feet	Area	Owner	Type	State LU	Zoning LUO
6-1-05:14	1.571	68,433	Portion	B P Bishop Trust Estate	Fee	Ag	AG-1 Restrict. Ag
6-1-05:19	0.13	5,663	Portion	B P Bishop Trust Estate	Fee	Ag	AG-1 Restrict. Ag
6-1-08:17	0.69	30,047	All	City & County of Honolulu	Fee	Urban	R-5 Residential
6-1-08:18	0.393	17,127	All	City & County of Honolulu/ ~~Ralston Dev. Corp~~	Fee	Urban	R-5 Residential
6-1-08:25	0.459	19,983	Portion	B P Bishop Trust Estate	Fee	Ag	AG-1 Restrict. Ag
6-1-08:26	0.4	17,395	Portion	State of Hawaiʻi	Fee	Ag	AG-1 Restrict Ag
TOTAL	**3.513**	**152,985**			**Fee**	**Ag&Urb**	**AG-1 & R-5**

(Source: Department of Planning & Permitting, December 2004)

2.2 RELATION OF THE PROJECT SITE TO THE SMA

The subject property is located entirely within the City and County of Honolulu Special Management Area (SMA). An SMA map is displayed by *Figure 2-1*. A location and property boundary map are provided by *Figures 1-1* and *1-2*. The proposed project site is located mauka and makai of Kamehameha Highway at Chun's Reef in Kawailoa on the North Shore of O'ahu. All of the mauka and makai parcels of the planned Kawailoa Beach Park are located within the SMA, which includes the coastal areas leading to the park.

2.3 DESCRIPTION OF PROPOSED PROJECT

The City and County of Honolulu, Department of Design and Construction, is planning the development of recreational facilities at Kawailoa Beach Park. City policies and guidelines call for the preservation and enhancement of the recreational resources along the shoreline consistent with these policies to meet island-wide demands on these resources. The City must improve these parks with basic support facilities. Currently, the Chun's Reef area has no improvements for parking, restrooms and lifeguard facilities. The site is very popular and support facilities are needed to control the impact of public use of this resource. Public use of this area of the North Shore has grown to the point of creating a burden on neighbors and the land.

The general elements of the proposed project involve planning for beach park amenities including, access and parking improvements, a comfort station and outdoor shower area, and a lifeguard station and storage area. The park landscape includes a restricted nesting area for the Wedge-tailed Shearwaters. There will be two pedestrian crossings Kamehameha Highway and room for a proposed bicycle pathway. The project improvements will be in compliance with the Americans with Disabilities Act of 1990 (ADA). The City and County Department of Parks and Recreation will be responsible for the ongoing operation and maintenance of the new park facilities.

The park concept has been discussed in meetings and site visits with the North Shore Neighborhood Board No. 27, local residents, public agencies, lifeguards and other interested individuals. As a result of these discussions, three alternative concept plans for the Kawailoa Beach Park recreation facility improvements are being considered, as described below.

A conceptual rendering of the beach park facility is shown in *Figure 2-2*.

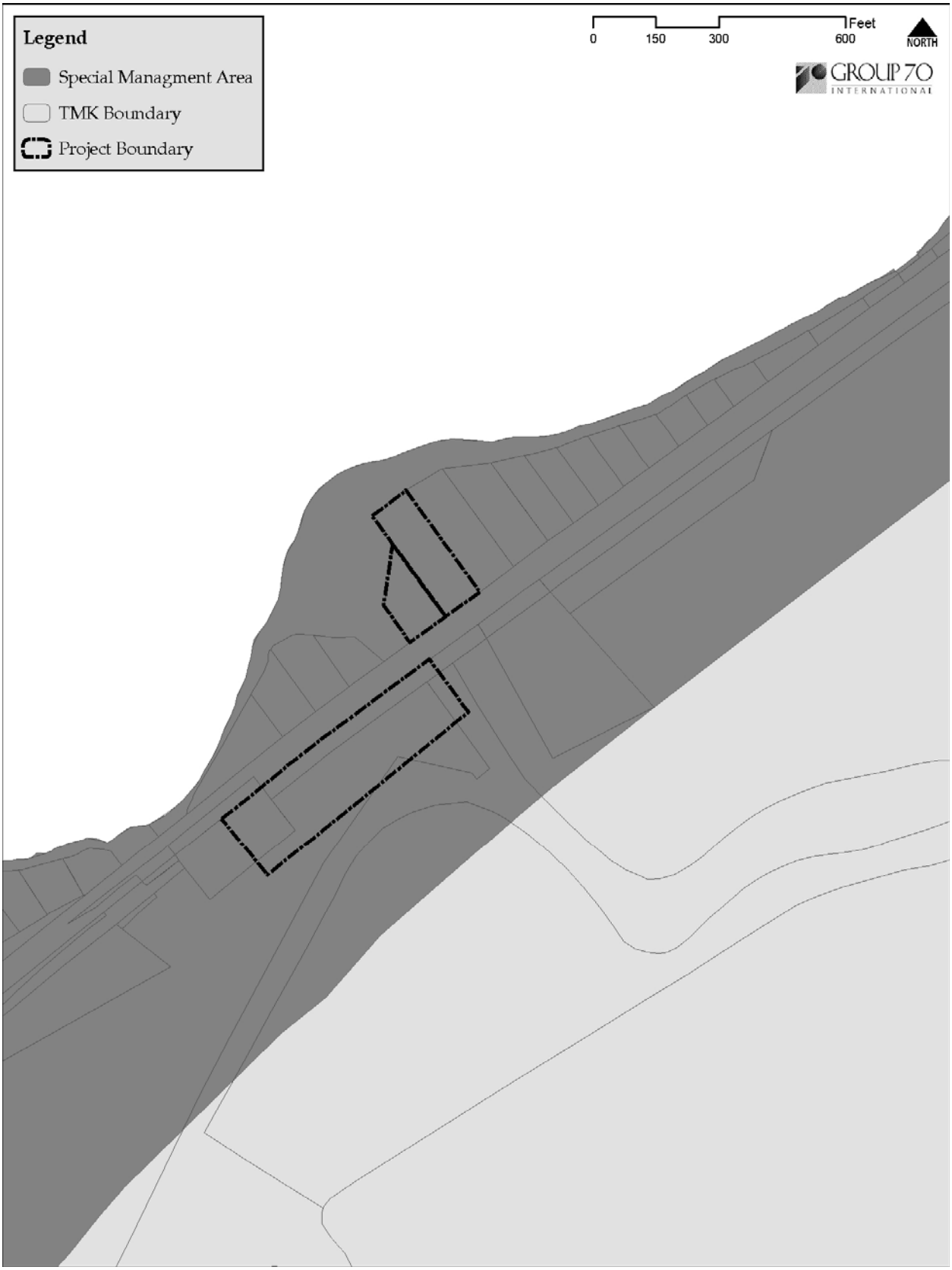


FIGURE 2-1: CITY AND COUNTY OF HONOLULU SPECIAL MANAGEMENT AREA

Kawailoa Beach Park

Concept Rendering

GROUP 70 INTERNATIONAL

28 June 2005

Concept Site Plan – Alternative A:
For Alternative A, both of the mauka and makai properties would be developed into the new beach park. The proposed plan for the makai portion of the site includes a new comfort station and outdoor shower area, a lifeguard tower and gear storage, limited parking, walkways, picnic tables and benches, and landscaping. Facilities and access will comply with the Americans with Disabilities Act of 1990 (ADA).

The mauka portion of the site would be developed into a new parking lot for approximately 80 parking spaces, including area for potential expansion to 100 spaces. ADA compliant parking spaces are included. Two pedestrian crosswalks at Kamehameha Highway are planned to connect with the makai areas. *Figure 2-3* depicts the conceptual site plan for Alternative A.

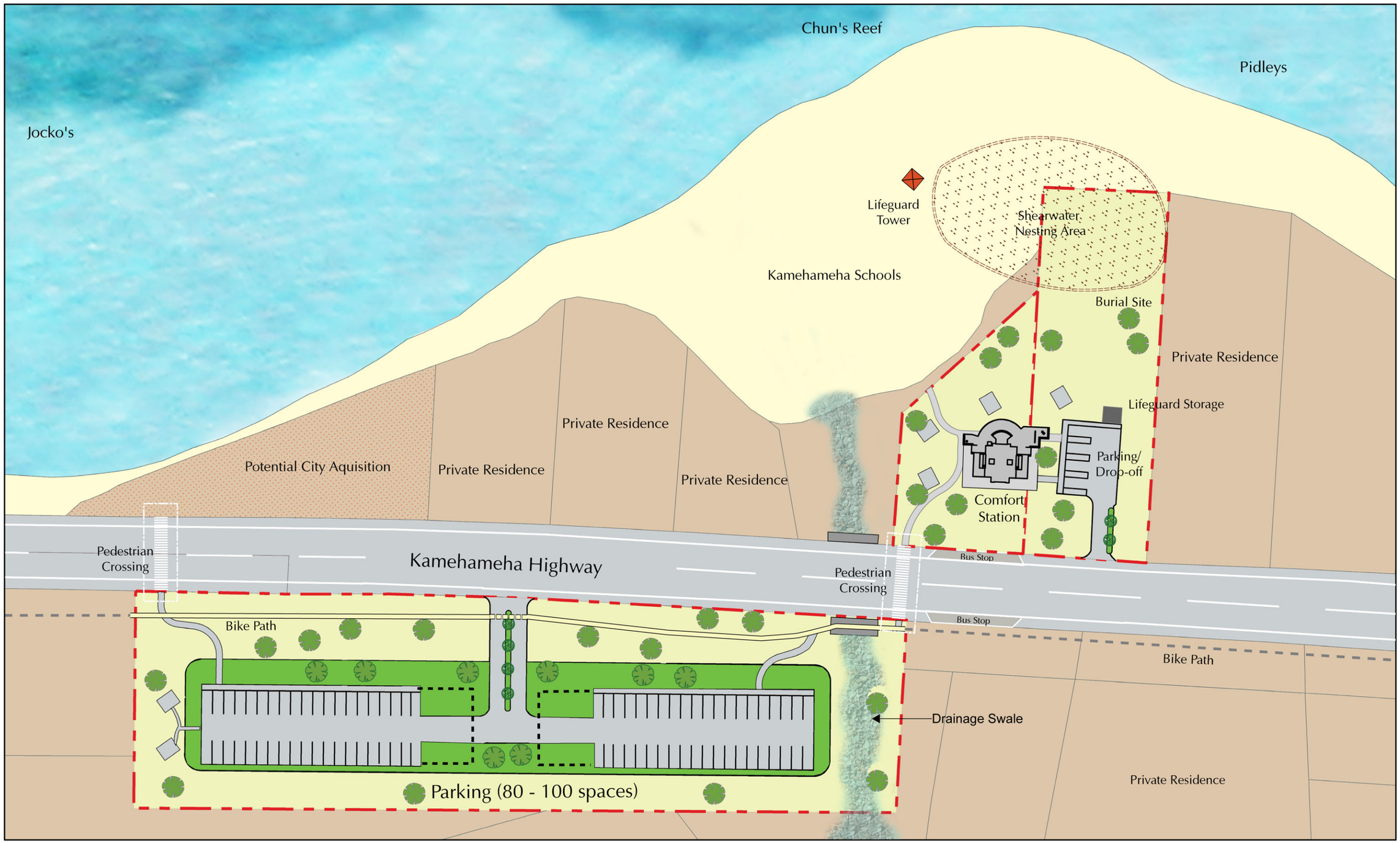
Concept Site Plan - Alternative B:
Alternative B would utilize the mauka portion of the property as the location of the new comfort station and parking. The parking area would include approximately 80 spaces with required ADA compliant parking. Two pedestrian crosswalks at Kamehameha Highway are planned to connect with the makai areas.

The makai portion of the property, including the beach reserve area, is proposed to be used as part of the subsequent design of the proposed master park improvements. Alternative B proposes improvements to the makai parcels to include the new beach park area with a lifeguard tower and gear storage, limited parking, walkways, picnic tables and benches, and landscaping. Facilities and access will comply with the Americans with Disabilities Act of 1990 (ADA). *Figure 2-4* depicts the conceptual site plan for the proposed improvements for Alternative B.

Concept Site Plan – Alternative C:
The Alternative C would not include a new comfort station. This plan could potentially serve as an interim park plan, pending future funding of the comfort station as planned in Alternatives A and B. Instead, Alternative C includes beach park improvements for the makai portion of the site to include a pick-up/drop-off area with ADA parking, an outdoor shower area, lifeguard tower and gear storage, walkways, picnic facilities, and landscaping.

For the mauka portion of the site, Alternative C proposes a new parking lot area for approximately 80 spaces, including area for potential expansion to 100 spaces. ADA compliant parking spaces are included. Two pedestrian crosswalks at Kamehameha Highway are planned to connect with the makai areas. *Figure 2-5* depicts the conceptual site plan for the proposed improvements for Alternative C.

Applicable to all three concepts the project may eventually warrant modifications to Kamehameha Highway to accommodate vehicle traffic access and egress to parking areas. Although not presently required, it is anticipated that the State Department of Transportation will eventually require a median left-turn storage lane at the entrance mauka to the parking area. This improvement will reduce interruptions to the flow of through traffic along the highway, and provide left turn storage and shelter for vehicles entering and exiting the mauka parking areas.



Kawailoa Beach Park

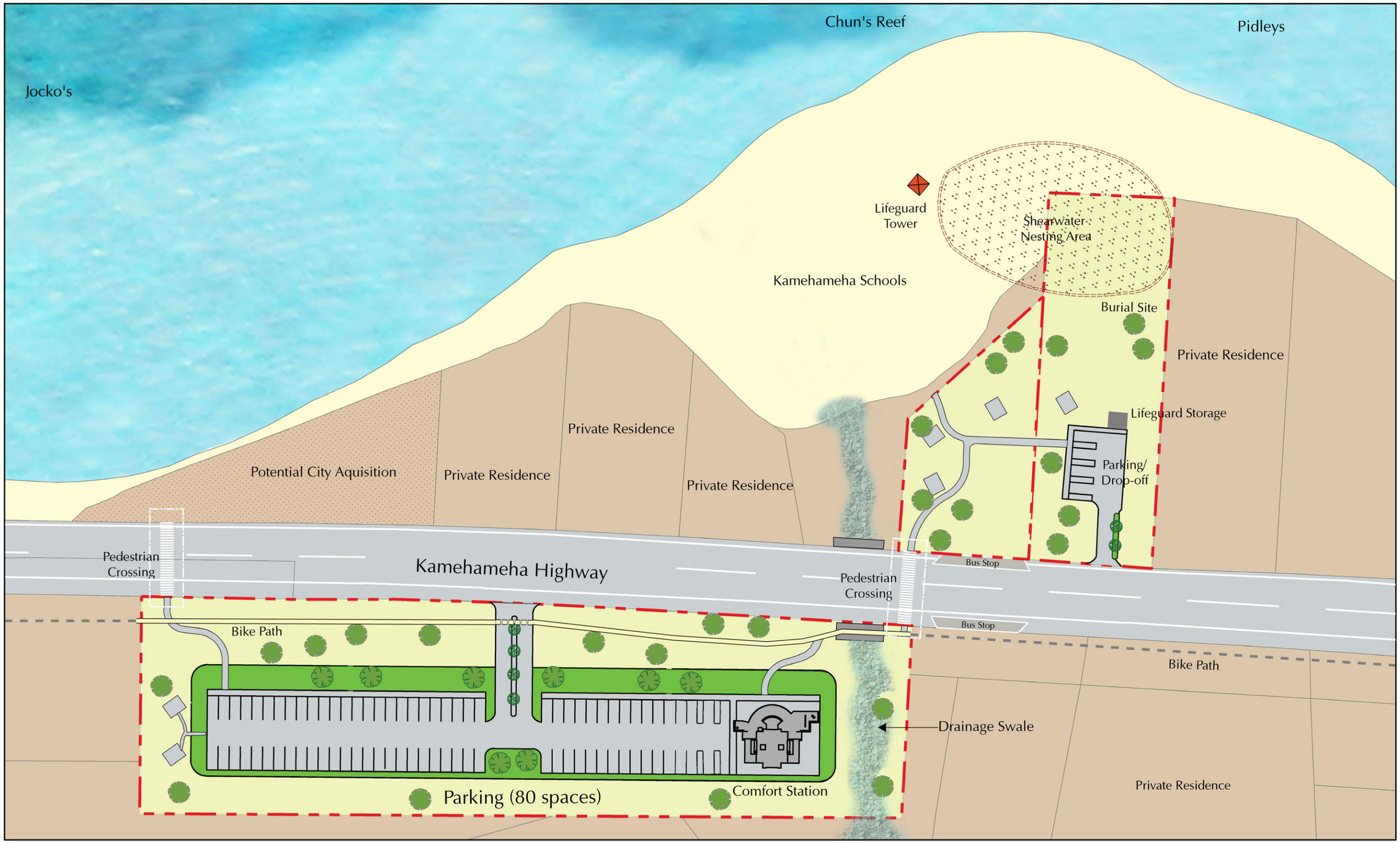
Concept Site Plan - Alternative A

NORTH

0 20 40 80 Feet

GROUP 70 INTERNATIONAL

August 2005



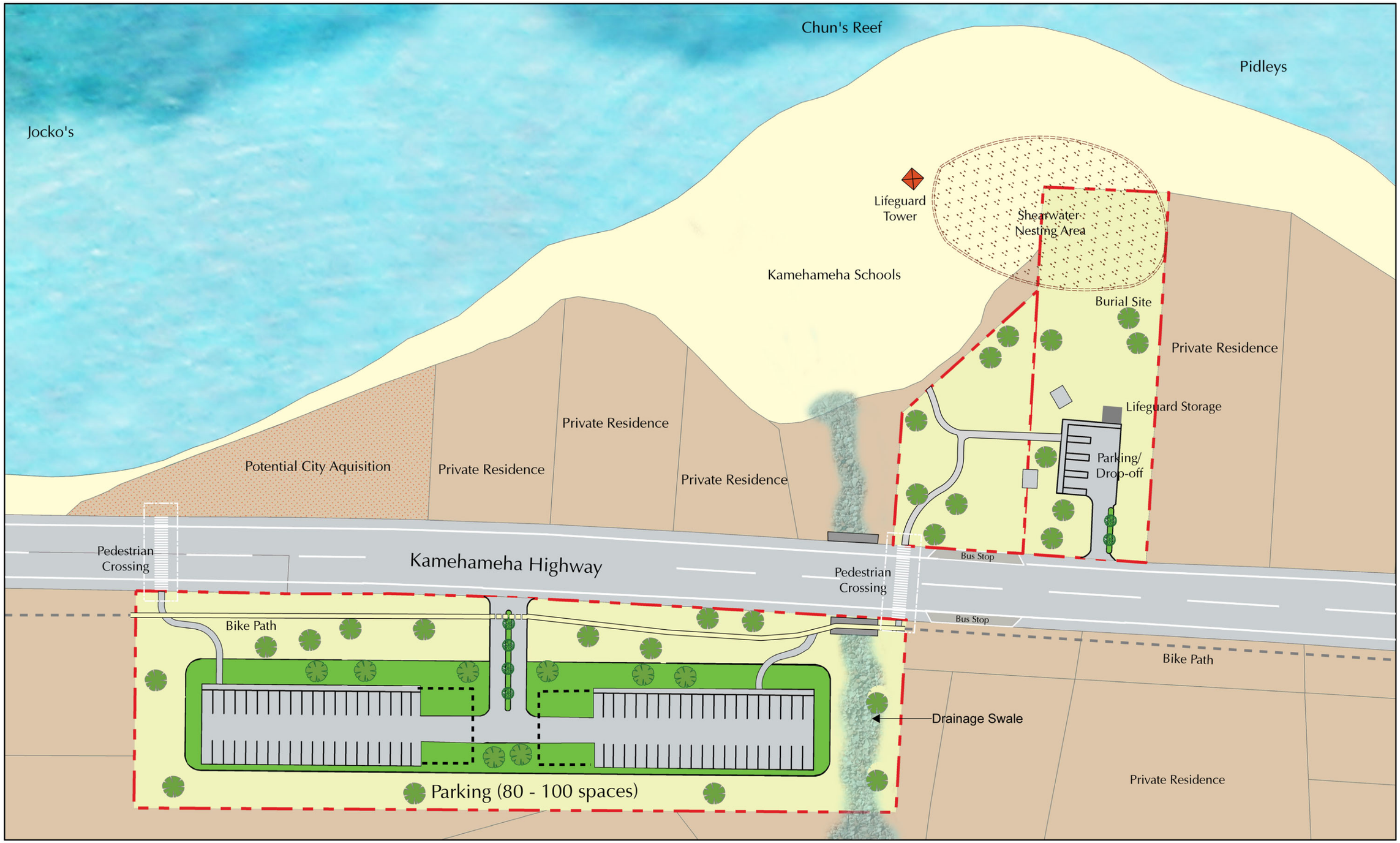
Kawailoa Beach Park

Concept Site Plan - Alternative B

NORTH 0 25 50 100 Feet

GROUP 70 INTERNATIONAL

August 2005



Kawailoa Beach Park

Concept Site Plan - Alternative C

NORTH 0 25 50 100 Feet

GROUP 70 INTERNATIONAL

August 2005

2.4 USE CHARACTERISTICS

Kawailoa Beach Park is anticipated to serve North Shore residents, O'ahu Island residents and visitors to Hawai'i. Surfing and beach-going are the major activities at this park. On a busy weekend, especially when there is small to moderate size surf, utilization of this beach area is currently very high. It is typical to witness between 80 to 100 cars parked along Kamehameha Highway fronting the Chun's Reef area. This translates to between 200 to 300 people on the beach, in the ocean and using the parking/pedestrian areas. Planning for the new support facilities anticipates usage of 300 to 400 people during peak periods.

The proposed beach park improvements are located entirely within the SMA. Access driveways, parking, utilities, and drainage facilities required for the complex will also be developed within the SMA. Construction of the improvements will include outdoor recreational facilities, parking and driveways, improved beach access, and picnic amenities. Park landscaping will provide substantial green open space for picnic areas and both passive and active park recreational use.

A two-lane driveway off Kamehameha Highway will be provided to access parking on the mauka portion of the site. Approximately 80 to 100 parking stalls will be provided to serve the beach park. Also, a driveway entrance will be provided to access the makai portion of the site, providing access to the proposed ADA and lifeguard vehicle staging area off Kamehameha Highway. Median storage lanes (left-turn) may be required on Kamehameha Highway at the mauka parking area driveway.

City and County Department of Parks and Recreation personnel shall be responsible for the operations and maintenance of these facilities. ~~The park will have designated hours of operation. Signs shall be posted in the parking lot to notify park users of the parking lot hours.~~ City and County Lifeguard services will be available during the day. The parking lot, showers, and comfort station shall be illuminated at night to ensure security and public safety. However, the lighting shall be designed to avoid disturbance of the neighboring residences and Wedge-tailed Shearwaters. Parking lot closure at night may be possible with the assistance of the North Shore community.

2.5 PHYSICAL CHARACTERISTICS

The proposed improvements will be limited to the property boundaries of the site as displayed by *Figure 1-2*. As described by *Table 2-1*, the proposed improvements to Kawailoa Beach Park will include both the makai and mauka parcels. Site improvements will include approximately 3.5 acres and will include improved access to approximately 2.8 acres of beach frontage.

The proposed mauka site planned for the parking lot and driveway access area is approximately 620 feet wide (along Kamehameha Highway) and 175 feet deep. Elevations at the site range from approximately 15 feet to 20 feet above sea level, with gentle grades (0-5% slope).

Access and Parking Improvements: To facilitate beach-going activities, the project improvements will include on-site parking with improved pedestrian and vehicle access in and

around the area. On-site parking will likely consist of approximately 80 spaces with potential for future expansion up to 100 spaces. Driveways will provide access to both the mauka and makai side areas.

Pedestrian access from the mauka parking area to the beach park will be provided by two pedestrian crossings, to provide improved safety for crossing this two-lane highway. Driver awareness to crossing pedestrians will be improved by installing crosswalk striping, highway signage and possibly include blinking lights. The two crosswalks will be located at either end of the proposed parking lot for convenience to pedestrians crossing the highway.

Improvements involving Kamehameha Highway (i.e. driveways, crosswalks, turning lanes) will require coordination and approval by the State of Hawai'i Department of Transportation. All County-improved roads are required to be in compliance with Section 103D-407 of the Hawai'i Revised Statutes (HRS) D-407 "Construction projects, roadway materials; recycled glass requirements."

Highway Traffic Management: A Traffic Impact Assessment Report for the proposed Kawailoa Beach Park was prepared by Traffic Management Consultants Hawai'i, Inc. (August, 2005) and is included as *Appendix B*. The study analyzed existing conditions and estimated the impact of project-generated traffic on the Kamehameha Highway at the proposed parking access/egress points.

Pedestrian safety will be improved, with new crosswalks to help guide pedestrians across the highway while providing drivers with a cue to slow down and yield to pedestrians. Crosswalk warning signage and the possible use of blinking lights will provide additional cues to drivers. In addition to the two proposed crosswalks, a traffic signal or a pedestrian overpass are two options that could be considered for crossing Kamehameha Highway from the parking lot to the beach park. New improvements affecting the State highway will be a Department of Transportation concern.

The traffic analysis indicates that widening Kamehameha Highway to provide for exclusive left-turn lanes or median shelter lanes at the mauka and makai accesses is not recommended at this time. While the median turning lanes would improve traffic operations, the projected turning volumes are relatively low, and widening the Highway would increase operating speeds and increase the crossing time for pedestrians. Separate left-turn and right-turn driveway egress lanes are recommended for the mauka and makai access driveways. The makai parking area will be designed to accommodate vehicle drop-off/pick-up activities and to facilitate traffic flow.

Infrastructure and Site Improvements: The project proposes to create a comfort station with changing areas, an outdoor shower area, a lifeguard station and storage area. The City's standard comfort station floor plan and elevation plan are displayed by *Figure 2-6* and *2-7*. The location and design of the lifeguard tower will need to be determined by a specified site analysis conducted by the City and County of Ocean Safety and Lifeguard Services Division.

Picnic tables will be installed to improve the overall use of the park facilities. Picnic tables will be constructed per City and County Standards consistent with ADA requirements. Charcoal pits and trash receptacles will also be located near the picnic area.

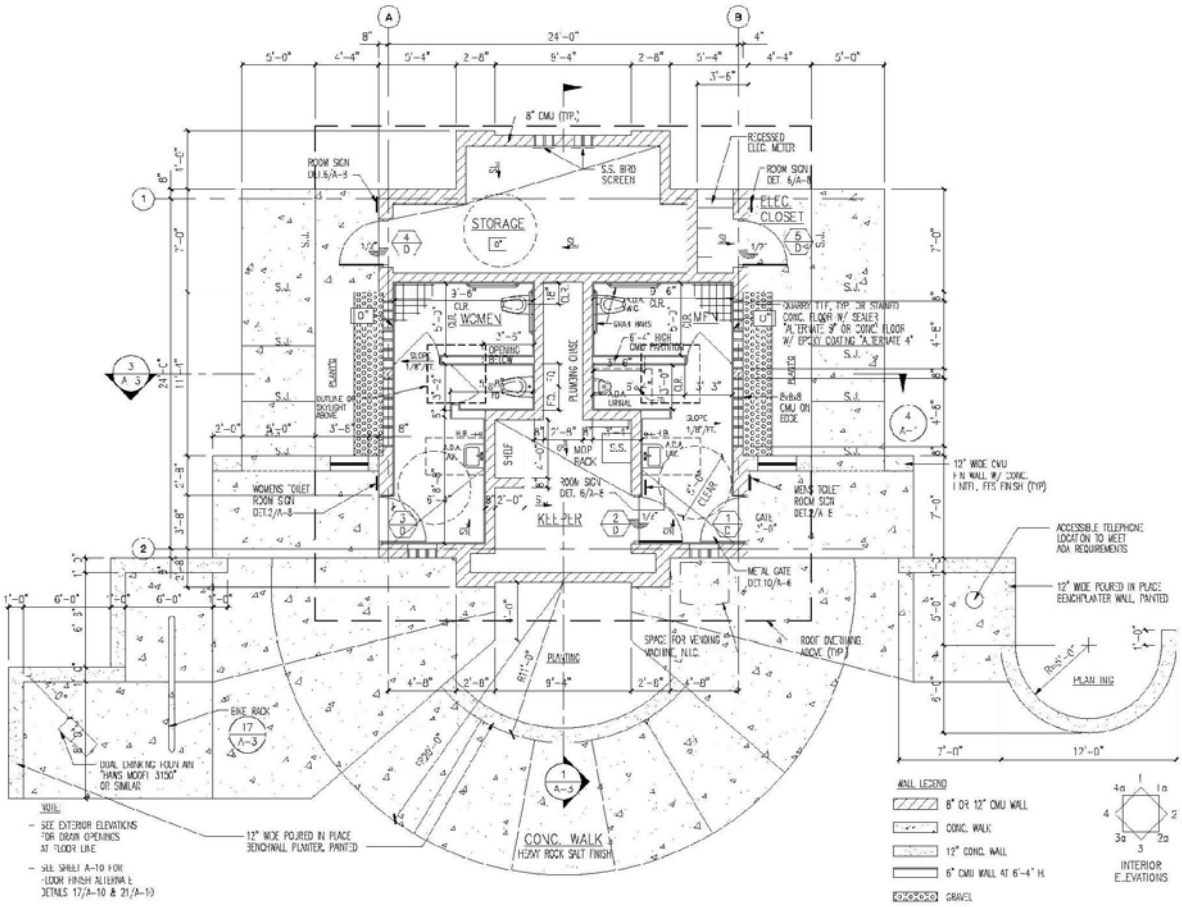


FIGURE 2-6: CITY AND COUNTY OF HONOLULU COMFORT STATION FLOOR PLAN

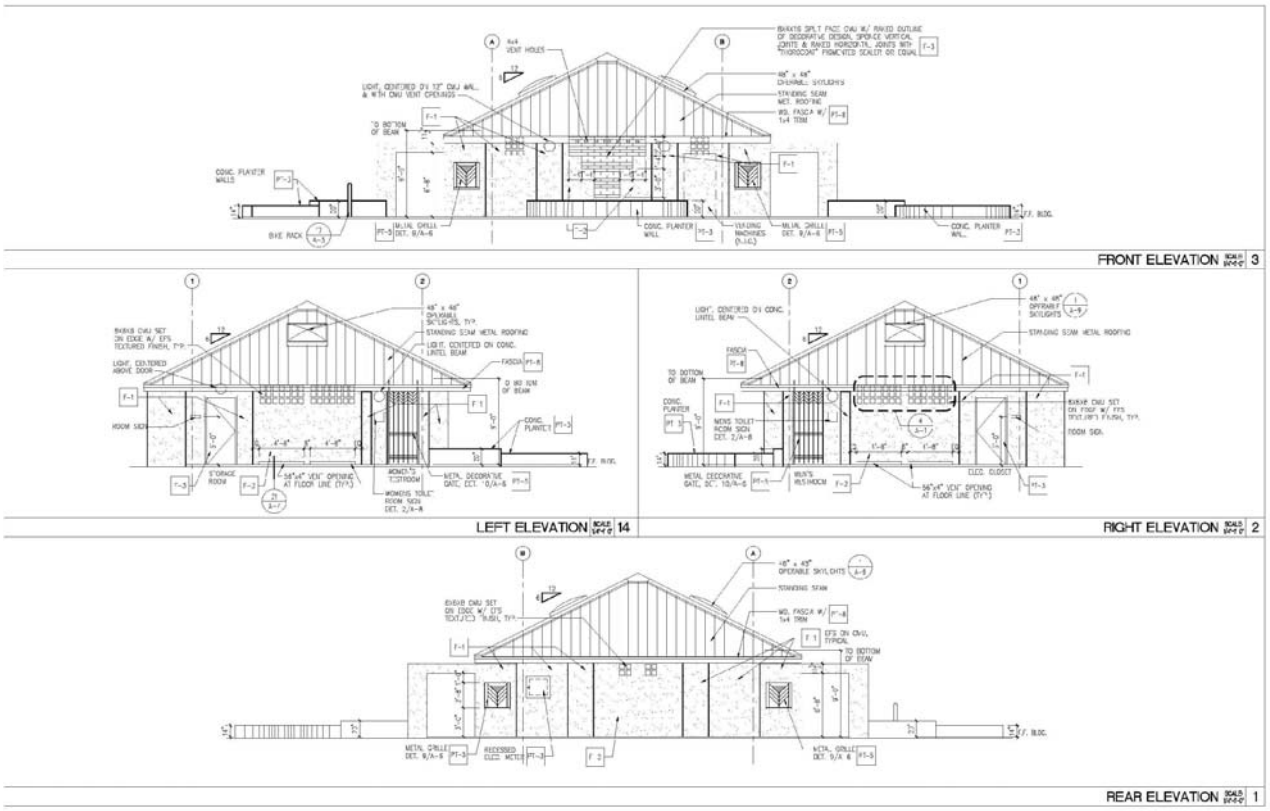


FIGURE 2-7: CITY AND COUNTY OF HONOLULU COMFORT STATION ELEVATION PLAN

In addition, the project proposes to create a Wedge-tailed Shearwater nesting preservation area. The site plan roughly identifies the existing shearwater nesting area, which extends off site. With the implementation of the proposed plan, additional consultation with the U.S. Fish and Wildlife Service would be beneficial to the protection of the shearwater.

Site Utilities: The site is already being served by an existing 6-inch diameter water main by the Honolulu Board of Water Supply (BWS). The existing water main is adequate to accommodate the proposed comfort station. An existing fire hydrant is located adjacent to the entrance driveway to the parking lot on the mauka side of Kamehameha Highway. Water to the proposed comfort station and irrigation will be provided by the installation of a lateral waterline from the BWS main. Electricity to the improved site will also be served by connection from existing HECO electrical distribution system.

Wastewater Disposal: A comfort station and an outdoor shower area is proposed for the beach park, however, there is no public sewer system available to serve this site. An individual wastewater treatment system will be installed for the wastewater disposal. The proposed comfort station will have six water closets and two urinals. According to the design requirements of the "Individual Wastewater System Standards for the City and County of Honolulu Parks," the comfort station will have a design capacity of approximately 4,100 gallons of wastewater per day. A treated wastewater disposal area (leach field) of approximately 5,250 square feet will be required. Possible locations for the disposal field are shown in *Appendix A*. The system will be compliant with State of Hawai'i Department of Health regulations for wastewater systems.

Landscaping: Irrigation will be installed to establish and maintain the plantings. Permanent landscaping will consist of a variety of species including native, non-invasive, and xeriscape in design and placement. All landscaping improvements are required to be in compliance with Section 103D-408 of the Hawai'i Revised Statutes (HRS) D-408 "Indigenous and Polynesian introduced plants; use in public landscaping requirements." Hardy, drought-tolerant, soil-stabilizing varieties of native and non-invasive plantings will also be used. The landscaping scheme involves preservation of many of the existing trees on the site in order to provide shade and overall park appearance. The design of the parking lot landscape will use grassed swales to minimize storm water runoff and non-point source pollution impacts, and follow Land Use Ordinance requirements. The project landscape and irrigation plan will be provided with the DPP Master Application Form to initiate permit processing.

Drainage: Drainage patterns on the parcel will change slightly with development. The parking area requires paving which will add some impervious surface on the site. A pervious paving system is being considered to reduce storm runoff. Storm water runoff from the site will be by sheet flow and designed in conformance with the current "Rules Relating to Storm Drainage Standards", Department of Planning and Permitting, City and County of Honolulu, Honolulu, Hawai'i. The proposed park facilities will not affect drainage at downstream properties. In addition, the on-site drainage will be designed to flow away from the Kawailoa Stream. Runoff will be directed on-site, including an oil-water separator that removes refuse and petroleum products.

Best Management Practices (BMPs) will be included during the project's design and overall storm water operation and maintenance program. Landscape buffer strips along the parking lot

and roads will be designed to filter pollutants and silt through vegetation, sand and gravel. Vegetated swales will also provide some biological uptake of nutrients in storm water.

Solid Waste: Solid waste generated on site will be collected and disposed at approved County solid waste disposal facilities. Solid waste generated during construction will also be managed.

2.6 CONSTRUCTION CHARACTERISTICS

Tentative plans are to complete the project in two phases. The first phase would involve the makai area (comfort station, lifeguard storage, parking/drop-off). The second phase would be for the 80-100 parking space lot on the mauka side of the highway. The completion of improvements is currently not scheduled by the City and County of Honolulu. For the purposes of this study, we assume a completion date of 2010. SMA approval is anticipated by 2006. Design of the facilities, permitting and construction will follow depending on City funding priorities.

Extensive cut/fills, or the construction of retaining walls, are not anticipated for the construction of the comfort station and parking lot. Minor grading to remove local high/low spots and level the area will be required to construct the parking lot and building pad. Grading work at the site will conform to the "Rules Relating to Soil Erosion Standards and Guidelines."

In addition, National Pollutant Discharge Elimination System (NPDES) permits will be obtained for storm water discharges from construction activities. Best Management Practice plans to control erosion during construction will be a component of the NPDES permits. Short-term construction-related activities are addressed in *Section 3.0* of this document.

2.7 SUMMARY OF PROJECTED COSTS

The total cost of improvements for the proposed beach park is estimated at $2.0 million (as of 2005). This includes the comfort station ($850,000), parking and landscaping ($400,000), wastewater system ($150,000), roadway/driveway improvements ($150,000) and utilities. All of the project costs will be funded by the City and County of Honolulu. ~~Construction of the improvements may be phased depending on City funding priorities.~~ There is no current funding beyond the planning phase. Funds will be programmed for the Fiscal Year 2008 budget for design work. Construction funds will be programmed in the Fiscal Year 2009 budget.

2.8 LAND USE APPROVALS

This section includes a description of the government approvals and permits required for improvement of the Kawailoa Beach Park parcels. The SMA application will be processed in 2005, with approval anticipated by 2006. The construction start date will be dependent on City funding priorities.

Special Management Area Use Permit (SMP): Approval of an SMP is required because the project site lies within the Special Management Area along the North Shore coastline.

Processing and approval of the SMP, Pursuant to Chapter 25 ROH, requires review from the Department of Planning and Permitting (DPP) and the City Council. Prior to the DPP's acceptance of the SMP application, the acceptance of a Final Environmental Assessment (EA)/FONSI is required.

Required Permits for Construction: Several other approvals will be required from the City and County of Honolulu and State of Hawai'i to implement the proposed action, some of which will include:

- Building Permit for Buildings, Electrical, Plumbing, and Sidewalk/Driveway Work (City & County Department of Planning and Permitting)
- Grading, Grubbing and Stockpiling Permit (City & County Department of Planning and Permitting ~~Facility Maintenance~~)
- National Pollutant Discharge Elimination System (NPDES) Permit – Storm water (State Department of Health~~, City & County Department of Facility Maintenance~~)
- Water System (Board of Water Supply)
- Individual Wastewater System (Department of Health)
- Department of Health's Administrative Rules, Chapter 11-62 "Wastewater Systems" (State Department of Health)
- Sign Permit (City & County Dept. of Planning and Permitting, City & County Department of Design and Construction)
- Driveway Connection to Kamehameha Highway (City & County Department of Transportation Services, State Department of Transportation)

Section 3.0
Description of the Environmental Setting, Potential Impacts, And Mitigation Measures

3.0 DESCRIPTION OF THE ENVIRONMENTAL SETTING, POTENTIAL IMPACTS, AND MITIGATION MEASURES

This section describes the existing environmental setting and identifies possible impacts of the proposed project. Strategies to mitigate those potential impacts are also identified.

3.1 CLIMATE

Existing Conditions
The climate at the project site, on the North Shore of O'ahu, is mild and semi-tropical with slight seasonal variations. The average maximum daily temperature ranges from 78 degrees F to 87 degrees F, with an average minimum temperature ranging from 60 degrees F to 68 degrees F. Rainfall for this area is between 25 to 50 inches annually, with most of it occurring between November and April (USDA, 1972).

Northeasterly winds prevail much of the time throughout the state of Hawai'i. Typical wind velocities range from 3 to 14 knots. During the summer months stronger, more persistent trade winds result with the location of the North Pacific high pressure system. Light and variable westerly "kona" winds occasionally replace this pattern, most often in the winter.

Anticipated Impacts and Mitigation Measures
The proposed action will have no effect on climatic conditions, therefore no mitigation measures are required.

3.2 GEOLOGY AND TOPOGRAPHY

Existing Conditions
The Island of O'ahu is comprised of two major extinct volcanoes, Wai'anae and Ko'olau. The project site is situated on the Schofield Plateau, an alluvial fan of erosional unconformity created by the Wai'anae Range to the west and the Ko'olau Range to the east. This specific area of the North Shore is generally characterized by gently sloping topography. No significant topographical features exist on any of the flat land parcels.

The topography of the project site is predominantly a relatively flat area, slightly sloping towards the ocean's edge. Elevations at the site range from approximately 15 feet to 20 feet above sea level, with maximum slopes approximately 4 percent (*Figure 3-1*). Extensive cut/fills is not anticipated for the construction of the park facilities.

Anticipated Impacts and Mitigation Measures
There will be a small amount of earth movement required for implementation of this project and no substantial alteration to the overall existing topography of the project site. It is not anticipated that significant grading will be required. The parking areas will be flattened and smoothed along with the area for the comfort station and walkways. No substantial fill or excavation is being proposed for the project. The geology and topography of the area will not be significantly impacted. Mitigation measures related to soils and grading are described in the next section.

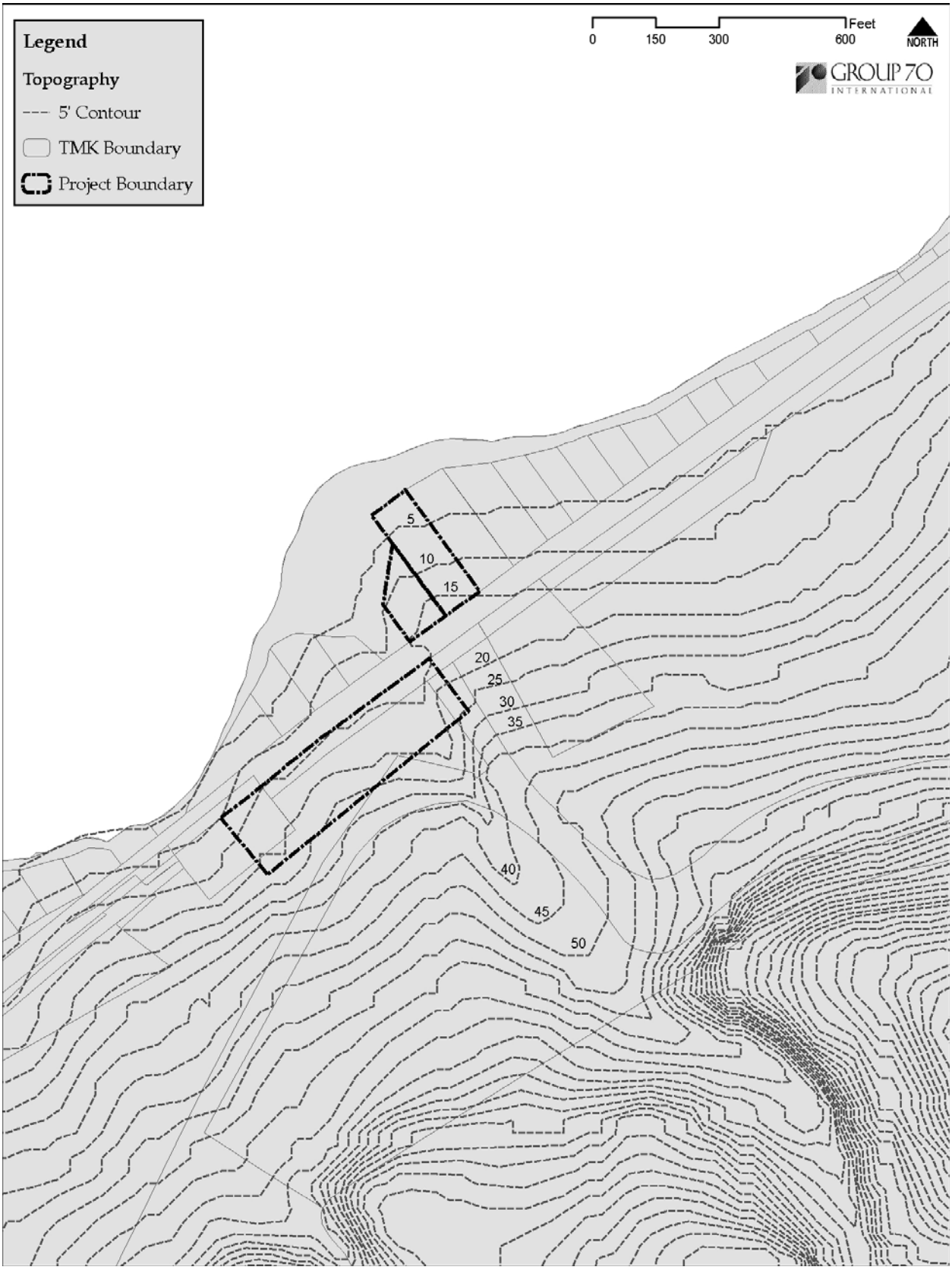


FIGURE 3-1: TOPOGRAPHY

3.3 SOILS AND GRADING

Existing Conditions

Soil types or classifications for the project site are based on soil surveys by the USDA Soil Conservation Service (SCS). The SCS system classifies soils by type, capability classification (SCS rating), and permeability characteristics including run-off and erosion, as shown in *Table 3-1*. The soil at the proposed site is classified as Waialua silty clay (WkA), 0-3% slopes. According to the "Soil Survey of Islands of Kauai, O'ahu, Maui, Moloka'i, and Lana'i," the Waialua Series soil consists of moderately well drained and typically will support grassed slopes up to 30% (which are steeper than the proposed grades) with minimal erosion. This series developed in alluvium weathered from basic igneous rock and is found on smooth coastal plains. Permeability is moderate, runoff is slow, and the erosion hazard is no more than slight. A variety of soil types exist in the region including Beaches (BS), Jaucas Sand (JaC), Ewa Series (EwC), and Helemano Series (HLMG). *Figure 3-2* illustrates the types of soils found within the project area.

TABLE 3-1: PROMINENT SOIL TYPES IN THE PROJECT AREA (SOIL CONSERVATION SERVICE SOIL CLASSIFICATION)

Soil	Soil Type	SCS Rating	Runoff	Erosion
Waialua Series (WkA)	Weathered igneous rock	IIe, irrigated	Slow	Slight
Beaches (BS)	Light colored sands derived from coral	VIIIw, nonirrigated	Very Slow	Slight
Jaucas Sand (JaC)	Sands derived from coral	VIe, nonirrigated	Very Slow to Slow	Slight
Ewa Series (EwC)	Weathered igneous rock	IIe, irrigated	Slow	Slight
Helemano Series (HLMG)	Weathered igneous rock	VIIe, nonirrigated	Medium to Very Rapid	Severe to Very Severe

Anticipated Impacts and Mitigation Measures

Minor grading to remove local high/low spots and level the project site will be required to construct the parking lot and building pad, and for landscaping. Very little earth movement is anticipated in order to implement the proposed site improvements. Grading for landscaping will not be extended to the coastal dune. Clearing and grubbing activities during construction will temporarily disturb the soil retention values of existing vegetation and expose the soils to erosion forces. Grading work at the project site will conform to the "Rules Relating to Soil Erosion Standards and Guidelines," including strict erosion control and dust control measures.

Primary fugitive dust control methods that will be implemented include regular watering of exposed soil areas, good housekeeping on the job site, and prompt landscaping, covering or paving of bare soils in areas where construction is completed. Siltation will be limited during construction through the use of fencing, hay bales and other sediment-absorbing devices. Once construction is complete, ground cover plantings, hardscape and other landscaping will be in place, effectively minimizing the soil loss.

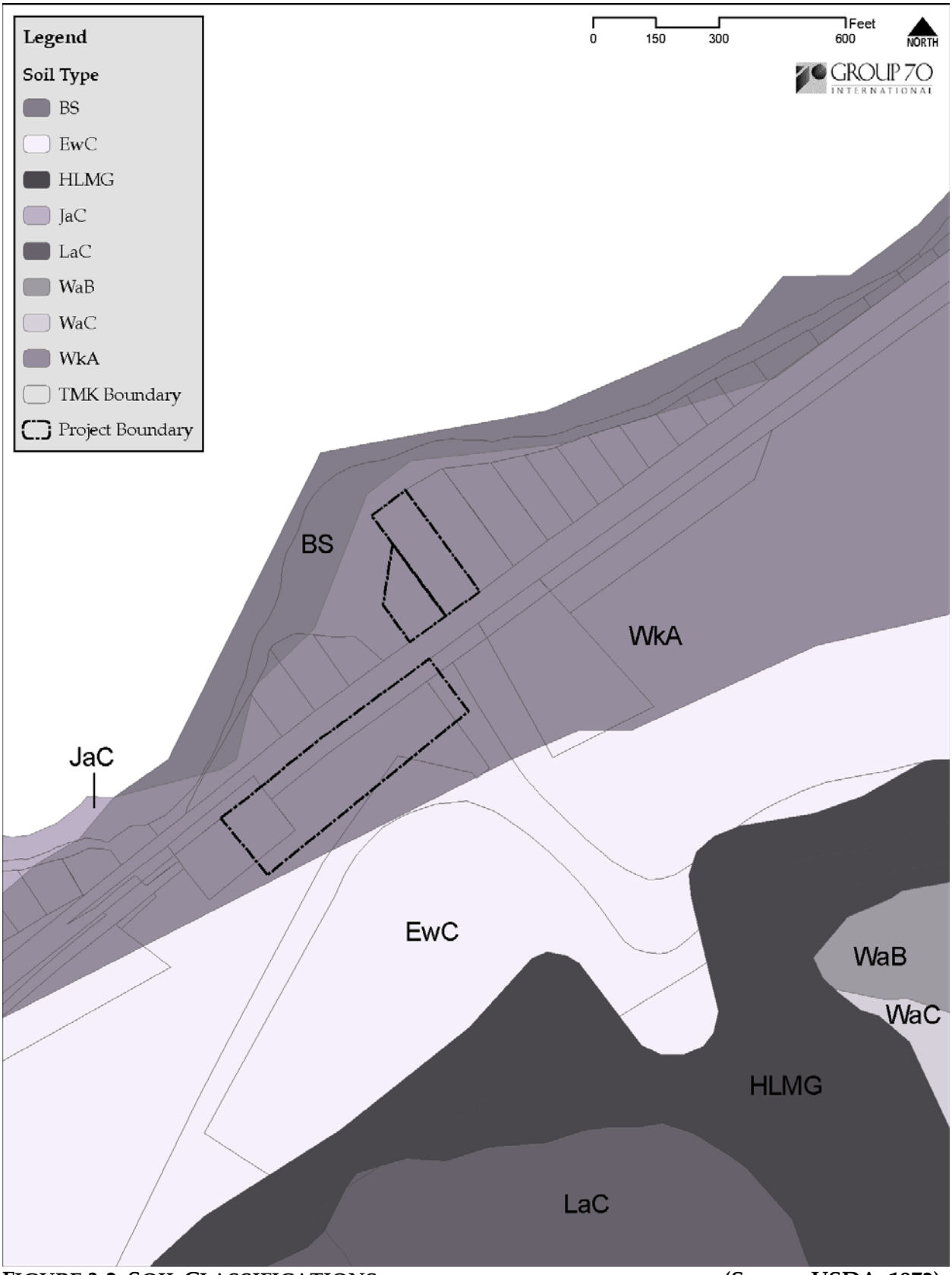


FIGURE 3-2: SOIL CLASSIFICATIONS **(Source: USDA, 1972)**

A portion of the site will be covered by paving and buildings. Paving over the proposed area will reduce permeability and increase runoff velocity. Site grading will direct runoff into grassy swales. The on-site soils, whose permeability is moderate with slow runoff and slight erosion hazard, will absorb normal runoff events. As compared to the vacant site, with exposed soils and limited vegetation, the proposed project is anticipated to reduce the amount of soil erosion and silt runoff from the site.

3.4 SURFACE WATER AND DRAINAGE

Existing Conditions

Generally, in Hawaii surface water quality is excellent. However, both stream and coastal waters are susceptible to point-source (from a discrete or distinct source) and nonpoint-source (from a diffuse or widely spread, scattered unconcentrated source) pollution in part because of our island environment (COFP, 2002). The project area on the mauka side of Kamehameha Highway drains towards the Highway, whereas the makai side project area drains towards the beach and ocean.

The project site is situated adjacent to an intermittent drainage swale, Kawailoa Stream. This drainage swale is normally a dry streambed, absent of wetland habitat that extends inland to the Kawailoa Ridge. The drainage swale lies in between the Kawainui Stream and Kaiwiko'ele Stream within the Keamanea Watershed. Runoff from a portion of the mauka hillside flows into the existing drainage swale.

Existing runoff from the site flows to the north toward Kamehameha Highway. Runoff from the site flows towards the drainage depression, which is diverted through a culvert under Kamehameha Highway, and empties into a drainage swale on the makai side of the highway. For the most part, existing permeability on the site is moderately rapid and runoff is slow.

Ocean waters off the project site are designated Class A waters. Beneficial uses of Class A waters are fishing, swimming, surfing, recreational water activities, aesthetic enjoyment, and beach going, which are all very popular in the area. An additional discussion on coastal waters and marine ecology is provided in *Section 3.8*.

Anticipated Impacts and Mitigation Measures

Construction of the parking area and beach visitor support infrastructure will modify the velocities, directions and quantities of the water drainage and runoff. Runoff from the project site will not be directed towards the existing drainage swale. The pattern of excess rain runoff will be controlled. Landscaping with porous sub-drains will be maximized to create a filter medium to prevent surface water collection and groundwater contamination.

In addition to the SMA permit application, an application for a National Pollutant Discharge Elimination System (NPDES) general coverage permit will be submitted for the anticipated construction activities associated with the project. The proposed development will comply with *Chapter 11-55, Water Pollution Control, Hawai'i Administrative Rules, Department of Health*, which requires an NPDES permit for certain construction activities. A Notice of Intent (NOI) will be submitted according to the 30-day requirement stipulated in the applicable section of *Hawai'i Administrative Rules (HAR), Title 11, Chapter 55-4(a)(5), Application for NPDES Permit*. Under

provisions of the NPDES permit, quantities, constituents and velocities of drainage water must not exceed pre-development levels. Mitigation measures include using extensive landscaping, drywells, oil-water separators, and pervious pavers for the parking area, where practical and appropriate. Dry wells may be utilized to slow and manage runoff from heavy rains. Oil-water separators and screening devices may be utilized to prevent trash and oil from parking areas from reaching surface waters. Best Management Practices such as silt fencing, hay bales and other siltation-reducing devices will be utilized to mitigate impacts during construction.

In order to mitigate runoff from the shower stations, Best Management Practices will be implemented in the project's design, operation and maintenance. Landscaping with porous sub-drains will create a filter medium to prevent runoff of surface water. In addition, landscaped buffer strips along the shower stations will be designed to absorb water runoff and filter pollutants and silt through vegetation, sand and gravel. Vegetated swales will also provide some biological update of nutrients in runoff water and absorption of runoff.

No significant impact to groundwater underlying the project site is anticipated during the construction and operation of the proposed project. Construction of the proposed improvements is unlikely to introduce or release any substance into the soil that could adversely affect groundwater quality. No wells are planned at the project site.

3.5 FLOOD AND TSUNAMI HAZARDS

Existing Conditions

Based on the Federal Emergency Management Agency's *Flood Insurance Rate Map, FIRM Community Panel No. 150001 0110 E and 150001 0020 E*, effective November 20, 2000, portions of the project site are located in "Zone VE" and "Other Areas – Zone X," see *Figure 3-3*. The makai project site is located within flood zone VE, which refers to lands in which base flood elevations are determined and the land is subject to 100-year coastal floods with velocity hazards (wave action). The base flood elevations determined for the makai parcels are 18 and 20 feet. Whereas, the majority of the mauka project site is located within the flood zone X designation, which indicates that the area is determined to be outside the 500-year floodplain. Elevations at the site range from approximately 15 feet to 20 feet above sea level, with maximum slopes approximately 4 percent (*Figure 3-1*).

The project site is located within the Tsunami Inundation Zone as demarcated on the maps for the Island of O'ahu and would need to be evacuated during a tsunami threat. During periods of seasonal high surf, wave wash is known to extend into the edge of the project site.

Anticipated Impacts and Mitigation Measures

In general, flood and tsunami conditions impose no major constraints on the project. All development at the site will be required to meet applicable building code standards for non-habitable structures in a tsunami zone.

In addition, any improvement plans will be required by the Honolulu Department of Design and Construction (DDC) and Department of Environmental Services (DES) as related to structures designed for flood zones. The proposed project will comply with the amended Section 21-9.10, Revised Ordinances of Honolulu 1990, including development standards

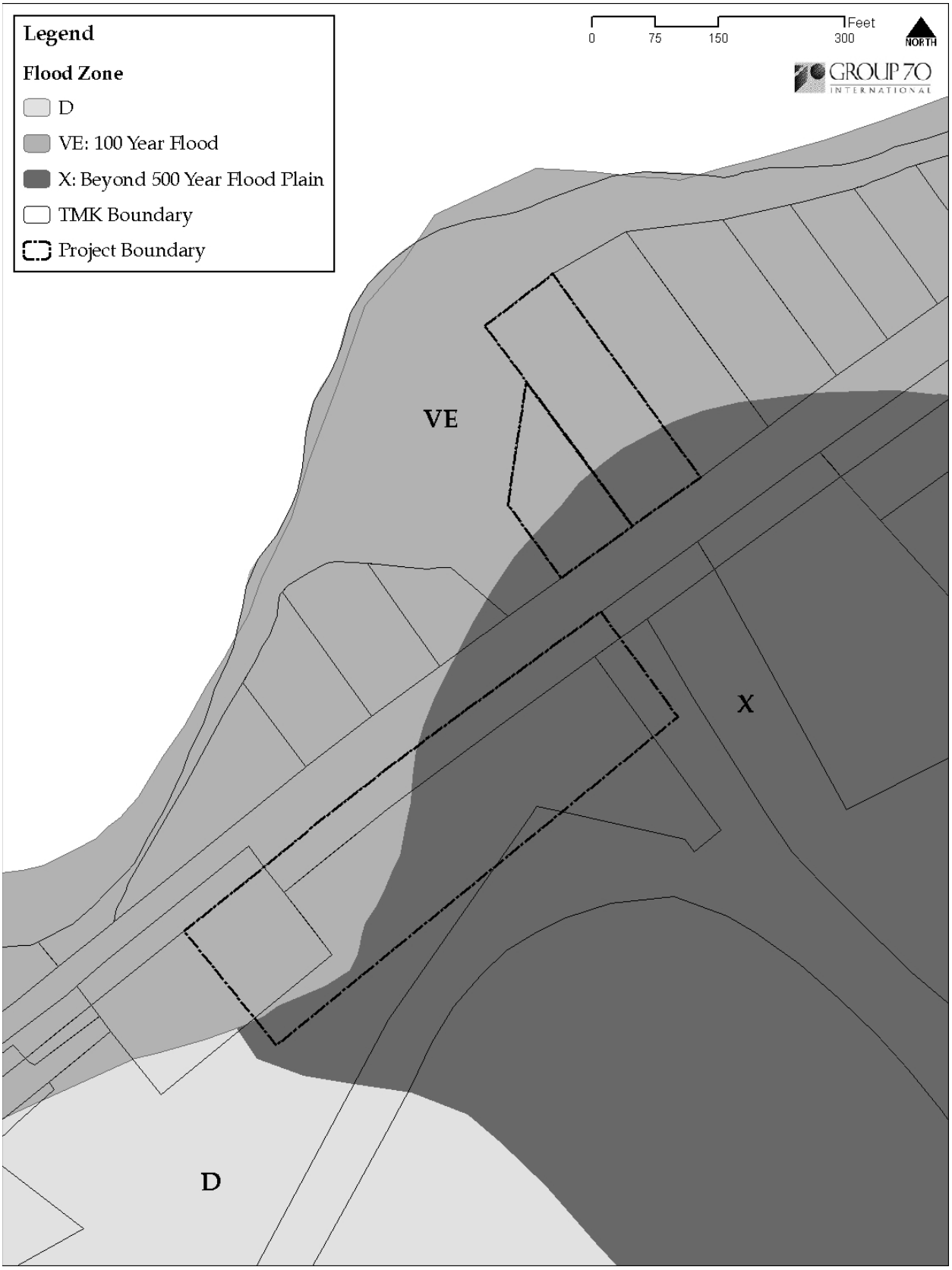


Figure 3-3: FIRM Classification Map **(Source: FEMA, 1996)**

identified in Sections 21-9.10-4 and 21-9.10-7 applicable to the coastal high hazard district. ~~Under provisions of Section 21-9.10-13 of the County Land Use Ordinance, "comfort stations, boat houses, picnic tables and open pavilions are exempt from flood zone requirements." Other Building Code provisions will be applicable.~~ Zone VE of the project site is subject to coastal flooding from extreme high surf action during the winter season and could be evacuated and closed to the public during an event. Zone X includes areas of minimal hazard from the principal source of flood in the area and the Flood Insurance Program does not have any regulations for development within this district. No mitigation measures are required.

3.6 FLORA

Existing Conditions

The natural vegetation of the project site and surrounding area has been destroyed or heavily degraded by past agriculture practices. Areas mauka of Kamehameha Highway consist primarily of overgrown pasture with invasive shrubbery, various grasses associated with ranching and cultivated crops, roadside weeds, koa-haole (*Leucaena leucocephala*) and scattered with a few banyan (*Ficus benghalensis*) and kiawe (*Prosopis pallida*) trees.

The makai project site areas were formerly used as residential property. A grove of ironwood (*Olneya tesota*) trees is found along the beach property line. Beneath the trees are dense patches of grass. The grounds are very uneven with mounds and dips in the surface through out. The site's proximity to the highway and beach implies that the area has been disturbed and altered for quite some time. A large Monkeypod tree (*Samanea saman*) is found near Kamehameha Highway. The plants and trees on the site have not been cared for and most are overgrown. Vegetation on the makai parcels includes African tulip (S*pathodea campanulata*), banana (*Musa acuminate Colla*), banyan (*Ficus benghalensis*), coconut (*Cocos nucifera*), ironwood (*Olneya tesota*), kiawe (*Prosopis pallida*), mango (*Mangifera indica*), monkeypod (*Albizia saman*), norfolk pine (*Araucaria heterophylla*), palms, rubber (*Ficus elastica*), and shower (*Cassia fistula*) trees. The site also contains bougainvillea (*Bougainvillea glabra*), hibiscus (*Hibiscus rosa-sinensis*), naupuka kahakai (*Scaevola sericea*), night blooming cereus (*Peniocereus greggii*), opiuma (*Pithecolobium*), various grasses and some ti plant (*Cordyline fruticosa*).

Anticipated Impacts and Mitigation Measures

The majority of the current vegetation species are exotic to Hawai'i. The mauka project area is typical of highly disturbed grazing lands in the area. The development and operation of the proposed beach park improvements is not expected to result in any adverse impacts to native plant species. Most of the invasive scrub vegetation will be removed. The proposed improvements will enhance the natural vegetation on the site and overall appearance.

The landscape plan for the beach park will incorporate many of the existing major trees and landscaping. Permanent landscaping will consist of a variety of species including native, non-invasive, and xeriscape in design and placement. Some native dune plants include Naupaka – Morning Glory (*Scaevola taccada*), the 'Aki 'Aki Native Grass (*Sporobolis virginicus*), Pa'u o Hi'iaka – Skirt of Pele's Sister (*Jacquemontia ovalifolia*), 'Ilima (*Sida fallax*), Alena (*Boerhavia repens*), HinaHina Ku-Kahakai - Beach Heliotrope (*Heliotropium anomalum*).

The project landscaping will incorporate non-invasive, drought-tolerant species to minimize irrigation requirements and water needs. Some of the existing banyan and kiawe trees will be removed to allow for the construction of improvements. New trees will be planted as part of the overall landscape plan.

Irrigation will be installed to establish and maintain the plantings. Irrigation will be controlled to prevent artificially induce a seaward migration of the vegetation line.

3.7 FAUNA

Existing Conditions

The coastal habitat is mainly overgrown pasture and scrub vegetation on the mauka project site of Kamehameha Highway. The makai site is currently utilized as an informal beach park.

A portion of the makai project site is habitat for the protected Wedge-tailed Shearwater (*Puffinus pacificus chlororhynchus*), also known as 'Ua'u Kani. These seabirds nest on a portion of the makai project site. According to the National Fish and Wildlife Service (USFWS), Wedge-tails breed widely in the tropical and subtropical waters of the Indian and Pacific Ocean. The birds are dark brown to brownish-grey above with white underparts except dark wing margins and undertail-coverts (*Figure 3-4*). The birds are identified by their wedge-shaped tail and a slender slate-grey hooked bill. The Wedge-tailed Shearwaters feed during the day and consume larval forms of goat fish, mackerel scads, and flying squid. Their breeding ritual begins shortly after arrival in late March. Returning to the same nest each year, Wedge-tails nest in shallow burrows one to two meters in length. Egg laying occurs throughout the month of June, and chicks hatch during late-July through late-August. Fledging occurs in approximately 100 to 115 days.

Over the past decade, several concerned Kawailoa residents sought agency assistance to help protect these grounded nesting seabirds. Signs were posted warning of their presence, providing notice that loud noises and human disturbances should be avoided during the nesting period.

FIGURE 3-4: WEDGE-TAILED SHEARWATER (*PUFFINUS PACIFICUS CHLORORHYNCHUS*)

There are several other types of avian species inhabiting the area as well, but none are an endangered species. Because of the geographical mobility of birds, they can appear in the area at any time. Cattle Egrets (*Bubulcus ibis*) and pigeons are common in the project area. Other birds often found in the area may include the Spotted or Lace-necked Dove (*Streptopelia chinensis*); the Barred or Zebra Dove (*Geopelia maugei*); and the Melodious Laughing-thrush (*G.c. canorus*). The Pacific Golden Plover (*Pluvialis fluva*) is a migratory bird found in the area during the winter season. This bird frequents open areas such as lawns in residential areas and feeds along the coastline.

The proposed site is mainly vacant of mammal species with the exception of occasional domestic cattle (*Bos taurus*) and horse (*Equus c. caballus*) found grazing and resting in the mauka project area, and dogs (*Canis f. familiaris*), cats (*Felis cattus*) and mongoose (*Herpesters a. auropunctatus*). It is also likely that the Roof Rat (*Rattus r. rattus*), Norway Rat (*Rattus norvegicus*), European House Mouse (*Mus domesticus*) and possibly Polynesian Rat (*Rattus exulans hawaiiensis*), use resources within the general project area. All of these introduced rodents are deleterious to native ecosystems and the native faunal species that are dependent on them. No species currently listed as endangered, threatened or proposed for listing under either the Federal or the State of Hawai'i's endangered species programs were detected on the site.

Anticipated Impacts and Mitigation Measures

The cattle and horses currently allowed to graze on the mauka portion of the site will be excluded from the site. Fencing will be installed to keep cattle from the surrounding properties out of the project area. There will be short-term disturbances to introduced wildlife species (birds and mammals) during the construction period.

Currently, the Wedge-tail nesting area is located on the coastal edge of the makai parcels. Other than a few small warning signs, this area is not protected from beach-goers and other disturbances. The construction and operation of the park facilities will be conducted in a manner which will avoid adverse effects to the Wedge-tailed Shearwater nesting area. The City will coordinate with U.S. Fish and Wildlife Service (US FWS) to develop and implement a plan to protect the seabirds at this new beach park. Current plans are to provide a designated nesting area that is fenced off and landscaped as a protected nesting area for the shearwaters.

Based on recommendations from the US FWS, potential design components are proposed for the planned nesting area to increase preservation of the shearwaters. This would involve roping off the area with small segments of rope tied to concrete-anchored poles, approximately 30-36 inches above ground level to effectively restrict pedestrian access. Interpretive and educational signs would be used to provide further awareness of the importance of the protected area. This mitigation would serve the dual purpose of minimizing the threat of disturbance to the Wedge-tailed Shearwaters, by providing a protected nesting area, while also providing an educational asset for the public.

In support of the proposed Wedge-tailed Shearwater nesting preserve area the Offshore Island Restoration Committee (OIRC) and the US FWS are dedicated to restoring and preserving habitat of sensitive species such as the nesting seabirds of Hawai'i. The OIRC is initiating a web cam program to monitor nesting sites, providing resources for researchers, wildlife managers

and the general public via the internet. The City and County will consider participation in the OIRC web cam program as part of an ongoing education and public outreach program.

To reduce the potential for interactions between nocturnally flying shearwaters with external lights and man-made structures, it is recommended that shields be installed for construction lighting and permanent lighting. This would minimize the threat of disorientation and downing of adult seabirds and shearwaters.

3.8 COASTAL WATERS AND MARINE ECOLOGY

Existing Conditions

Near shore coastal waters in the area of the site are classified as Class A waters by the State Department of Health (DOH). The objective for Class A waters is: "…use for recreational purposes and aesthetic enjoyment be protected. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class." (DOH Water Quality Standards, Title 11, Ch. 54, HRS). The drainage plan for the proposed project will be designed for detention within the property to avoid surface water runoff to coastal waters, in compliance with City and County of Honolulu Drainage Standards.

Marine water quality assessments that have been completed on the North Shore of O'ahu have shown high quality conditions for standard water quality indicators. Very high mixing conditions exist along this shoreline due to persistent trade winds and surf conditions, which results in the rapid dispersion of suspended sediment and other pollutants contributed to the nearshore waters. During heavy rainfall runoff periods, this coastline experiences suspended sediment loading; however, the strong mixing conditions help to disperse this material within several days.

Marine life in the nearshore region includes benthic reef ecology and a typical Hawaiian reef fish community. A 1998 study conducted by Marine Research Consultants for a Pua'ena Point project provides a description of the North Shore marine environment. Marine animals that frequent the Kawailoa ocean shoreline include *honu*, Green Sea Turtle (*Chelonia mydas*) which is termed threatened and the Hawksbill Turtle (*Eretmochelys imbricate*), less frequently seen than the Green Sea Turtle, is considered endangered. The endangered Hawaiian Monk Seal (*Monachus schauinslani*) has also been observed in the Chun's Reef area, on occasion. Federal laws and agencies project these animals and representatives are typically alerted when there is disturbance or abuse.

The North Shore fish are characteristic of undisturbend Hawaiian reef environments. The family Acanthuridae (surgeonfish) species are the most common reef fish. These include Goldring Surgeonfish (kole, *Ctenochaetus strigosus*), Convict Surgeonfish (manini, *Acanthurus triostegus*), Whitebar Surgeonfish (maikoiko, *A. leucopareius*), Orangeband Surgeonfish (na'ema'e, *A. olivaceus*), Bluelined Surgeonfish (maiko, *A. nigroris*), Unicornfish (umaumale, *Naso lituratus*), and the Yellow Tang (lau'ipala, *Zebrasoma flavescens*). Also common were Rudderfish (nenue, *Kyphosus bigibbus*) and Parrotfish (uhu, *Scarus spp.*). Found in abundance were Planktivorous Damselfish (*Chromis spp.*) and Wrasses including many Saddle Wrasse (hinalea lau-wili, *Thallassoma duperrey*). Butterflyfish included the Raccoon Butterflyfish

(kekakapu, *Chaetodon lunula*) and Milletseed Butterflyfish (lau wiliwili, *C. miliaris*). Fish species that are popular with people who dive and fish for food include Goatfish (weke, *Mulloidichthys falvolineatus*, Kumu (*Parupeneus porphyreus*), Moana Kea (*Parupeneus cyclostomus*), Hawaiian Mackerel (opelu, *Decapterus macarellus*), Blue-lined Snapper (taape, *Lutjanus kasmira*), Squirrelfish (u'u, *Myripristes berndti*), Parrotfish (uhu, *Scarus spp.*), several Small Jacks (papio, *Caranx melamphygus*), and Grouper (roi, *Cephalopholus argus*).

Benthic algae on the North Shore consists primarily of frondose benthic algae such as green alga, *Halimeda spp.*, *Ulva spp.*, brown alga, *Dictyopteris spp.*, and red alga, *Amansia spp.*, *Asparagopsis taxiformis*, *Corallina spp.*, and *Trchoglea spp.*

Flat or lobed break-resistant coral growth forms are typically found across the North Shore where winter surf creates conditions of severe physical stress. The coral found in this area include *Pollicopora meandrina*, as well as the *Porites lobata* and the *Monipora falbellata, M. patuala, M. verruscoas*. Other common macro invertebrates include Sea Urchins (*Class Echinoidea*) and Sponges.

Anticipated Impacts and Mitigation Measures
Beneficial uses of Class A water activities will be enhanced by the completion of the proposed beach park improvements. The proposed project does not include plans for direct alteration of the shoreline or offshore areas. In effort to help mitigate the potential effects of the wastewater disposal to the marine environment, the comfort station and leach field would be located close to the highway. The proposed project will have on-site drainage controls consistent with County Grading Permit and NPDES Permit requirements. The proposed wastewater treatment and disposal will meet or exceed State Department of Health standards for the new facility. The project is not anticipated to cause adverse effects to the near shore waters and marine life during its construction and operation. Best Management Practices will be implemented in the project's design, operation and maintenance.

3.9 AIR QUALITY

Existing Conditions
In Hawaii, both Federal and State environmental health standards pertaining to outdoor air quality are generally met due to prevalent trade winds and the absence of major stationary sources of pollutant emissions. A residential character and the relative absence of stationary pollutant sources in the area keep air quality in the project area at levels well within the air quality standards.

Anticipated Impacts and Mitigation Measures
Currently, no air quality monitoring stations exist on the North Shore of O'ahu. The proposed project will not negatively impact air quality since no structures or uses generating air emissions are proposed and air emissions is already present from traffic that is already parking at the site and traversing through the area.

There will be short-term impacts during the construction period in the form of exhaust from increased traffic and fugitive dust from construction activity. A dust control management plan will be developed which identifies and addresses activities that have a potential to generate

fugitive dust. The short-term effects on air quality during construction will be mitigated by compliance with provisions of Hawai'i Administrative Rules, Section 11-60.1-33 on Fugitive Dust. Potential control measures to reduce fugitive dust include:

- Planning the different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locating dusty equipment in areas of the least impact;
- Providing an adequate water sources at the site prior to the start up of construction activities;
- Landscaping and rapid coverage of bare areas, including slopes, starting from the initial grading phase;
- Controlling of dust from shoulders and access roads;
- Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- Controlling of dust from debris being hauled away from the project site.

3.10 NOISE

Existing Conditions
The primary noise sources in the area of the project site are related to traffic and urban activities. Kamehameha Highway is the most significant source of noise in the project area. Noise levels at the site and surrounding area are generally quiet due to the rural uses for residential and rural land use activities.

Anticipated Impacts and Mitigation Measures
The primary noise receptors in the area are the residences in the Kawailoa area. Adjoining neighbors will notice noise from the increased activity at the park site. Most of the uses at the proposed beach park will not generate extended unacceptable levels of noise. No long-term adverse noise impacts are expected to result from the new park.

Construction work at the project site will involve activities that may generate an increase in noise levels. However, such exposures will be only a short-term condition, occurring during specific daylight hours. Construction vehicles and activities must comply with State Department of Health Administrative Rules. The State of Hawai'i Department of Health's noise control regulation requires a permit for construction activities that emit noise in excess of 95 decibels. Mitigation measures to minimize construction noise will include the use of mufflers to suppress loud equipment and limitations on the hours of heavy equipment operation.

3.11 LAND USE

Existing Conditions
The surrounding region has historically been used for agriculture and grazing. The project site is currently unoccupied. The project site is bordered by the developed Kawailoa urban residential neighborhood along the makai side of Kamehameha Highway, and overgrown former sugar plantation land on the mauka side.

The project site is made up of a number of properties mauka and makai of the Highway. On the makai side, the northern-most property (TMK 6-1-08: 17) is a former residential property (Roberts) with a concrete driveway running along the southwest edge and a concrete slab in the middle. The parcel located on the Hale'iwa-side (TMK 6-1-08: 18) is also a vacant former residential property (Ralston). These makai parcels are currently used by the public as an informal beach park and access to Chun's Reef. The mauka parcels currently are made up of vacant agricultural land, mainly consisting of alien trees, shrubbery and grasses. ~~Since the City purchased these lots in the mid 1990's, this site has been known as a future beach park site.~~ The City is planning to acquire the portions of parcels mauka of Kamehameha Highway and the parcels would be subdivided into one lot. The two parcels which are makai of the highway are now owned by the City and will be consolidated.

Development patterns on the Island of O'ahu are set by State Land Use District designations, the City and County of Honolulu General Plan, North Shore Sustainable Communities Plan and zoning district designations. The principal function of these plans and regulations is to specify where land uses such as commercial, residential, industrial, agricultural, open and public areas are permitted. The existing land use designations are briefly summarized below.

State Land Use Designation - The proposed site is situated within the State Land Use Urban (makai area) and Agricultural Districts (mauka area) *(Figure 3-5)*. According to the State Land Use District Boundaries compiled by the State Land Use Commission, ~~Land Study Bureau Detailed Land Classifications~~, the area has been classified for "Urban" and "Agricultural" type uses.

City and County of Honolulu Zoning - The subject property is designated as "AG-1: ~~Restrictive~~ Restricted Agricultural" and "R-5: Residential" by the City and County of Honolulu's Land Use Ordinance *(Figure 3-5)*.

City and County of Honolulu's North Shore Sustainable Communities Plan - The City and County of Honolulu's North Shore Sustainable Communities Plan (NSSCP) approved by the community and Council in 1999, designates the project area as Park (makai area) and Agricultural Use (mauka area) *(Figure 3-6)*. Land uses surrounding the project area include residential and agricultural. Urban areas in proximity to the site include the commercial district of Hale'iwa, which is located approximately one-mile to the west, and the residential communities of Kawailoa, Hale'iwa, and Pupukea. This site is on the NSSCP Public Facilities Map as a future beach park.

Coastal Zone Management Program - The parcel is located in the Special Management Area (SMA) established to administer the Coastal Zone Management (CZM) Program (*Figure 2-1*).

Anticipated Impacts and Mitigation Measures

Makai portions of the project site have been used as an informal beach park for over 20 years. Given previous uses at the project site, the proposed improvements are not considered to be significant. Of the 3.5 acre site, the majority of the site will be open space, parking, and preservation easements. At the proposed site, open space will be preserved for recreational beach-related and park activities, and allow for increased beach access. In addition, areas for preservation of Wedge-tailed Shearwater nesting areas will be designated to contribute to species protection.

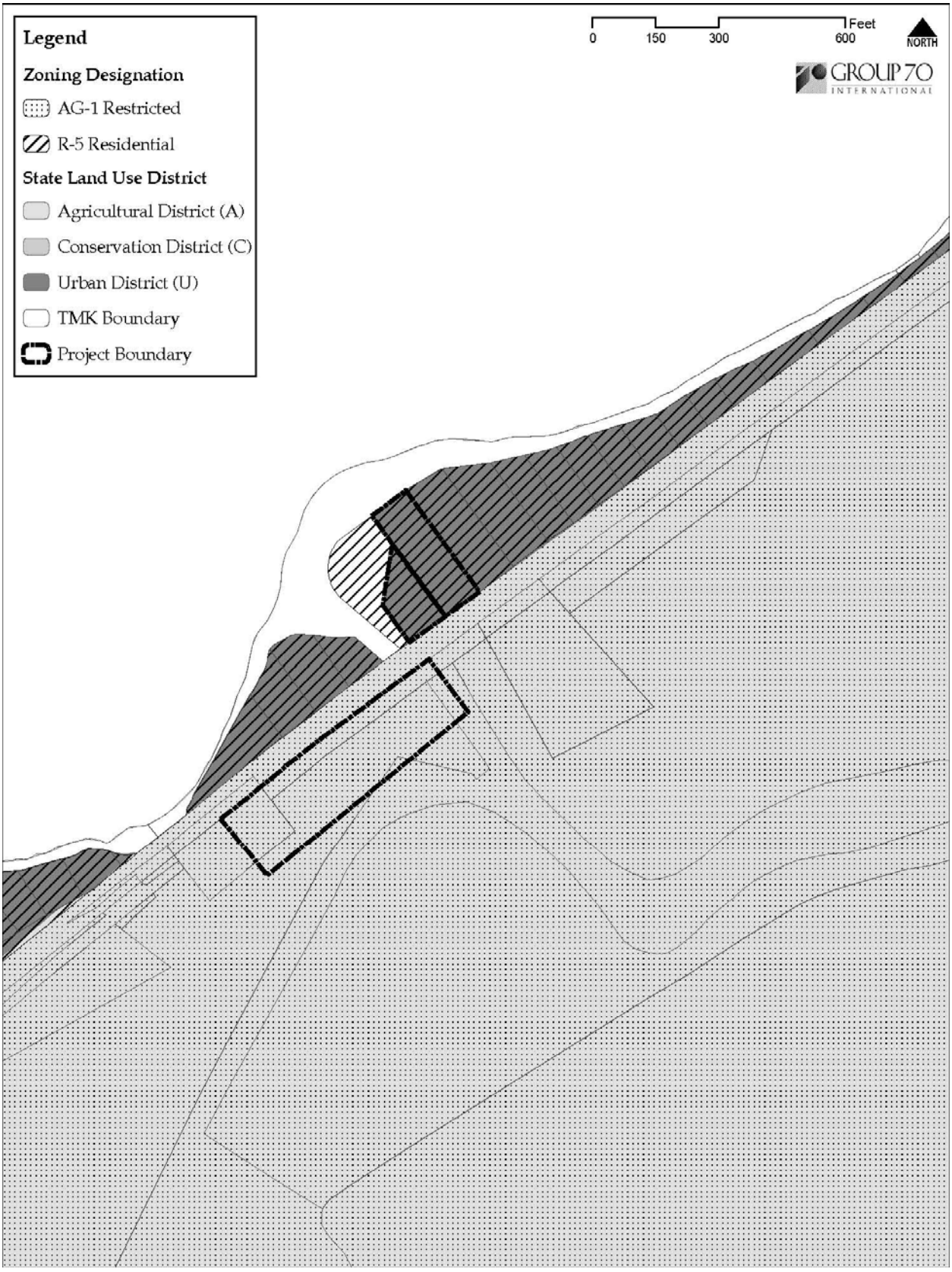


Figure 3-5: State Land Use Districts and Zoning Designation

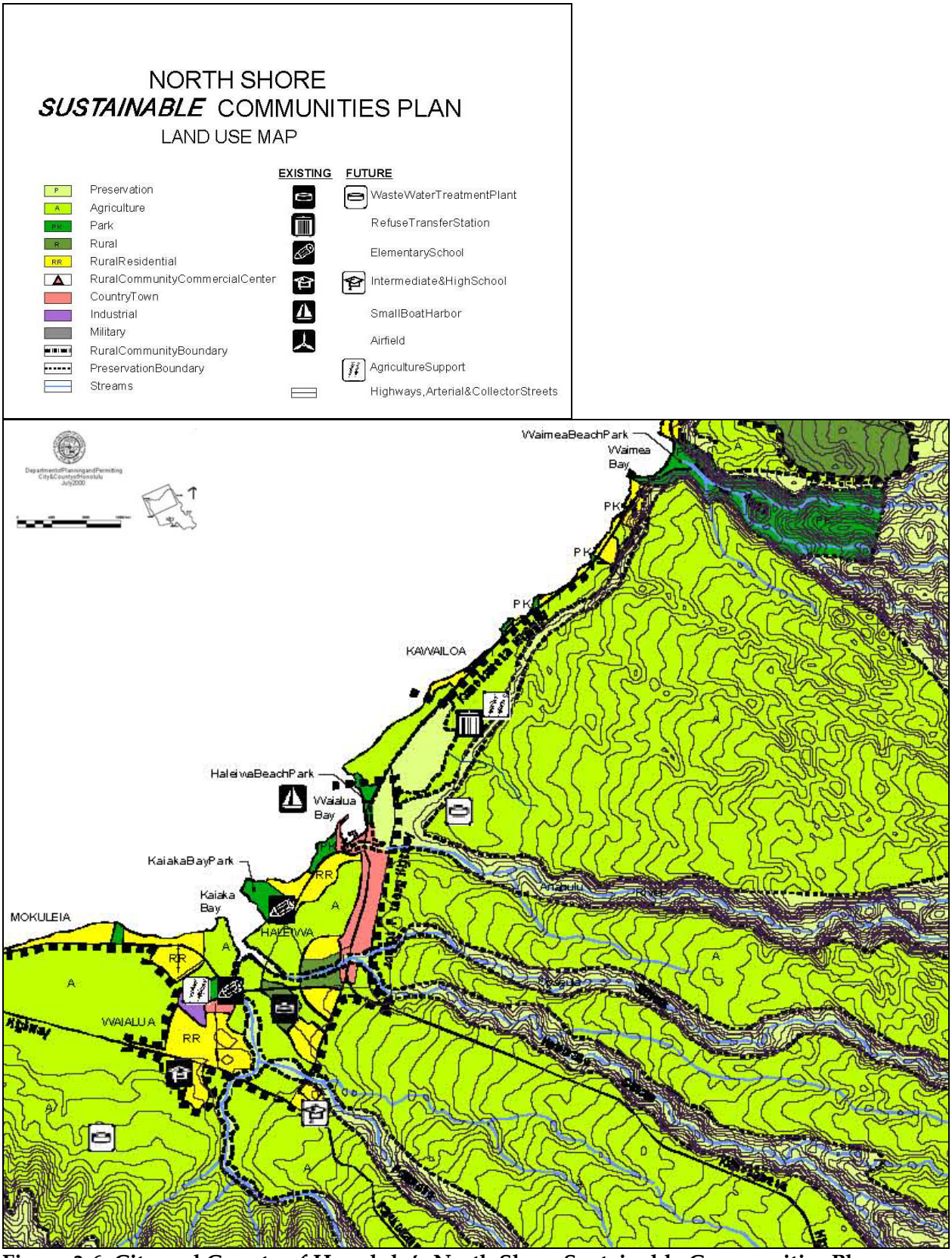


Figure 3-6: City and County of Honolulu's North Shore Sustainable Communities Plan

State Land Use Designation – The State of Hawai'i will have to designate use of the proposed site for the proposed improvements. The project site is State Urban District Lands on the makai side of Kamehameha Highway, and does not involve the use of State Conservation District Lands. Initial consultation with the Department of Planning and Permitting determined that the proposed parking lot and possible park on the mauka side of Kamehameha Highway, State Agricultural District Lands, would not require a State Special Use Permit.

City and County of Honolulu Zoning – The City and County of Honolulu are proposing the improvements to Kawailoa Beach Park. Public facilities such as beach park facilities are allowed in R-5 and AG-1 districts. The proposed comfort station will comply with LUO, Section 21-3.50-4, Agricultural uses and development standards, for the proposed mauka site located in the AG-1 district, and Section 21-3.70-1 Residential uses and development standards, for the proposed makai site located in the R-5 district.

For the mauka parcels, a Minor Conditional Use Permit will potentially be required for the proposed parking lot in the AG-1 district. The proposed parking lot landscaping, outdoor lighting, irrigation system, pathways and possible park support facilities will comply with Article 4, General Development Standards, of the LUO. In addition, the proposed parking lot and drop/off area will also comply with requirements in Article 6, Off-street Parking and Loading.

The park is on the Development Plan Public Facilities Map for the North Shore and the Public Infrastructure Map (PIM) is in the inventory.

City and County of Honolulu's North Shore Sustainable Communities Plan – The City and County of Honolulu are proposing this project to develop the Kawailoa Beach Park recreation facility. The proposed project area is designated as Park Land Use, which is an open space land use beneficial to the community. The North Shore Sustainable Communities Plan (1999) includes a Public Facilities Map symbol for the designated beach park on the makai side of the road. The project now includes the mauka support area. This action is consistent with the County and community's long range plan for the area. The project will follow through with the proposed Park designation for the site.

3.12 ADJACENT LAND USES

Existing Conditions

The proposed Kawailoa Beach Park is located in the coastal Kawailoa Ahupua'a, of the Waialua District, on the Island of O'ahu. The associated improvements will be made on the newly created combined 3.5-acre site, completely within the SMA boundary. The site, as shown in *Figure 3-5*, is bounded by primarily agricultural and residential uses. The ocean shoreline provides the western boundary for the two land parcels makai of Kamehameha Hwy. Agricultural and farm uses surround the eastern side of the mauka land parcels.

Land uses surrounding the project area include open space/conservation, agricultural lands and animal grazing and stabling. Urban areas include the town of Hale'iwa to the south and Pupukea to the north beyond Waimea Bay.

Retail and service businesses are located along Kamehameha Highway in the adjacent areas. Beach front and inland residences, beach parks and agricultural land comprise the majority of uses within the project's region between Hale'iwa and Waimea Bay. Hale'iwa is the nearest commercial center, located approximately 1.3 miles from the project site.

Anticipated Impacts and Mitigation Measures
The proposed improvements will not affect the surrounding land uses and will be complimentary to beach access and use across Kamehameha Highway. Traffic flow and safety will be improved. Vehicles will not have to park and maneuver within the right-of-way of Kamehameha Highway and pedestrians will have well-marked and defined crosswalks to access the beach and parking areas. This use will not be in conflict with surrounding land uses of agriculture and rural residences.

3.13 ROADWAYS AND TRAFFIC

Existing Conditions
A traffic assessment report was completed by Traffic Management Consultants (August, 2005) and is enclosed in *Appendix B*. Kamehameha Highway is a two-lane, two-way arterial highway, which provides access to the North Shore of O'ahu. The posted speed on Kamehameha Highway is 35 miles per hour between Hale'iwa Town and the Turtle Bay Resort (Kuilima Resort).

The field investigation was conducted from 2:30 PM to 4:30 PM on Saturday, May 14, 2005. The peak hour of Saturday traffic occurred between 3:15 PM and 4:15 PM, when Kamehameha Highway carried about 1,600 vehicles per hour (vph), total for both directions. The directional split in Saturday peak hour traffic was 56 percent eastbound (Kahuku-bound) and 44 percent westbound (Hale'iwa-bound). Traffic typically flowed in platoons, which were created by vehicles turning on and off Kamehameha Highway or traffic stopping for pedestrians crossing the highway. Kamehameha Highway operated at LOS "E" with a vehicle to capacity (v/c) ratio of 0.52, during the Saturday peak hour of traffic.

About 70 pedestrians were observed crossing Kamehameha Highway at the site during the study period. The existing culvert under Kamehameha Highway was used by some as a pedestrian underpass during the field investigation period. About 55 vehicles were parked along Kamehameha Highway in the vicinity of the project site during the study period.

Weekday traffic data on Kamehameha Highway was obtained from the Hawai'i State Department of Transportation (DOT, February 11-12, 2003). Kamehameha Highway carried a total of 14,685 vehicles per day, total for both directions. The AM peak hour of weekday traffic occurred between 11:00 AM and 12 Noon, with Kamehameha Highway carrying a total of 950 vph. The PM peak hour of weekday traffic occurred between 3:15 PM and 4:15 PM, with Kamehameha Highway carrying 1,268 vph, total for both directions.

Projected Traffic Conditions Without Project: Analysis of historical traffic count data, obtained from DOT, indicated that traffic on Kamehameha Highway has grown at an annual rate of about 3.28 percent. The planning horizon selected for this traffic access analysis assumes project completion by 2010. By 2010, Kamehameha Highway is expected to carry a total of

about 1,870 vph during the Saturday peak hour of traffic without the proposed beach park. Kamehameha Highway is expected to continue to operate at LOS "E". The v/c ratio is expected to increase to 0.60.

Projected Traffic Conditions With Project: The trip generation characteristics of the proposed beach park are summarized in *Table 3-2*, based on Institute for Traffic Engineers (ITE) standards.

TABLE 3-2: TRIP GENERATION CHARACTERISTICS

Land Use (ITE Code)	Units	Trip Rate			Saturday Peak Hour (vph)		
		Enter	Exit	Total	Enter	Exit	Total
Beach Park (415)	6.3 Acres	1.2	1.4	2.6	8	9	17

It was assumed that one half of the trips arriving at the beach park would drop-off passengers, beach equipment, etc. at the makai side of the beach park, then return to the mauka parking lot. Similarly, it was assumed that one half of the trips departing the beach park would pick-up passengers, etc. at the makai side of the beach park before leaving the area.

The left-turn movements from both park accesses onto Kamehameha Highway are expected to operate at LOS "F". Widening Kamehameha Highway to provide median shelter lanes – westbound at the mauka access and eastbound at makai access – to facilitate the left-turn movements from the driveways would mitigate the LOS "F" conditions. However, the widening of Kamehameha Highway may also require widening the existing culvert crossing at Kawailoa Stream, which is not part of this project.

Kamehameha Highway is expected to operate at LOS "E" and a v/c ratio of 0.61. Through traffic on Kamehameha Highway can be expected to experience average delays of about 20-25 seconds per vehicle, due to vehicles turning off the Highway and pedestrians crossing the Highway. Figure 4 depicts the existing Saturday peak hour traffic, the Year 2010 Saturday peak hour traffic without the proposed project, and the Year 2010 Saturday peak hour traffic with the proposed project.

Anticipated Impacts and Mitigation Measures

The proposed project is not expected to generate a significant increase in traffic and/or beachgoers. The proposed project is anticipated to improve current conditions at the proposed site by consolidating the beach parking off the highway shoulders, and improving pedestrian safety. Pedestrian safety will be improved, as a striped crosswalk will guide pedestrians across the highway while providing drivers with a cue to the need to yield for them. Crosswalk warning signage and separate ingress/egress routes will provide additional driver cues to the presence of pedestrians. In addition to the two proposed crosswalks, a traffic signal or a pedestrian overpass are two options that could be considered for crossing Kamehameha Highway from the parking lot to the beach park to additionally aid the situation.

The Saturday peak hour traffic volumes on Kamehameha Highway are higher than during the AM or PM peak hours of weekday traffic. Stop-and-go conditions, during Saturday peak hour of traffic, were caused by vehicles turning on an off the Highway and pedestrians crossing the

Highway. The proposed project would consolidate the beach parking at the mauka parking lot and the pedestrian crossings at or between the mauka and makai accesses.

Widening Kamehameha Highway to provide for exclusive left-turn lanes or median shelter lanes at the mauka and makai accesses is not recommended at this time. While the median turning lanes would improve traffic operations, the projected turning volumes are relatively low. Widening the Highway would increase the vehicle operating speeds, as well as the required crossing times for pedestrians.

From a pedestrian safety standpoint, the traffic consultant recommends locating the proposed comfort station on the makai side of Kamehameha Highway to reduce the pedestrian crossings of the Highway. Separate left-turn and right-turn egress lanes are planned for on the mauka and makai driveway accesses. The small makai parking area will be designed to accommodate vehicle drop-off/pick-up activities and to facilitate traffic flow.

The community has voiced concerns about the congested operation of Kamehameha Highway in the vicinity of Chun's Reef. The Neighborhood Board has sponsored an effort to study the potential of re-aligning the highway or adding a mauka bypass roadway to alleviate traffic congestion at this location. Should a potential future mauka bypass roadway be developed, access to this beach park would most likely continue via driveway along the existing Kamehameha Highway. New improvements affecting the State highway will be a Department of Transportation concern.

3.14 UTILITIES

Electrical and Telephone: Existing overhead Hawaiian Electric Company (HECO) power lines, HawaiianTelecom telephone lines and Oceanic Cable transmission lines extend along the makai side right of way along Kamehameha Highway.

Anticipated Impacts and Mitigation Measures
The beach park facilities will have a small electrical demand. Electric and communication utility services will not be affected by the implementation of the proposed improvements.

Water: The site is currently being served by an existing 6-inch diameter water main by the Honolulu Board of Water Supply. The existing water main extends along the mauka side of Kamehameha Highway. An existing fire hydrant is located adjacent to the entrance driveway to the parking lot on the mauka side of Kamehameha Highway.

Anticipated Impacts and Mitigation Measures
There will be no adverse impact to the existing water system as a result of the proposed improvements. Water to the proposed comfort station will be provided by the installation of a lateral waterline from the water main to the makai project site. The water line extended to the makai side of Kamehameha Highway will be installed only for irrigation, outdoor showers, drinking fountains, and landscape irrigation in Alternative B.

The BWS system is adequate to accommodate the proposed comfort station and other anticipated water demands of the beach park. Water conservation practices will be applied to

the program for landscaping irrigation. Drought tolerant landscaping will be included (as practical) to minimize irrigation requirements.

Wastewater Disposal: A public sewer system is not available to serve development at this site. Residents and parks in the area are served by individual wastewater systems.

Anticipated Impacts and Mitigation Measures
The new beach park will create a comfort station and an outdoor shower area. An individual wastewater treatment system is proposed for the wastewater disposal. The proposed comfort station will have 6 water closets and 2 urinals. According to the design requirements of the "Individual Wastewater System Standards for the City and County of Honolulu Parks," the comfort station will have a design capacity of approximately 4,100 gallons of wastewater per day. A leach field of approximately 5,250 square feet will be required. Possible locations for the leach field for Alternatives A (makai side) and B (mauka side) is shown in *Appendix B*. The system will comply with State of Hawai'i Department of Health regulations for wastewater systems.

Landscaping: Irrigation will be used to establish and maintain the plantings. Permanent landscaping will consist of a variety of species including native, non-invasive, and xeriscape in design and placement. Hardy, drought-tolerant, soil-stabilizing varieties of non-invasive plantings will also be used.

Anticipated Impacts and Mitigation Measures
The landscaping scheme involves preservation of many of the existing trees on the site in order to provide shade and overall park appearance. The design of the parking lot landscape will use grassed swales to minimize stormwater runoff and non-point source pollution impacts.

3.15 SOCIO-ECONOMIC CHARACTERISTICS

Existing Conditions
The site is located in proximity to the coastal lowlands and popular North Shore beaches of the Hale'iwa, Waimea Bay and Sunset Beach areas. Several world famous surfing spots including Waimea Bay and the Banzai Pipeline, are located in close proximity to the site. Hale'iwa town is the closest commercial center. The proposed site is actively used by beach-goers for recreational activities such as swimming, diving, snorkeling, surfing, picnicking, and sight-seeing. Fronted by a wide sandy beach, the proposed park is inshore of Chun's Reef, one of the North Shore's popular surfing sites. Surfers cross the wide sand beach fronting the park to reach several surf sites besides Chun's Reef, including Pidleys and Jocko's.

Anticipated Impacts and Mitigation Measures
The principal social impact of the proposed project will be the creation of a recreational park for the community and visitors. Long-term benefits of the improvements will create increased public open space and beach access along the North Shore of O'ahu. In addition, the improvements will provide improved traffic flow and safety. The anticipated socio-economic impacts for the local community are positive. Construction and ongoing maintenance expenses will be borne by the City.

3.16 ARCHAEOLOGICAL RESOURCES

Existing Conditions
An archaeological inventory survey of the proposed project site was conducted by Jeffrey Panteleo Consultants, LLC in July 2005. The complete report is enclosed as *Appendix C*. The survey was conducted in accordance with the National Historic Preservation Act of 1966, as amended, Chapter 6E of the Hawai'i Revised Statutes (HRS), and guidelines established by the State Historic Preservation Division (SHPD), State Department of Land and Natural Resources (DLNR).

Archaeological and historical literature and documents research was undertaken to enhance the predictability of the nature and extent of potential cultural resources in the subject area. Hawaiian legends and traditions, as well as LCA records, indicate that the coastal zone of Kawailoa contained a density of habitation sites in the pre-contact period. The "fishing village" of Kapaeloa, house sites, the surrounding *heiau*, and the two large royal fishponds ('Ukoa and Loko'ea) were located in the *ahupua'a*. However, more recent activities, such as ranching, dairy farming, cultivation of sugar cane and construction of the OR&L railroad and Kamehameha Highway have destroyed much of the evidence.

No previous archaeological work was conducted in Parcels 17 and 18 (makai parcels); however, a reconnaissance survey was conducted in Parcel 5 (mauka parcels). Results of this survey revealed rock walls, probable remnants of Pu'upea Heiau, off-site near the southwestern boundary of the mauka parcels. A boulder and cement bridge was found in the northeastern corner of the mauka parcel, and remnants of the O.R.&L railroad right-of-way were located off the mauka site parallel to Kamehameha Highway.

No cultural remains were encountered during the surface survey. Due to previous disturbances and absence of surface remains, subsurface testing was conducted by backhoe. Five backhoe trenches were placed in Parcel 5 and five backhoe trenches were placed in Parcels 17 and 18. Results of testing revealed human skeletal remains, in Trench 5 at the makai parcel 17 (Site 50-80-10-6768). Upon discovery of the remains, all work at Trench 5 was halted, and SHPD and O'ahu Burial Council were notified. The burial was located in a pit feature. At the base of the pit was a probable platform constructed of stacked sub rounded basalt cobbles and boulders. A total of 21 light blue glass beads were found in association with the burial. Based on the historical reference of these beads, the burial probably was an adult Native Hawaiian female interred between ca. 1850 and ca. 1880.

No subsurface cultural remains or deposits were encountered in any of the other trenches. Generally, two to three stratigraphic layers were exposed during trenching in the mauka Parcel 5. Layer I was overburden consisting of silty clay with abundant root/rootlets. Underlying the overburden was Layer II, silty clay to clay with abundant rocks. Underlying Layer II was Layer III, silty clay to clay. Two to three stratigraphic layers were also exposed in Parcels 17.

Anticipated Impacts and Mitigation Measures
Initial significance has been assessed for Site 50-80-10-6768. This assessment is based on the criteria outlined in the Hawai'i Register of Historic Places significance evaluation criteria. A site may be considered significant is it meets one or more of the following criteria:

Criterion A: associated with events that have made an important contribution to the broad patterns of our history;

Criterion B: associated with the lives of persons important in our past;

Criterion C: embody the distinctive characteristics of a type, period, or method of construction; represents the work of a master; or possesses high artistic value;

Criterion D: have yielded, or is likely to yield, information important for research on prehistory or history; and

Criterion E: have an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with traditional cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts; these associations being important to the group's history and cultural identity.

Based on the above criteria, Site 50-80-10-6768 is considered significant under Criterion D and E. This site has important traditional cultural value and yielded or has the potential to yield more information significant to our understanding of the history of this region and O'ahu Island.

Therefore, no further inventory-level work is recommended at Site 50-80-10-6768. The burial will be preserved and integrated into the restricted area for shearwater nesting. Probable remnants of Pu'upea Heiau, situated off-site near the southwestern portion of Parcel 5. The feature is outside the proposed development portion of the parcel and recommended for permanent in-situ preservation. A buffer zone will be established at this site prior to commencing construction-related activities. Due to the presence of a human burial in Parcel 17 and probable remnants of Pu'upea Heiau near Parcel 5, archaeological monitoring is recommended during initial construction activities. Prior to commencing any construction activities, a monitoring plan shall be prepared for approval by SHPD.

3.17 HISTORIC AND CULTURAL RESOURCES

Existing Conditions

A Cultural Impact Assessment for Kawailoa Beach Park was undertaken as part of the master planning effort for the Kawailoa Beach Park recreation facilities improvements. The complete report by Colburn (July 2005) is enclosed as *Appendix D*. The project area is entirely located within the *ahupua'a* of Kawailoa ("the long water") in the *moku*, traditional district, of Waialua. The purpose of the cultural impact assessment was to gather information about traditional cultural practices and pre-historic and historic cultural remains that may be affected by the implementation of this development project. The study was prepared in compliance with Act 50 SLH 2000 (HB 2895 H.D.1) as it amends to the State of Hawai'i Office of Environmental Quality Control (OEQC) Guidelines for Environmental Impact Statement law [Chapter 343, HRS]. The level of ethnographic study included five interviews. Research on traditional resources entailed a review of the literature of Hawaiian *mo'olelo* or stories/legends, late nineteenth century and early twentieth century ethnographic works, and interviews with knowledgeable consultants.

Literal translation of Kawailoa is "the long water". The Kawailoa ahupua'a (traditional land division) is located in the moku (traditional district) of Waialua. The shoreline runs from Waimea Bay to Pua'ena Point. The land division took its name from the Kawailoa Stream that is one of the longest streams on O'ahu Island. Kawailoa ahupua'a is especially noted as Kawailoa Kai lawai'a (Fishery). The fishing industry was flourishing in this area during the ownership of Ali'i Nui (Princess) Victoria Kamamalu and has continued through out the history of this area. No information could be found on when Kawailoa Kai lawai'a ended. It was a natural abundant fishery in ancient times. The industry survives until this day but mostly as a recreational fishing area instead of fishing as a livelihood. That dwindled in the late 1960's.

Sacred spaces that include cultural properties encompass the concept of "*wahi pana*" and were "*kapu*" (privileged). Some of the most prominent *Wahi Pana* (Sacred Spaces) located in and around the Kawailoa ahupua'a include Punanue Point, Pu'upea Heiau, Kahokuwelowelo Site, and Kahoku-welowelo Heiau. In addition, the coastal area has been known for its abundant marine resources. Fishermen gather turtle, crabs, *eh'e* (octopus) and reef fish such as menpachi, *'aweo'weo*, *nenue* and *kala* in the nearshore waters. Other popular coastal activities at Kawailoa include surfing, camping, and *limu* (seaweed) gathering.

Anticipated Impacts and Mitigation Measures
The lands within the project area were heavily affected by the historic activities of the 19th and 20th centuries. Cultural sites and/or resources were destroyed or buried by previous activities. No adverse impact to surface cultural resources is anticipated. However, it should be noted that cultural sites have been found and several consultants have stressed that there are both unmarked and marked graves/burials throughout the project lands; as well as a *heiau* important in Kawailoa's history. An archaeological and cultural monitor should be available (on-site) for any and all excavation activity to mitigate any subsurface cultural resources found or *iwi* (ancestral bones).

The main concern is the potential for disruption of cultural practices at this site, primarily access for gathering coastal resources. The proposed beach park is planned to provide improved public access, which will benefit cultural practices. It is proposed that cultural practitioners participate as advisors and participants in the ongoing management of the park.

3.18 VISUAL RESOURCES

Existing Conditions
The project site is located on the edge of the North Shore coastline surrounded by developed urban residential neighborhoods to the east and west and agricultural pasture land towards the mountains. The existing makai parcel views consist of the surrounding residential neighborhood and of the coastline as displayed *Figures 3-7* and *3-8*. The proposed mauka site is displayed by *Figure 3-9*. As displayed by *Figures 3-10*, currently, invasive plants, automobiles, and unattended landscape block most of the views of the coastline from the Kamehameha Highway.

FIGURE 3-7: EXISTING VIEW FROM THE MAKAI PROPERTY

FIGURE 3-8: EXISTING VIEW OF THE RESIDENTIAL PROPERTY (TO THE NORTH) ADJOINING MAKAI PROPERTY

FIGURE 3-9: EXISTING VIEW OF MAUKA PROPERTY FROM THE MAKAI PROPERTY ACROSS KAMEHAMEHA HIGHWAY

FIGURE 3-10: EXISTING VIEW OF THE MAKAI AND MAUKA PROPERTIES ALONG KAMEHAMEHA HIGHWAY LOOKING TOWARDS HALE'IWA

Anticipated Impacts and Mitigation Measures
The existing views of the North Shore coastline with be preserved and enhanced by the proposed improvements. The proposed comfort station and improvements will be compatible with the surrounding residential area.

The proposed project will not significantly impact area views. The project site is currently undeveloped and the improvements will enhance the appearance. Landscaping will be used to improve the visual character of the project site and views of the coastline from Kamehameha Highway will be enhance by providing a vehicle parking area mauka of Kamehameha Highway and clearing of invasive vegetation.

3.19 HAZARDOUS MATERIALS

Existing Conditions
A Hazardous Materials Assessment Survey was conducted by Clayton Group Services (2004) on the proposed site. The complete report is enclosed in *Appendix E*. During the onsite inspection, five types of suspect asbestos-containing materials (ACM) were observed in one area of the subject property, and representative samples of each material were collected for analysis. Based of Polarized Light Microscopy (PLM) analysis, materials collected from two of 15 samples contained asbestos above the regulatory level of one percent (1%). Asbestos was found in samples from sheet vinyl flooring and sheet vinyl floor tiles located on a concrete foundation.

The ACM was found to be deteriorating and in poor condition. The sheet vinyl floor tiles are lose and resting in place. Removal of both these materials is recommended.

Anticipated Impacts and Mitigation Measures
Based on the 2004 hazardous materials assessment, there is some asbestos in tiles on the property. These tiles currently remain on the northern makai parcel of this site. There is a State DOH-approved plan for removal of the asbestos material. This includes excavation of some the former pool fill on this site. Materials will be removed from the site and appropriately disposed following the DOH plan requirements.

When removal of the ACM is planned, a qualified asbestos abatement contractor will be hired to perform the work. In addition, a qualified industrial hygienist should be employed to conduct air monitoring during removal work to comply with regulatory requirements.

3.20 POTENTIAL CUMULATIVE AND SECONDARY IMPACTS

Cumulative effects are impacts which result from the incremental effects of an activity when added to other past present, and reasonably foreseeable future actions, regardless of what agency or person undertake such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The project is not anticipated to generate substantial cumulative impacts. The new facilities will provide basic support services to help manage the growing utilization of this beach resource.

Secondary effects are impacts that are associated with, but do not result directly from, an activity. The environmental analysis of the proposed project addresses full development of the facilities in the context of known planned or approved land uses in the vicinity.

3.21 COASTAL EROSION

Existing Conditions

Coastal erosion is a chronic problem on the Hawaiian Islands, effecting coastal properties throughout the state. As such, it is addressed in this Final EA for the proposed coastal development project. According to the Oahu Shoreline Study, Part I Data on Beach Changes (Sea Engineering, Inc., 1998) this area is characterized as "generally stable, but is subject to erosion during large winter waves." According to the Office of Coastal and Conservation Lands of Department of Land and Natural Resources, the area has recently expressed highly dynamic behavior on annual and inter-annual time frames. The specific project site parcels have not been substantially modified by erosion forces in recent decades.

Anticipated Impacts and Mitigation Measures

The proposed project does not include plans for direct alteration of the shoreline or offshore areas. The proposed project is located over 100 feet mauka from the shoreline, and will not affect coastal erosion or shoreline behavior. The on-site soils, whose permeability is moderate with slow runoff and slight erosion hazard will absorb normal runoff events. As compared to the vacant site, with exposed soils and limited vegetation, the proposed project is anticipated to reduce the amount of soil erosion and increase protection of the coastal dune with proposed landscaping and controlled foot traffic. In the event of unstable beach loss and increased shoreline erosion rates, mitigation measures would be considered in the future.

Section 4.0
Alternatives to the Proposed Project

4.0 ALTERNATIVES TO THE PROPOSED PROJECT

This Final ~~Draft~~ Environmental Assessment evaluates alternatives to the proposed project described in *Section 2.0*. The following provides discussion of the alternatives to the proposed project.

4.1 NO-ACTION ALTERNATIVE

The "no-action" alternative would result in the continued use of the land on the makai side of Kamehameha Highway as an informal beach park with no recreational improvements and remnants of the demolished residence would continue to be present on the property. In this alternative, construction of the proposed Kawailoa Beach Park recreation facilities would not occur and the anticipated new public recreational improvements would be negated. This alternative would not generate new environmental impacts. The positive community and recreational benefits associated with the new park improvements would not be available.

The portion of the site located on the mauka side of Kamehameha Highway would continue to be vacant agricultural land consisting of overgrown shrubbery. The site is a small portion of a larger TMK designated for agricultural grazing and ranching activities. The no-action alternative would allow a continuation of the existing problems at this site. Parking of vehicles along the roadside would continue in a haphazard manner, with rutted dirt parking on both sides. Pedestrian crossing of the highway would continue to be random and hazardous due to the obstruction of vehicles parked along the roadside and the lack of a crosswalk. There would be no restroom facilities provided in the no-action alternative, forcing people to find other means for relief, such as the bushes or ocean. Presently, there are no lifeguard facilities at this location. As the trend of growing beach use continues, these problems would become more severe with this option.

4.2 ALTERNATIVE A – MAKAI LOCATION FOR COMFORT STATION

This alternative would involve the construction of new park improvements on the makai portion of the proposed site. These improvements would include a new comfort station, outdoor shower area, a lifeguard tower, storage and vehicle parking, walkways, picnic tables and benches, and landscaping.

On the mauka portion of the site, this alternative would involve the construction of approximately 80 parking spaces, including room for expansion to 100 spaces. Two pedestrian crosswalks would be installed with highway signage. Facilities and access would comply with the Americans with Disabilities Act of 1990 (ADA).

This alternative would provide improved public recreational facilities to residents and visitors on the Island of O'ahu in the area. Pedestrian safety would improve due to off-road designated parking areas and reduction of shoulder parking along Kamehameha Highway. The development of the comfort station on the makai site would include the treated wastewater disposal facilities. The proposed makai portion of the site already contains an existing concrete slab from a previous residential structure. The proposed comfort station would be located mauka of the existing slab. In addition, the proposed location of the comfort station would be

situated over a 100 feet mauka from the seaward limit of vegetation in effort to minimize placement of structures near the shoreline. Of note, the location of the comfort station on the makai site would eliminate the need for pedestrians (including children) to cross the highway to use the comfort station, thereby reducing the potential risks to pedestrian safety.

4.3 ALTERNATIVE B – MAUKA LOCATION FOR COMFORT STATION

This alternative would involve the construction of a new comfort station and 80 parking spaces on the mauka portion of the site. In addition, two pedestrian crosswalks with striping and highway signage would be installed to connect to the makai site.

On the makai portion of the property, the new beach park area would include a pick-up/drop-off area with ADA parking, new lifeguard tower, storage and vehicle parking, walkways, picnic tables and benches, outdoor showers and landscaping. Facilities and access would comply with the Americans with Disabilities Act of 1990 (ADA).

This alternative would provide similar benefits as Alternative A. The treatment wastewater disposal area would be about 100 feet mauka of the disposal area planned for Alternative A. In comparison to Alternative A, Alternative B includes more open space and less impermeable surfaces on the makai site. However, there would be a need for pedestrians (including children) to cross the Kamehameha Highway to access the comfort station on the mauka side of the highway. This would also create an increased risk to pedestrians and may serve to further slow traffic along this section of the highway.

4.4 ALTERNATIVE C – NO COMFORT STATION

This alternative would not include the development of a new comfort station. This plan could potentially serve as an interim park plan, pending future funding of the comfort station (as planned in Alternatives A and B). The makai site would include a pick-up/drop-off area with ADA parking, an outdoor shower area, lifeguard tower and storage facility, walkways and picnic facilities, and landscaping. The mauka site would consist of a new parking lot area for approximately 80 spaces, including room for expansion to 100. There would be two pedestrian crosswalks to connect with the makai areas.

In terms of beach access and parking, this alternative would also provide similar benefits as Alternative A and B. This alternative does not include the development of a new comfort station. This alternative would provide the greatest amount of open space, and have the least amount of impermeable surfaces. However, the need for public restroom facilities and amenities would not be addressed for this popular beach designation, resulting in continued lack of restroom facilities. There would be no wastewater treatment and disposal. As the trend of beach utilization grows, this situation would eventually pose a risk to public health and safety, and adversely affect the adjoining residential neighborhood.

4.5 RESIDENTIAL DEVELOPMENT

Another alternative to the proposed project would be the development of the site as a residential development without the proposed beach park improvements. The available building area for the makai parcels, already zoned as R-5 Residential, is approximately 1.1 acres or 47,174 square feet. Assuming R-5 zoning (5,000 square feet lots) and making allowances for roadways, the R-5 residential development alternative could create approximately seven to eight lots for the proposed makai portion of the site. In addition, the mauka portion of the proposed site, zoned as AG-1 Restricted Agriculture, would potentially allow for one or two single-family residences on the mauka portion of the site. In combination, the residential alternative could create as many as ten new house lots for the proposed 3.5 acre site.

This residential development alternative would be compatible with the surrounding residential neighborhood. As compared to current conditions this alternative would create several environmental impacts including an increase in noise, traffic, population, etc. The resulting increase in population would also increase demand on public utilities and traffic in the area. In addition, under this alternative, the community would no longer be able to access using the existing Kawailoa Beach and Chun's Reef informal beach park access across the two makai lots. The community and general public would also not benefit from the recreational improvements proposed under the Kawailoa Beach Park Recreation Facilities concept plan.

4.6 COMMERCIAL DEVELOPMENT

This alternative to the proposed project would re-zone the parcel to B-1 Neighborhood Business and develop the site as a shopping center. The approximately 3-acre project site would include up to 100-150 parking spaces and between and between 20,000 to 30,000 sq. ft. of retail space and service. The most likely businesses for this location would be restaurants, convenience stores and beach/visitor-related shops.

This option would directly conflict with the North Shore Sustainable Communities Plan designation for this residential area. The creation of commercial development on the property would create additional traffic entering and exiting the shopping center development. In addition, the commercial development would be in close proximity to the residential area and would cause the disruption of existing residential community. While the shopping center could provide retail and service opportunities for the community, there are several other shopping centers nearby, such as the Haleʻiwa Shopping Center, Pupukea Foodland Shopping Center, and the town of Haleʻiwa which provides many retail services. In addition, under this alternative, the community would not benefit from new public beach access with the addition of the proposed beach park improvements.

4.7 EVALUATION OF ALTERNATIVES

To evaluate the alternatives it is necessary to consider the impacts each alternative would have on the physical environment (visual, traffic, noise, and air quality, etc). In addition, it is important to weigh these effects against the benefits each alternative would bring to the surrounding community in terms of community services.

The "no-action" alternative would have the least impact on the environment, noise level, and view planes. However, the edges of Kamehameha Highway would continue to be used for recreational parking, often reducing traffic flows, and would continue to be unsafe for pedestrians. There would be no designated crosswalks or pedestrian footpaths. The Wedge-tailed Shearwater nesting area would continue to be neglected and disturbed with no restrictions on access. There would be no lifeguard facilities. In addition, this alternative would not provide restroom facilities for the popular beach designation. This situation if left unchecked could pose a risk to health and safety.

The no-action alternative would result in the continued shortage of public facilities and recreational resources for visitors and community members on the Island of O'ahu. The no-action alternative does not meet the needs or address the problems of the current situation. While, the no-action alternative would have no adverse environmental impacts, it cannot be considered a reasonable solution to the existing situation and future shortfalls of recreational amenities for the community of the North Shore and the Island of O'ahu.

The residential development alternative would be compatible with the surrounding neighborhood but it would increase the population in the area as well as the use of public facilities. While housing is an important community resource, the benefits of improved public access and support facilities for Kawailoa Beach would not be realized.

The alternative for a commercial shopping facility would create jobs and retail opportunities, it would generate substantial traffic, noise, and visual impacts. In addition, two shopping centers already provide retail functions in the area. The benefits of commercial development such as job creation would be outweighed by the negative consequences of the development. Such a development would be in conflict with the North Shore Sustainability Communities Plan designated use for this area.

The proposed beach support park, would not have significant negative impacts to the physical environment and would provide benefits for the community. The park would provide outdoor recreational opportunities for the community. In addition, the proposed beach park would preserve a substantial amount of open space for public enjoyment and would enhance the visual resources of the area.

In comparing the three beach park alternatives, Alternative A would provide the beach support facilities on the makai side, which would provide the greatest utility and convenience to beach users. The mauka location for the comfort station (Alternative B) would result in a greater distance between the wastewater disposal field and the ocean. Each beach park alternative would require pedestrians to cross the highway in order to utilize the mauka parking lot. The need for pedestrians to cross Kamehameha Highway would be greater in Alternative B. There would be the greatest amount of open space and landscaping on the makai side with the mauka comfort station option (Alternative B) and the interim park plan with no comfort station (Alternative C).

Section 5.0
Plans and Policies
(Conforming to the Coastal Zone Management Program)

5.0 PLANS AND POLICIES (CONFORMANCE TO THE COASTAL ZONE MANAGEMENT PROGRAM)

The project's consistency with applicable land use policies set forth in the Hawai'i State Plan, Coastal Zone Management Program, General Plan and North Shore Development Plan are discussed.

5.1 HAWAI'I STATE PLAN

The Hawai'i State Plan establishes a statewide planning system that provides goals, objectives, and policies which detail property directions and concerns of the State of Hawai'i. Priority guidelines relating to the economy, housing, population growth, facility systems, and the physical environment will be discussed as they relate to the Kawailoa Beach Park project.

It is the goal of the State, under the Hawai'i State Planning Act (Chapter 226, HRS), to achieve the following:

- A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai'i present and future generations.
- A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.
- Physical, social, and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life (Chapter 226-4, HRS).

Discussion:
The proposed Kawailoa Beach Park project is consistent with the objectives and policies of the State Plan. The project strives to promote increased recreational opportunities and preservation of open space for the State of Hawai'i. The project will also promote the goals of the State of Hawai'i by providing recreational facilities, enhanced public access to the shoreline and enhanced health safety public amenities in the area.

In addition, Kawailoa Beach Park will promote the goals of Hawai'i's State Plan by providing cultural and environmental preservation opportunities, supporting cultural values, customs, and arts that enrich the lifestyles of Hawai'i's people. The project includes areas for preservation of Site 50-80-10-6768 and a designated area for the Wedge-tailed Shearwater nesting. The project is consistent with Hawai'i State Plan by enhancing the surrounding environment and view corridors along the North Shore coastline.

5.2 HAWAI'I STATE LAND USE DISTRICT BOUNDARIES

The State of Hawai'i Land Use Law regulates the classification and uses of lands in the State to accommodate growth and development, and to retain the natural resources in the area. All State lands are classified by the State Land Use Commission, as Urban, Rural, Agricultural, or Conservation, with consideration given to the General Plan of the County.

Discussion: The proposed project site includes lands within the designated Agricultural and Urban District. The Hawai'i State Plan, Chapter 205-4.5 Hawai'i Revised Statutes, states that:

"Within the agricultural district all lands with soil classified by the land study bureau's detailed land classification as overall (master) productivity rating class A or B shall be restricted to the following permitted uses: (6) Public and private open area types of recreational uses including day camps, picnic grounds, parks, and riding stables, but not including dragstrips, airports, drive-in theaters, golf courses, golf driving ranges, country clubs, and overnight camps."

The proposed Kawailoa Beach Park is consistent with this Statute, as the park soils are designated with a LSB productivity rating of "D".

5.3 HAWAI'I COASTAL ZONE MANAGEMENT PROGRAM

The objectives of the Hawai'i Coastal Zone Management (CZM) Program, Section 205A-2, HRS, are to protect valuable and vulnerable coastal resources such as coastal ecosystems, special scenic and cultural values and recreational opportunities. The objectives of the program are also to reduce coastal hazards and to improve the review process for activities proposed within the coastal zone.

The ten ~~seven~~ objectives of the Hawai'i Coastal Zone Management Program and an assessment of the project impacts relative to the CZM objectives and policies are described below.

Recreational Resources:
Provide coastal recreational opportunities accessible to the public.

- *(a) Improve coordination and funding of coastal recreational planning and management; and*
- *(b) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:*
  - *(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
  - *(ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;*
  - *(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
  - *(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
  - *(v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*
  - *(vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*
  - *(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*
  - *(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals for permits by the land use commission, board of land and*

natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.

Discussion: The primary function of the proposed beach park improvements is to provide coastal recreational opportunities accessible to the public. The proposed improvements to Kawailoa Beach Park will provide improved public access, consistent with conservation of natural resources, to and along a shoreline with recreational value. The proposed beach park improvements will meet the need to provide an adequate supply of shoreline parks and other recreational facilities suitable for public recreation. In addition, the proposed beach park improvements will ensure public recreational uses of County-owned and controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources.

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

*(a) Ide*ntify and analyze significant archaeological resources.
(b) Maximize information retention through preservation of remains and artifacts or salvage operations.
(c) Support State goals for protection, restoration, interpretation and display of historic resources.

Discussion: Probable remnants of Pu'upea Heiau, Site 50-80-10-6768 and the construction area have been identified near the mauka project site in the Hale'iwa direction. A buffer zone will be established between this site prior to commencing construction-related activities. In addition, archaeological monitoring will be conducted during construction. In addition, prior to commencing construction activities, a monitoring plan will be prepared for approval by SHPD.

Scenic and Open Space Resources:
Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.

(a) Identify valued scenic resources in the coastal zone management area.
(b) Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline.
(c) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources.
(d) Encourage those developments which are not coastal dependent to locate in inland areas.

Discussion: The proposed project represents a coastal-dependent use. The provision of new facilities will provide improved and expanded facilities for public use. Planned enhancements at the beach park will improve the visual environment.

Adjustments to existing grades will be required to construct the proposed facilities. Construction will not cause substantial alteration of the topography. Views from roads and other public areas towards the mountains will be improved by development of the new facilities.

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

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

Discussion: The proposed improvements will have no adverse effect on coastal ecosystems. Runoff will be controlled at the site, and will not affect waters leading to the coast. Mitigative measures to reduce runoff for the short-term construction and long-term use of the site are discussed in detail in *Section 3.8*. Receiving waters will benefit by the reduced soil loss from the site due to landscaping.

Although there will be temporary disturbance during construction, there will be no significant impact to plant or wildlife species on the project site or in the surrounding area. Clearing and grubbing activities during construction will temporarily disturb the soil retention values of the limited existing vegetation and expose the soils to erosion forces. Despite construction site watering programs, wind erosion will likely cause some limited soil loss. Erosion and silt runoff during construction phases may result in short-term effects on runoff water quality. Construction activities will comply with permit conditions regulated by City and State authorities.

On-site drainage measures will control runoff within the project site. Measures that are typically implemented to lessen construction impacts of soil erosion and silt runoff in storm water include:

- Minimize time of construction.
- Retain existing ground cover until the latest date before construction.
- Early construction of drainage control features.
- Use of temporary area sprinklers in non-active construction areas when ground cover is removed.
- Station water truck on-site during construction period to provide for immediate sprinkling, as needed, in active construction zones (weekends and holidays included).
- Continue watering of graded areas after construction activity has ceased for the day and on weekends.
- Sod or plant all cut and fill slopes immediately after grading work has been completed.
- Use temporary berms, cut-off ditches and other diversion channels, where needed, to interrupt runoff and divert it to the nearest sediment basin.
- Construct temporary sediment basins to trap silt.
- Construct temporary silt fences and devices to trap silt.

For further details, refer to *Section 3.8*.

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

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

Discussion: The proposed action will generate short-term economic benefits from construction activity. Total project construction cost is estimated at approximately $2 million. Increased visitation to the neighborhood and local businesses could potentially expand employment opportunities and on-going expenditures. Long-term economic benefits from the improved recreational facilities will result from the proposed beach park enhancements.

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

- *(a) Develop and communicate adequate information on storm wave, tsunami, flood, erosion, and subsidence hazard.*
- *(b) Control development in areas subject to storm wave, tsunami, flood, erosion, and subsidence hazard.*
- *(c) Ensure that developments comply with requirements of the Federal Flood Insurance Program.*
- *(d) Prevent coastal flooding from inland projects.*

Discussion: The project site is located within Zone VE and Zone X of the Federal Emergency Management Agency, Flood Insurance Rate Map classifications (refer to *Figure 3.3*). In addition, the project site is located entirely within the Tsunami Inundation Zone. In general, flood and tsunami conditions impose no major constraints on the project. Any improvement plans will be required by the Honolulu Department of Design and Construction (DDC) and Department of Environmental Services as related to structures designed for flood zones. Under provisions of Section 21-9.10-13 of the County Land Use Ordinance, "comfort stations, boat houses, picnic tables and open pavilions are exempt from flood zone requirements." In addition, development at the site will be required to meet applicable building code standards for non-habitable structures in a tsunami zone.

Managing Development:
Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

- *(a) Effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development.*

(b) Facilitate timely processing of application for development permits and resolve overlapping or conflicting permit requirements.
(c) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their lifecycle and in terms understandable to the general public to facilitate public participation in the planning and review process.

Discussion: There has been an active community dialogue on the proposed beach park. Kawailoa Beach Park was designed with the intention of providing enhanced recreational facilities and amenities to the North Shore community and visitors. Several agencies, organizations and individuals have been consulted in the planning process. The North Shore Neighborhood Board No. 27 has been briefed twice on the project. A community site visit was also conducted.

Public Participation:
(a) Promote public involvement in coastal zone management processes;
(b) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and
(c) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Discussion: There has been an active community dialogue on the proposed beach park. Several agencies, organizations and individuals have been consulted in the planning process. As part of the pre-consultation process, the following community planning meetings and presentations were conducted in order to involve the community in the planning and development of the Kawailoa Beach Park improvements and recreation facilities:

- March 22, 2005: The preliminary program for the park and very preliminary concept was presented and reviewed by the North Shore Neighborhood Board No. 27 and attending public.
- June 4, 2005: A community site visit meeting was conducted at the proposed Kawailoa Beach Park. The site visit and meeting was held with interested members of the community to discuss the park planning issues and address the potential alternative concepts for the Kawailoa Beach Park improvements.
- June 28, 2005: A presentation to the North Shore Neighborhood Board was conducted to provide an informational update on the community site visit, and to discuss the park planning design concepts and issues. Ideas and insight gathered from the community during the pre-consultation activities have been addressed in the alternative park concepts and the analysis contained in this document.

Beach Protection:
(a) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;
(b) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and
(c) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Discussion: The proposed beach park improvements conserve open space and enhance beach protection for the area. Other alternatives proposed in *Section 4.0*, such as the residential development alternative would potentially decrease conservation of open space and interfere with natural shoreline processes by developing the site. The proposed beach park improvements will not interfere with natural shoreline processes or propose any construction of private erosion-protection structures seaward of the shoreline.

Marine Resources:

(a) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;
(b) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;
(c) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;
(d) Promote research, study, understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and
(e) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Discussion: The planned beach park improvements are ecologically and environmentally sound and economically beneficial uses and development of marine and coastal resources. The proposed improvements encourage and promote the conservation of marine and coastal resources.

5.4 CITY AND COUNTY OF HONOLULU GENERAL PLAN

Adopted by resolution in 1977, the 1992 revised edition of the General Plan for the City and County of Honolulu sets forth the long-range objectives for the general welfare and prosperity of the people of O'ahu and broad policies to attain those objectives. The General Plan provides objectives and policies intended to guide and coordinate City land use planning and regulation, and budgeting for operations and capital improvements.

Kawailoa Beach Park will be consistent with the objectives and policies of the City and County of Honolulu General Plan.

Economic Activity:
Objective C: To maintain the viability of agriculture on O'ahu.
Policy 7: Encourage the use of more efficient production practices by agriculture, including the efficient use of water.

Natural Environment:
Objective A: To protect and preserve the natural environment.
Policy 4: Require development projects to give due consideration to natural features such as slope, flood and erosion hazards, water-recharge areas, distinctive land forms, and existing vegetation.
Policy 10: Increase public awareness and appreciation of O'ahu's land, air, and water resources.

Transportation and Utilities:
Objective B: To meet the needs of the people of O'ahu for an adequate supply of water and for environmentally sound systems of waste disposal.
Policy 3: Encourage the development of new technology which will reduce the cost of providing water and the cost of waste disposal.
Policy 4: Encourage a lowering of the per-capita consumption of water and the per-capita production of waste.

Physical Development and Urban Design:
Objective A: To coordinate changes in the physical environment of O'ahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.
Policy 8: Locate community facilities on sites that will be convenient to the people they are intended to serve.

Culture and Recreation:
Objective B: To protect O'ahu's cultural, historic, architectural, and archaeological resources.
Policy 3: Cooperate with the State and Federal governments in developing and implementing a comprehensive preservation program for social, cultural, historic, architectural, and archaeological resources.
Policy 4: Promote the interpretive and educational use of cultural, historic, architectural, and archaeological sites, buildings, and artifacts.
Policy 5: Seek public and private funds, and public participation and support, to protect social, cultural, historic, architectural, and archaeological resources.

Objectives D: To provide a wide range of recreational facilities and services that are readily available to all residents of O'ahu.
Policy 1: Develop and maintain community-based parks to meet the needs of the different communities on O'ahu.
Policy 5: Encourage the State to develop and maintain a system of natural resource-based parks, such as beach, shoreline, and mountain parks.
Policy 6: Provide convenient access to all beaches and inland recreation areas.
Policy 7: Provide for recreation programs which serve a broad spectrum of the population.
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.
Policy 13: Encourage the safe use of O'ahu's ocean environments.

Discussion: The proposed project promotes the objectives of the City and County General Plan by serving as a public facility for recreational activities, cultural practices, and environmental habitat restoration and preservation activities. The proposed project facilitates beach-going activities and access. By providing a nesting area for the Wedge-tailed Shearwater bird, preservation of the natural environment will be enhanced. The project will provide increased public access for cultural shoreline and ocean gathering activities. The proposed project will enhance the site's existing use as a growing recreational attraction for surfers, swimmers, fishermen, sightseers and beach-goers.

5.5 SMA GUIDELINES (SECTION 25-3.2, ROH)

The review guidelines of Section 25-3.2 of the Revised Ordinances of Honolulu (ROH) are used by the Department of Planning and Permitting and the City Council for the review of developments proposed in the Special Management Area (SMA). These guidelines are derived from Section 205A-26 HRS. The entire 3.5-acre site for Kawailoa Beach Park is within the City and County of Honolulu Special Management Area (SMA). The consistency of the proposed project with the guidelines is discussed below.

All development in the special management area shall be subject to reasonable terms and conditions set by the council in order to ensure that:

(a) Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas, and natural reserves is provided to the extent consistent with sound conservation principles;

(b) Adequate and properly located public recreation areas and wildlife preserves are reserved;

(c) Provisions are made for solid and liquid waste treatment, disposition, and management which will minimize adverse effects upon special management area resources; and

(d) Alterations to existing land forms and vegetation, except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation or failure in the event of earthquake.

Discussion:

The proposed action will involve facilities improvements within the SMA relating to public use of the beach, shoreline area and coastal resources. The proposed project will enhance access to publicly owned recreational areas and beaches. Water quality will not be adversely affected while scenic resources will be improved.

Existing electrical and water systems have adequate capacity to service the improved facilities. A new wastewater system will be developed for the project. Existing and proposed use of utilities are discussed in detail in *Section 3.14*.

In general, only slight adjustments to the site grades are predicted for improvement of the existing facilities. Measures will be taken during construction of the beach park improvements to minimize soil erosion and potential effects to water quality. The potential impacts of development on soils and water quality are discussed in *Section 3.0*.

No development shall be approved unless the council has first found that:

(a) The development will not have any substantial, adverse environmental or ecological effect except such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interests. Such adverse effect shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect, and the elimination of planning options;

(b) The development is consistent with the objectives and policies set forth in Section 25-3.2 and area guidelines contained in Section 205A-26, Hawai'i Revised Statutes; and

(c) The development is consistent with the County General Plan, Development Plans, Zoning and subdivision codes and other applicable ordinances.

Discussion:
Unavoidable short-term environmental effects will occur in the SMA during construction, including soils disturbance, erosion, limited clearing, wildlife disturbance, construction noise, dust and exhaust emissions, and views of construction. All of these impacts will be minimal and have no significant impact to the existing environment. Following construction, these short-term impacts will cease, and there will be beneficial long-term impacts such as improved site appearance. The project will not contribute to long-term cumulative impacts in the area. The area is already being affected by unmanaged public use.

The council shall seek to minimize, where reasonable:

(a) Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;

(b) Any development which would reduce the size of any beach or other area usable for public recreation;

(c) Any development which would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the special management area and the mean high tide line where there is no beach;

(d) Any development which would substantially interfere with or detract from the line of sight toward the sea from the State highway nearest the coast; and

(e) Any development which would adversely affect water quality, existing areas of open water free of visible structure, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land.

Discussion:
The project will not involve dredging or reduce a beach area. Access will be improved to the shoreline, and the view to the shoreline will be improved. The project will not affect water quality.

5.6 NORTH SHORE SUSTAINABLE COMMUNITY PLAN

The North Shore Sustainable Communities Plan (NSSCP) by the City and County of Honolulu Department of Planning and Permitting reaffirms the North Shore's role as a rural area as intended in the General plan policies by establishing the following principles for future land use:

- Protect and preserve the natural environment and natural resources and features including: mountain, forest and watershed areas; marshes, rivers, and streams; shoreline areas, fishponds, and bays; and reefs and offshore islands.
- Preserve scenic views of the mountains, coastal Pali and shoreline areas including mauka and makai views seen from near shore waters and heavily traveled areas such as Kamehameha Highway and Kaukonahua Road.
- Manage and sustain ocean and near shore resource to assure their long-term availability.
- Enhance opportunities for a wide range of recreational activities by providing community-based as well as natural resource-based parks, and by securing convenient public access, including public right-of-ways, bikeways, and pedestrian walkways to beaches and inland recreation areas.

The site is identified on the NSSCP Public Facility Map as a Beach Park area. This project will implement the planning policy decision approved in 1999.

Discussion:
This project is consistent with all of the above policies and will facilitate enhanced recreation experiences for both residents and visitors.

5.7 CITY AND COUNTY OF HONOLULU LAND USE ORDINANCE

The purpose of the LUO is to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, including the County General Plan and development plans. The LUO is also intended to provide reasonable development and design standards. These standards are applicable to the location, height, bulk and size of structures, yard areas, off-street parking facilities, and open spaces, and the use of structures and land for agriculture, industry, business, residences or other purposes (Revised Ordinance for the City and County of Honolulu, Chapter 21).

Discussion:
The subject property is designated as "AG-1: Restricted Agricultural" and "R-5: Residential" by the City and County of Honolulu's Land Use Ordinance *(Figure 3-5)*. Public facilities such as beach park facilities are allowed in R-5 and AG-1 districts. The proposed comfort station will comply with LUO, Section 21-3.50-4, Agricultural uses and development standards, for the proposed mauka site located in the AG-1 district, and Section 21-3.70-1 Residential uses and development standards, for the proposed makai site located in the R-5 district.

For the mauka parcels, a Minor Conditional Use Permit will potentially be required for the proposed parking lot in the AG-1 district. The proposed parking lot landscaping, outdoor lighting, irrigation system, pathways and possible park support facilities will comply with Article 4, General Development Standards, of the LUO. In addition, the proposed parking lot and drop/off area will also comply with requirements in Article 6, Off-street Parking and Loading.

5.8 AMERICANS WITH DISABILITIES ACT OF 1991

In 1991, the Federal government enacted the American with Disabilities Act to provide equal accessibility for persons with disabilities. Part of this statue is having building design consider the needs of persons with disabilities. Chapter 103-50 of the HRS states, "…all plans and specifications for the construction of public buildings, facilities, and sites shall be prepared so that the buildings, facilities, and sites are accessible to and usable by persons with disabilities." The disability and communication access board shall adopt rules for the design of buildings, facilities, and site, by or on behalf of the State and counties.

Discussion: The intent of the proposed project at Kawailoa Beach Park is to serve as a public facility, and provide ADA accessibility and facilities for the community and visitors. The proposed improvements will comply with ADA requirements.

Section 6.0
Findings Supporting the Anticipated Determination

6.0 FINDINGS SUPPORTING ANTICIPATED DETERMINATION

6.1 ANTICIPATED DETERMINATION

After reviewing the significance criteria outlined in Chapter 343, Hawai'i Revised Statutes (HRS), and Section 11-200-12, State Administrative Rules, Contents of Environmental Assessment, the proposed action has been determined to not result in significant adverse effects on the natural or human environment. A Finding of No Significant Impact (FONSI) has been made for this project.

6.2 REASONS SUPPORTING THE ANTICIPATED DETERMINATION

The potential impacts of the facilities improvements and future and operation of Kawailoa Beach Park have been fully examined and discussed in this Final ~~Draft~~ Environmental Assessment. As stated earlier, there are no significant environmental impacts expected to result from the proposed action. This determination is based on the assessments as presented below for criterion (1) to (13):

(1) Involve an irrevocable loss or destruction of any natural or cultural resources.

The proposed project does not involve any known destruction of existing natural or cultural resources. The subject lands consist of former residential lots and undeveloped agricultural lands. Measures are being taken to plan for on-site natural and cultural resource protection. A Wedge-tailed Shearwater nesting area is located on a portion of the makai parcel. As part of the concept plan, an area has been designated in the park master plan to restrict access to the nesting habitat. Archaeological burial, Site 50-80-10-6768 has been discovered on the site and is considered significant under State Criterion D and E. The burial will be preserved and integrated into the shearwater nesting preserve. In addition, probable remnants of Pu'upea Heiau, are situated outside of the proposed development portion of the parcel and will be preserved. During the course of construction archaeological monitoring will be conducted and a Monitoring Plan shall be prepared for approval by the State Historic Preservation Division (SHPD) of the State of Hawai'i Department of Land and Natural Resources. If additional resources are unearthed or discovered during construction, SHPD will immediately be notified, and their treatment will be conducted in compliance with SHPD requirements.

(2) Curtail the range of beneficial uses of the environment.

The proposed Kawailoa Beach Park will allow the area to be used to benefit the community. The proposed comfort station and parking lot, will be surrounded by landscaped open space for public recreation activities and beach access. The proposed improvements will improve public access along the shoreline and provide facilities to enhance ocean and shoreline recreation. In addition, views of the coastline will be enhanced. The development will not curtail the range of beneficial uses of the environment.

(3) Conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.

The proposed project does not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders. Construction-related impacts of noise, dust, and emissions will be mitigated by compliance with the State Department of Health Administrative Rules.

(4) Substantially affects the economic or social welfare of the community or State.

The proposed project will have no adverse effects on the economy or social welfare of the community or State. The socio-economic benefit of the proposed project will be the creation of public recreation facilities for Kawailoa Beach Park, providing enhanced beach access and shoreline recreation, improved recreational amenities for the area. The project is also expected to improve safety for beach users and pedestrians and vehicles along this area of Kamehmeha Highway. Short-term economic benefits will result in the form of construction jobs. Long-term benefits of the proposed project will also include preservation of open space for public use and enjoyment and enhanced view corridors along the North Shore coastline. The socio-economic impacts will be positive for the local community, as well as the City and State.

(5) Substantially affects public health.

The project will benefit public health. The proposed improvements to Kawailoa Beach Park enhance community health by providing increased recreational opportunities and open space to the public. Currently, this beach area is without public restroom facilities, and people are known to use the brush or the ocean for relief. The addition of the comfort station will improve public health at this location. The proposed lifeguard facilities will also provide benefits to public health and safety. In addition, this park will facilitate improved health through increased safety for beach users. The long-term benefits associated with the project outweigh the temporary impacts to air and noise levels.

(6) Involves substantial secondary impacts, such as population changes or effects on public facilities.

No adverse secondary effects are anticipated with the construction or use of the proposed park improvements. The proposed improvements are consistent with the general policies of the North Shore Sustainable Communities Plan regarding parks, open space and recreation. This park is identified on the NSSCP Public Facilities Map. In addition, the development of the proposed improvements will not increase population in the area and will not substantially impact public facilities.

(7) Involves a substantial degradation of environmental quality.

As discussed above, the environment on the makai portion of the site has been affected by previous development. The mauka portion of the site is former agricultural land and consists of overgrown vegetation. Construction activities associated with the project will result in minor short-term impacts to noise, air quality, and traffic in the immediate project vicinity. With the incorporation of the recommended mitigation measures during construction, the project will not degrade environmental quality. Long-term improvements to the environment quality include the planned comfort station, landscaping, preservation of open space, cultural resource protection, and enhancement of the Wedge-tailed Shearwater nesting area.

(8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.

No cumulative effects are anticipated and there are no other developments are planned in the area for larger actions. The nearby park improvements at Laniakea is the only known action planned in the vicinity.

(9) Substantially affects a rare, threatened or endangered species, or its habitat.

There are no endangered plants or animal species located within the project site. As previously mentioned, the Wedge-tailed Shearwater nesting area located on the makai portion of the site will have restricted access, enhancing the habitat and protection of this species. In addition, coastal water quality and marine ecology will not be affected by the proposed project. Landscaping and drainage swales will be utilized in order to minimize storm water runoff.

(10) Detrimentally affects air or water quality or ambient noise levels.

Short-term effects on air, water quality or ambient noise levels during construction will be mitigated by compliance with City and County of Honolulu and State Department of Health rules which regulate construction-related activities.

After construction, there will be no impacts to air and water quality. Daytime noise levels may increase moderately with the addition of this beach park. In the design of the project, water-efficient appliances and environmentally-conscious design efforts will be utilized as much as feasible. No detrimental effects to air or water quality or ambient noise levels are anticipated to result from the proposed beach park.

(11) Affects or is likely to suffer damage by being located in an environmentally sensitive area such as flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

This project is located in a flood plain and tsunami zone. While the structures and improvements will be designed to comply with applicable building codes, there are no structures planned for human habitation and the related stringent building codes.

(12) Substantially affects scenic vistas and view-planes identified in county or state plans or studies.

The project site is currently undeveloped and the improvements will enhance the appearance of the area. The comfort station will be designed to fit in with the character of the natural landscape. The landscape and design will include the use of indigenous and native plantings. A scenic vista of the shoreline will be improved by the project. Landscaping will also improve the visual character of the area.

(13) Require substantial energy consumption.

Construction of the project will not require substantial energy consumption relative to other similar projects. After the project is completed, energy will be conserved by using modern energy efficient appliances and fixtures and green design concepts as much as feasible.

6.3 SUMMARY

As stated above, there are no significant environmental impacts expected to result from the proposed project. A Finding of No Significant Impact (FONSI) is anticipated. The proposed Kawailoa Beach Park will provide great public benefits while resulting in minimal impacts to the surrounding environment.

Section 7.0
List of References and Personal Communications

7.0 LIST OF REFERENCES AND PERSONAL COMMUNICATIONS

American Planning Association and Planning Advisory Service, Parking Standards, Report Number 5107511, Michael Davidson and Fay Dolnick.

City and County of Honolulu, Department of Real Property Assessment. Tax Map for TMK 6-1-05:.

City and County of Honolulu, Department of Land Utilization. 1987. Coastal View Study.

City and County of Honolulu, Department of Planning and Permitting. 2005. GIS Database Zoning Data.

City and County of Honolulu, Department of Land Utilization. 1985. Special Management Area (SMA) Map.

City and County of Honolulu, Department of Planning and Permitting. 2005. GIS Database Special Management Area (SMA) Data.

City and County of Honolulu, Department of Planning and Permitting. 2005. GIS Database Topography Data.

City and County of Honolulu, Planning Department. 1992. General Plan for City and County of Honolulu.

City and County of Honolulu, Planning Department. Updated 1995. Development Plan Land Use Map.

City and County of Honolulu, Planning Department. Updated 1995. Development Plan Public Facilities Map.

City and County of Honolulu, Planning Department. 1999. North Shore Sustainable Communities Plan.

Clayton Group Services, Inc. 2004. Hazardous Materials Assessment Survey Prepared for Department of Parks and Recreation, at 61-479 Kamehameha Highway, Hale'iwa, Hawai'i.

Jeffery Pantaleo Consultants, LLC., Jo Lin Colburn. 2005. Kawailoa Beach Park and Chun's Reef Support Park Cultural Impact Assessment, Kawailoa Ahupua'a, Moku o Waialua, O'ahu Island.

Federal Emergency Management Agency. September 4, 1987. Flood Insurance Rate Map, City and County of Honolulu, Panel 20 of 135.

Hawai'i Coastal Zone Management Program (Office of State Planning). December 1995. Hawai'i's Coastal Nonpoint Pollution Control Program Draft Management Plan.

Jeffery Pantaleo Consultants, LLC and Paul Tichenal. 2005. Archaeological Inventory Survey Chun's Reef Support Park/Kawailoa Beach Park Addition, Kawailoa Ahupua'a, Waialua District, O'ahu Island.

Oceanit. 2005. Laniakea Beach Support Park, Final Environmental Assessment, Hale'iwa North Shore, Island of O'ahu.

State of Hawai'i Land Use Commission. Updated 1995. State Land Use District Map.

State of Hawai'i, Department of Agriculture. January 1977. Agricultural Lands of Importance to the State of Hawai'i (ALISH) Maps - Island of O'ahu – Waimea, Hawai'i Quadrangle.

Traffic Management Consultant Hawai'i, Inc. 2005. Kawailoa Beach Park Improvements.

U.S Department of Agriculture, Soil Conservation Service. August 1972. Soil Survey of Islands of Kaua'i, O'ahu, Maui, Moloka'i and Lāna'i, State of Hawai'i. Prepared in cooperation with the University of Hawai'i Agricultural Experiment Station

U.S. Geological Survey. 1983. Topographic Quadrangle Maps - O'ahu – Waimea.

Section 8.0
Consulted Parties, Agencies, Organizations and Individuals Receiving Copies of the EA

8.0 CONSULTED PARITIES, AGENCIES, ORGANIZATIONS AND INDIVIDUALS RECEIVING COPIES OF THE EA

Respondents and Distribution	Pre-Consultation	Pre-Consultation Community Site Visit	Pre-Consultation Comments Received	Draft EA	Comments Received
Federal Agencies					
US Fish and Wildlife Service (USFWS)	X			X	
National Marine and Fisheries Service (NMFS)	X	X	X	X	
State Agencies					
Department of Land and Natural Resources (DLNR)	X			X	X
DLNR Historic Preservation Division				X	
Department of Transportation	X		X	X	
Department of Health	X		X	X	
Office of Environmental Quality Control	X			X	X
Office of Hawaiian Affairs				X	
State Department of Business, Economic Development & Tourism (DBEDT)				X	
DBEDT Planning Office				X	X
State House Representative, Michael Magaoay	X			X	
University of Hawai'i, Environmental Center				X	X
City and County of Honolulu					
Board of Water Supply	X		X	X	
Department of Design and Construction	X	X	X	X	
Department of Planning and Permitting	X			X	X
Department of Parks and Recreation				X	
Department of Environmental Services				X	
Department of Facility Maintenance				X	X
Honolulu Fire Department				X	X
Honolulu Police Department				X	

Ocean Safety and Lifeguard Services Division	X				
Council District Representative, Donovan DelaCruz	X			X	
Libraries					
Hawaii State Library					
Waialua Public Library				X	
Citizen Groups, Individuals & Consulted Parties					
North Shore Neighborhood Board (NSNB) No. 27: Kathleen Pahinui (Chair)	X		X	X	X
NSNB No. 27: Warren Scoville (Subdistrict 4 Representative	X	X	X	X	
NSNB No. 27: Gerry Meade (Representative)	X	X	X	X	
NSNB No. 27: Robert Leinau	X	X	X	X	
North Shore Lifeguards: Bodo VanDerLeeden (Capt.), John Hoogsteden, Vitor Marcul	X	X	X	X	
Bruce Casler				X	
Luann Casey	X	X	X	X	
Diane Anderson	X	X	X	X	
Susan Hendry		X	X	X	
Sally Youngblood		X	X	X	
Tinker Blomfield		X	X	X	
Joan Gossett		X	X	X	
Karen Gallangher		X	X	X	
Mary Lacquers		X	X	X	
Marlu West	X	X	X	X	
Joanne Pettigrew		X	X	X	
Gil Riviere	X	X	X	X	
Norris Sandvold		X	X	X	
Dave Barter		X	X	X	
Bruce Bellows (Surfrider Foundation)		X	X	X	
Bruce Casler (Audubon Society)				X	

Esther Poor		X	X	X	
Lynette Gehring				X	
Bob Leinau				X	

Appendix A
Civil Engineering Report

Kawailoa Beach Park

Civil Engineering Report for the Masterplan of Comfort Station and Parking Lot

TMK: 6-1-008:017 & 018
TMK: 6-1-005:014 portion

prepared for:

Group 70 International
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

prepared by:

Engineering Solutions, Inc.
98-1268 Kaahumanu St, Suite C7
Pearl City, Hawaii 96782-3257

18 August 2005

Preliminary Evaluation:

This report is based on Kawailoa Beach Park Concept Site Plans, Alternative A and Alternative B, dated 28 June 2005, prepared by Group 70 International. See Appendix I for the Comfort Station site plans. The Comfort Station will be a medium size City and County of Honolulu "Prototype Comfort Station". Showers are not included in the wastewater flow. We have assumed that any showers will discharge directly on the ground surface as gray water.

References:

"Hawaii Administrative Rules, Title 11, Department of Health, Chapter 62, Wastewater Systems", State of Hawaii.

"Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii". United States Department of Agriculture, Soil Conservation Service.

"Individual Wastewater System Standards for the City & County of Honolulu Parks", Department of Design and Construction, City and County of Honolulu, State of Hawaii

"Rules Relating to Storm Drainage Standards", Department of Planning and Permitting, City and County of Honolulu, Honolulu, Hawaii

"Rules Relating to Soil Erosion Standards and Guidelines", Department of Planning and Permitting, City and County of Honolulu, Honolulu, Hawaii

Concept Site Plan – Alternative A, prepared by Group 70 International.

Concept Site Plan – Alternative B, prepared by Group 70 International.

Water Supply:

The Honolulu Board of Water Supply confirmed that the existing 6-inch diameter water main is adequate to accommodate the proposed Comfort Station. An existing fire hydrant is located adjacent to the entrance driveway to the parking lot on the mauka side of Kamehameha Highway. Water to the Comfort Station will be provided by the installation of a lateral waterline from the main to the Comfort Station. Additionally, a water line to the opposite side of Kamehameha Highway will be installed for irrigation for Concept A, and for outdoor showers, drinking fountains, and landscape irrigation for Concept B.

A waterline replacement project "Kamehameha Highway, Haleiwa Water System Improvements – Part I" to replace the 6-inch water main fronting this park with an 8-inch water main is currently under design. No construction date has been established for this project. As per the Board's policy, water availability will only be confirmed at the time the building permit for the proposed Comfort Station is approved. See Appendix II for the Board of Water Supply confirmation letter.

Wastewater Disposal:

A public sewer system is not available to serve development at this site. The State of Hawaii Department of Health allows individual on-site treatment systems under the following conditions: in areas where sewer systems are not available, the site is not in the "no-pass" zone, and the disposal field is at least 3 feet above the high groundwater level.

The site for the proposed Comfort Station is in the "no-pass" zone, however the Department of Health (DoH) allows individual on-site wastewater treatment systems that are determined to be for the "public good" in the "no-pass" zone. DoH has indicated that this Comfort Station project would be for the "public good" and therefore an individual wastewater treatment system would be allowed.

The existing ground surface elevation is approximately 15 feet above the groundwater elevation, therefore a leach field wastewater disposal system could be installed in this area. The City and County of Honolulu currently uses this method of wastewater treatment and disposal at other City Parks without sewer service.

The soil at this site is classified as Waialua Series (WkA), based on the "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii". The Waialua Series soil typically has percolation rates of 15 to 45 minutes per inch. For the purposes of this report, an assumed average percolation rate of 30 minutes per inch has been used. The final septic system leach field disposal design will be based on actual soil percolation rates as determined at the time the system is designed.

The proposed Comfort Station will have 6 water closets and 2 urinals. According to the design requirements of the "Individual Wastewater System Standards for the City & County of Honolulu Parks", the Comfort Station will generate approximately 4,100 gallons of wastewater per day. Using the assumed percolation rate of 30 minutes per inch, a leach field of approximately 5,250 square feet will be required. Possible locations for the leach field for Alternative A and Alternative B are shown in Appendix I. Due to the limited area available for the leach field disposal system, should the actual percolation rates prove to be lower than assumed, the number of plumbing fixtures in the Comfort Station may need to be reduced.

Drainage/Flood Hazard:

Based on the Flood Insurance Rate Map (FIRM), the Comfort Station is located in “Other Areas – Zone X,” indicating that the area is determined to be outside the 500-year floodplain (see map in Appendix II) and will not be subject to the "No Rise" provisions. Storm water runoff from the site will be by sheet flow and designed in conformance with the current "Rules Relating to Storm Drainage Standards", Department of Planning and Permitting, City and County of Honolulu, Honolulu, Hawaii. The Comfort Station site is at the bottom of the drainage area and hence will have no effect on downstream properties.

Grading:

Elevations at the site range from approximately 15 feet to 20 feet above sea level, with maximum slopes approximately 4 percent. Extensive cut/fills, or the construction of retaining walls, is not anticipated for the construction of the Comfort Station and Parking Lot. Minor grading to remove local high/low spots and level the area will be required to construct the parking lot and building pad.

As noted previously, the soil at this site is classified as Waialua Series (WkA). According to the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai", the Waialua Series soil typically will support grassed slopes up to 30% (which are steeper than the proposed grades) with minimal erosion. All grading work at the site will conform to the "Rules Relating to Soil Erosion Standards and Guidelines".

Site Access:

The project site is directly adjacent to Kamehameha Highway. Entrance to the parking areas will be from Kamehameha Highway. Construction of feeder roads to serve the project will not be required. Pedestrian access from the mauka parcel to the makai parcel will be via a new pedestrian bridge (adjacent to the drainage culvert headwall) across the drainage swale, and a new pedestrian crossing installed on the highway.

Summary:

Water Supply – water is available and adequate for the Comfort Station use. Water used for the Comfort Station will not have a significant impact on the Honolulu Board of Water Supply system.

Wastewater Disposal – an individual wastewater treatment and disposal system for the Comfort Station is acceptable to the Department of Health. This method of treatment and disposal is used at other City and County of Honolulu Parks where a public sewer is not available.

Drainage/Flood Hazard – the site is not in the flood plain and storm runoff will not have a significant impact on downstream properties.

Grading – grading will be of a minor nature without extensive cut and fill. All grading will be done in accordance with the "Rules Relating to Soil Erosion Standards and Guidelines". Grading will not have a significant impact on surrounding properties.

Site Access – additional road construction is not required for this project. The entrance to the parking lot will not have a significant impact on the existing highway.

Appendix I

1. Project Location Map
2. Conceptual Site Plan – Alternative A
3. Conceptual Site Plan – Alternative B

Kawailoa Beach Park

USGS Quad Map

GROUP 70 INTERNATIONAL

Project Location

Kawailoa Beach

Kawailoa Beach Park

Waimea

Waimea Bay

Wānanapaoa Islands

Uppers Beach Park

Leftovers Beach Park

Churns Reef Beach Park

Laniakea Beach Park

Meadow Gold

Kawailoa Beach

KAWAILOA

Cem

Aqueduct

DRIVE

Kawailoa Camp

Uko'a Pond

Pua'ena Point

Hale'iwa Beach Park

Dakoea

Air Park

Spring

Hale'iwa

'OPAE'ULA

Anahulu

River

Siphon

K A W A I

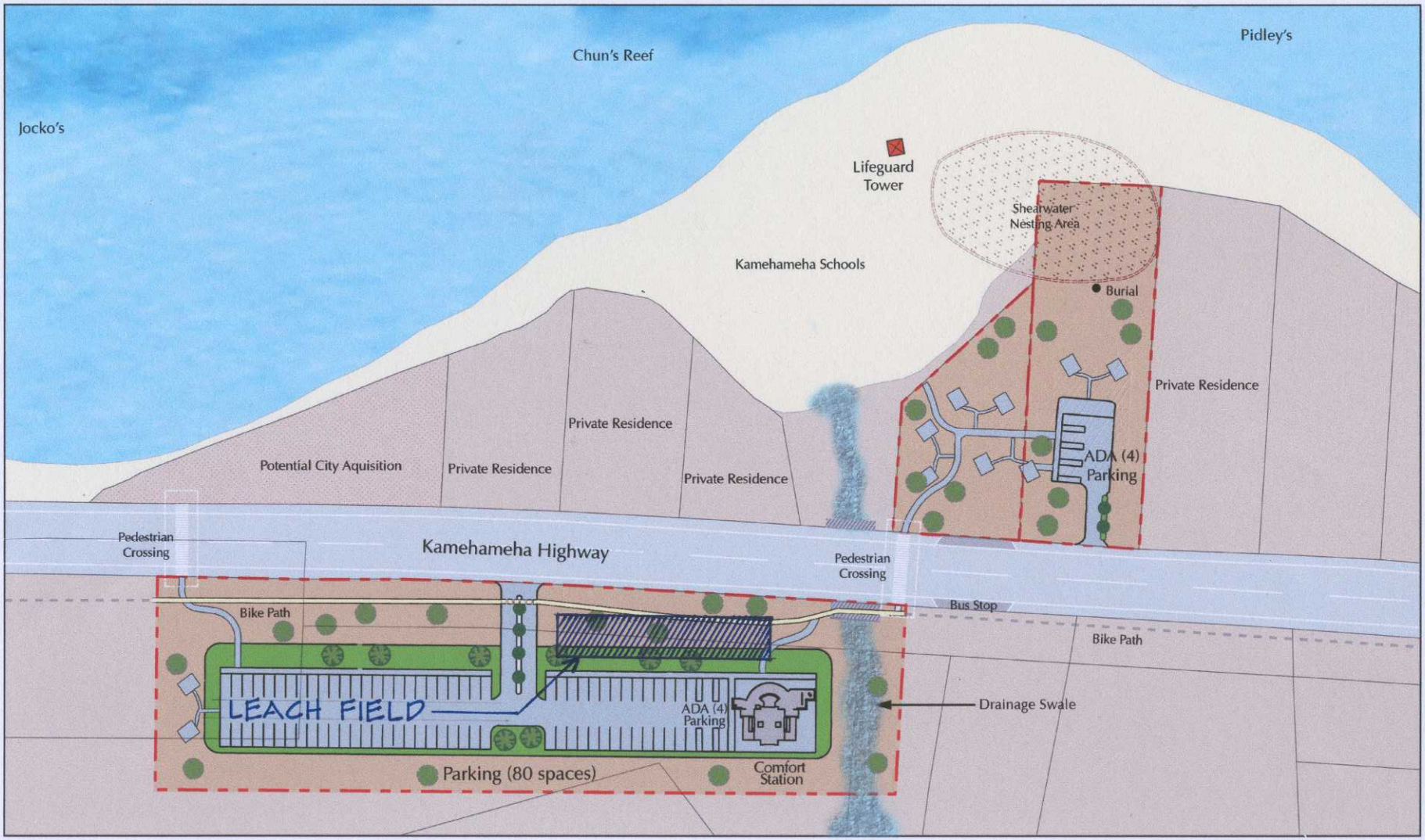
Kawailoa Beach Park

Concept Site Plan - Alternative A

0 37.5 75 150 Feet

28 June 2005

GROUP 70 INTERNATIONAL



Kawailoa Beach Park

Concept Site Plan - Alternative B

0 37.5 75 150 Feet

28 June 2005

GROUP 70 INTERNATIONAL

Appendix II

1. Board of Water Supply Letter
2. Flood Plain Map

OSD1

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

February 28, 2005

RECEIVED
MAR - 4 2005
ENGINEERING SOLUTIONS, INC.

Mr. Richard E. Frey
Engineering Solutions, Inc.
98-1268 Kaahumanu Street, Suite C-7
Pearl City, Hawaii 96782

Dear Mr. Frey:

Subject: Your Letter Dated February 18, 2005 Requesting Water Service
And Fire Flow Request for Kawailoa Beach Park Comfort Station,
TMK: 6-1-8: 17 & 18 and 6-1-5: 14

Thank you for your letter regarding water service and fire flow data for the proposed Kawailoa Beach Park comfort station.

The existing water system is presently adequate to accommodate the proposed comfort station.

The development plan may require action by the Department of Planning and Permitting before the Board of Water Supply processes the building permit on the proposed development. The availability of water will be confirmed when the building permit is approved. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

The on-site fire protection requirement should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

We no longer conduct flow tests on fire hydrants as a water conservation measure. However, you may use the following calculated flow data for Fire Hydrant No. C-45 on Kamehameha Highway.

Static Pressure	88 psi
Residual Pressure	35 psi
Flow	2500 gpm

The data are based on the existing water system, and the static pressure represents the theoretical pressure at the point of calculation with the reservoir full and no demands on the water system. The static pressure is not indicative of the actual pressures in the field. Therefore, in order to determine the flows that are available to the site, you will have to ascertain the actual field pressure by taking on-site pressure readings at various times of the day and correlating that field data with the above hydraulic design data.

Attached is a map showing the location of the hydrant.

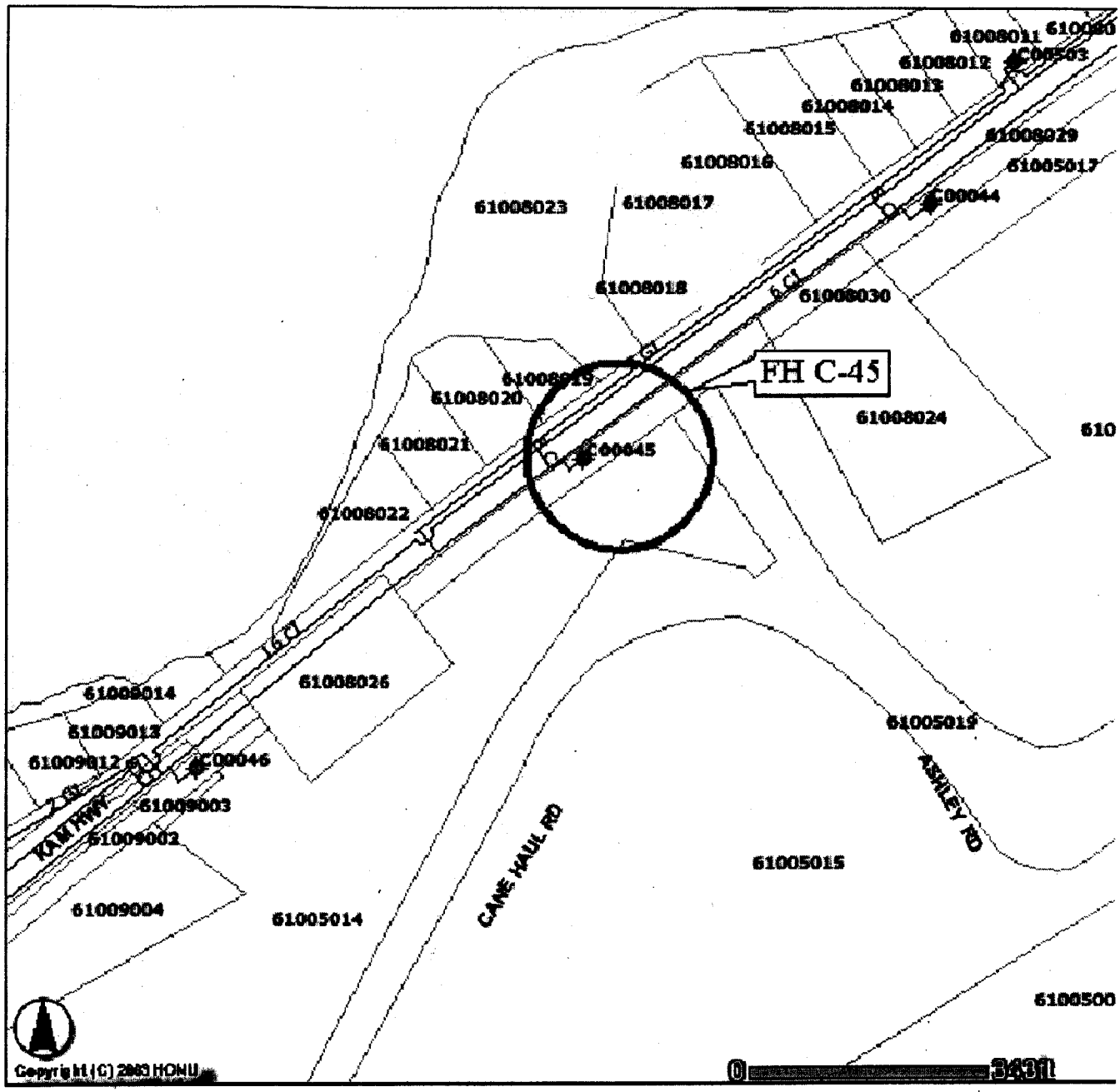
If you have any questions, please contact Joseph Kaakua at 748-5442.

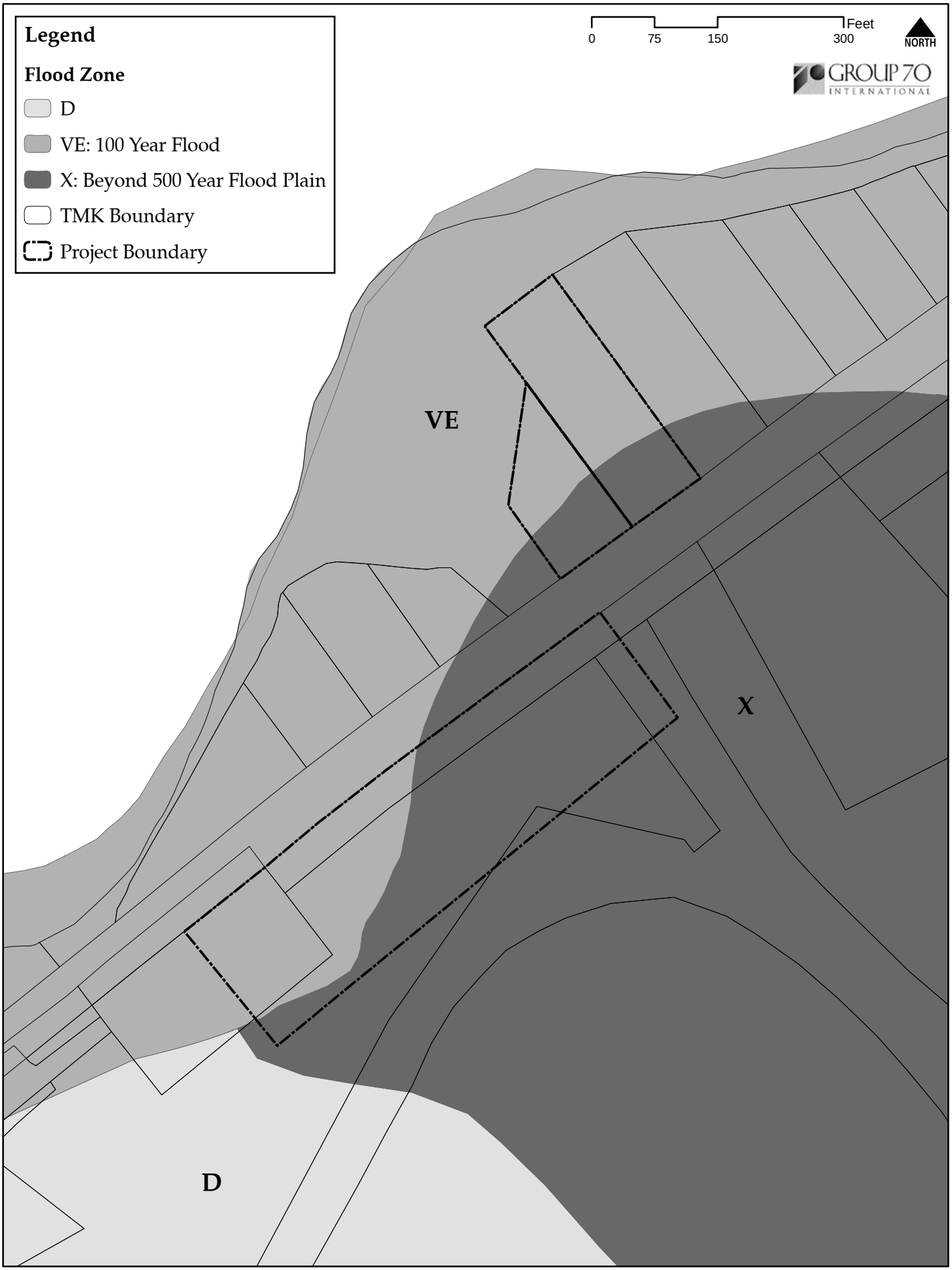
Very truly yours,

K. Shida

Keith S. Shida
Principal Executive
Customer Care Division

Attachment


FH C-45
61008011
61008012
61008013
61008014
61008015
61008016
61008017
61008018
61008019
61008020
61008021
61008022
61008023
61008024
61008026
61008030
61005017
61005019
61005014
61005015
61009002
61009003
61009004
61009012
61009013
61009014
C00044
C00045
C00046
C00503
KAMEHAMEHA HWY
CANE HAUL RD
ASHLEY RD
Copyright (C) 2003 HONU


Legend
Flood Zone
D
VE: 100 Year Flood
X: Beyond 500 Year Flood Plain
TMK Boundary
Project Boundary
0
75
150
300
Feet
NORTH
GROUP 70 INTERNATIONAL
VE
X
D

Appendix B
Traffic Assessment Report

THE TRAFFIC MANAGEMENT CONSULTANT

Randall S. Okaneku, P.E., P.T.O.E., Principal * 1188 Bishop St., Suite 1907 * Honolulu, HI 96813
Telephone: (808) 536-0223 * Facsimile: (808) 537-2985 * Email: TMCHawaii@aol.com

TMC Job No. 200412
August 31, 2005

Group 70 International, Inc.
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813

Attention: Mr. Jeff Overton and Ms. Kirstin Hochart

Gentlemen and Ladies:

Subject: Kawailoa Beach Park Improvements
Kawailoa, Oahu, Hawaii

The Traffic Management Consultant (TMC) is pleased to submit this Traffic Assessment Report to Group 70 International, Inc. for the proposed Kawailoa Beach Park Improvements. The purpose of the assessment is to evaluate the traffic access along Kamehameha Highway. My findings are as follows:

Project Description

The City and County of Honolulu Department of Design and Construction plans to provide recreational facilities at Kawailoa Beach Park (Chun's Reef). The Kawailoa Beach Park project site is located at 61-475 through 61-479 and 61-676 Kamehameha Highway in Kawailoa, Oahu, Hawaii. The project site is situated on the mauka and makai sides of Kamehameha Highway. The project location is depicted on Figure 1. The mauka portion of the site is located to the west (on the Haleiwa side) of an existing highway culvert and drainage swale. The makai portion of the site is located to the east (on the Waimea Bay side) of the highway culvert and drainage swale.

Two Alternative site plans have been developed. Alternatives A and B differ primarily in the location of the comfort station. The comfort station is located on the makai parcel under Alternative A and on the mauka parcel under Alternative B. The access to the mauka and makai portions of the site are proposed at two stop-controlled driveways on Kamehameha Highway, which would be spaced about 500 feet apart. Figures 2 and 3 depict Alternatives A and B, respectively.

The properties are identified as Tax Map Keys 6-1-05:14 (portion), 6-1-08:17, 18, 25 (portion) and 26 (portion), and 6-1-05:14 (portion). The five parcels total about 3.5 acres for the development of the Kawailoa Beach Park. The beach front area in the vicinity of Kawailoa Beach Park is estimated at about 2.8 acres, for a total of about 6.3 acres.

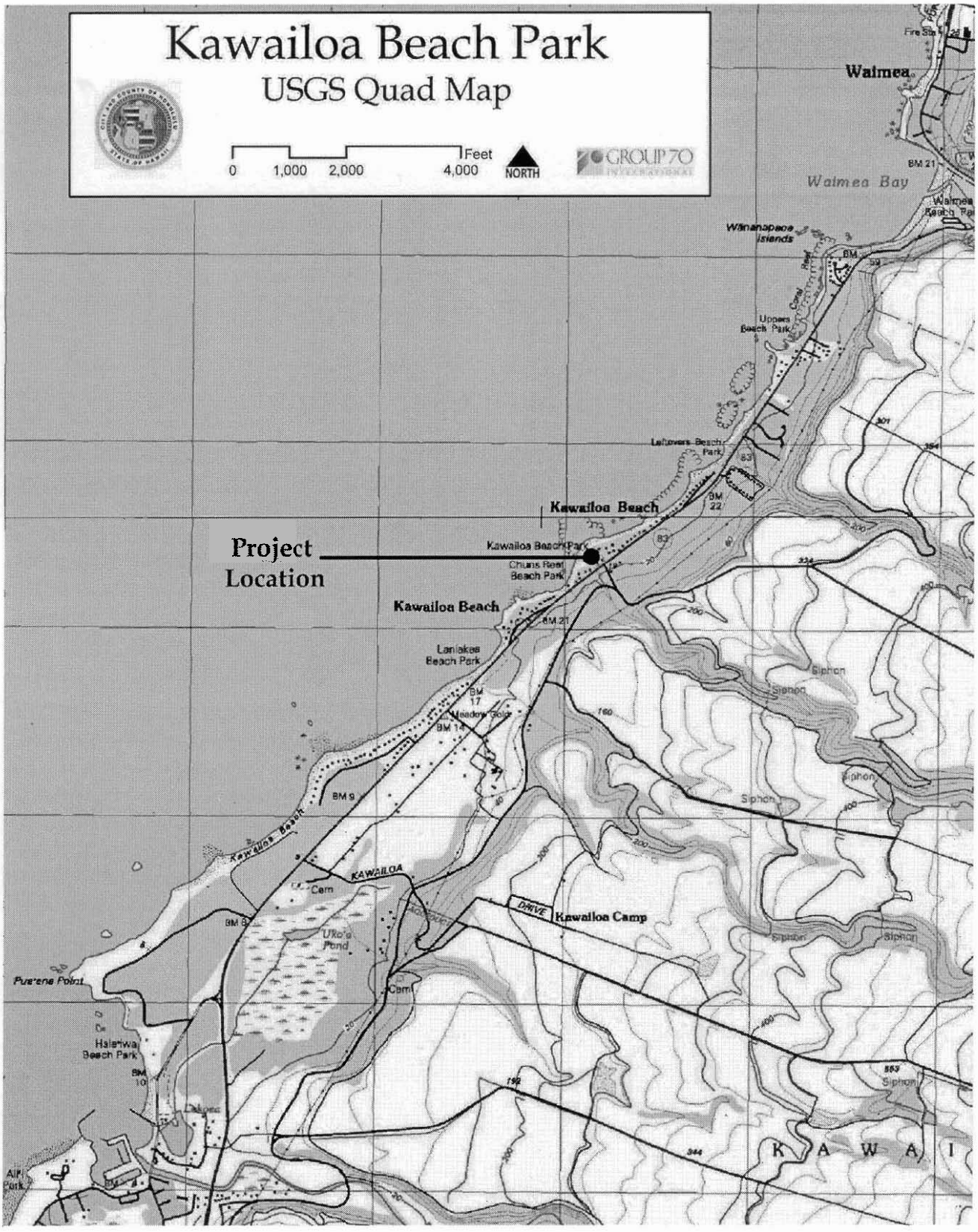


Figure 1. Location Map

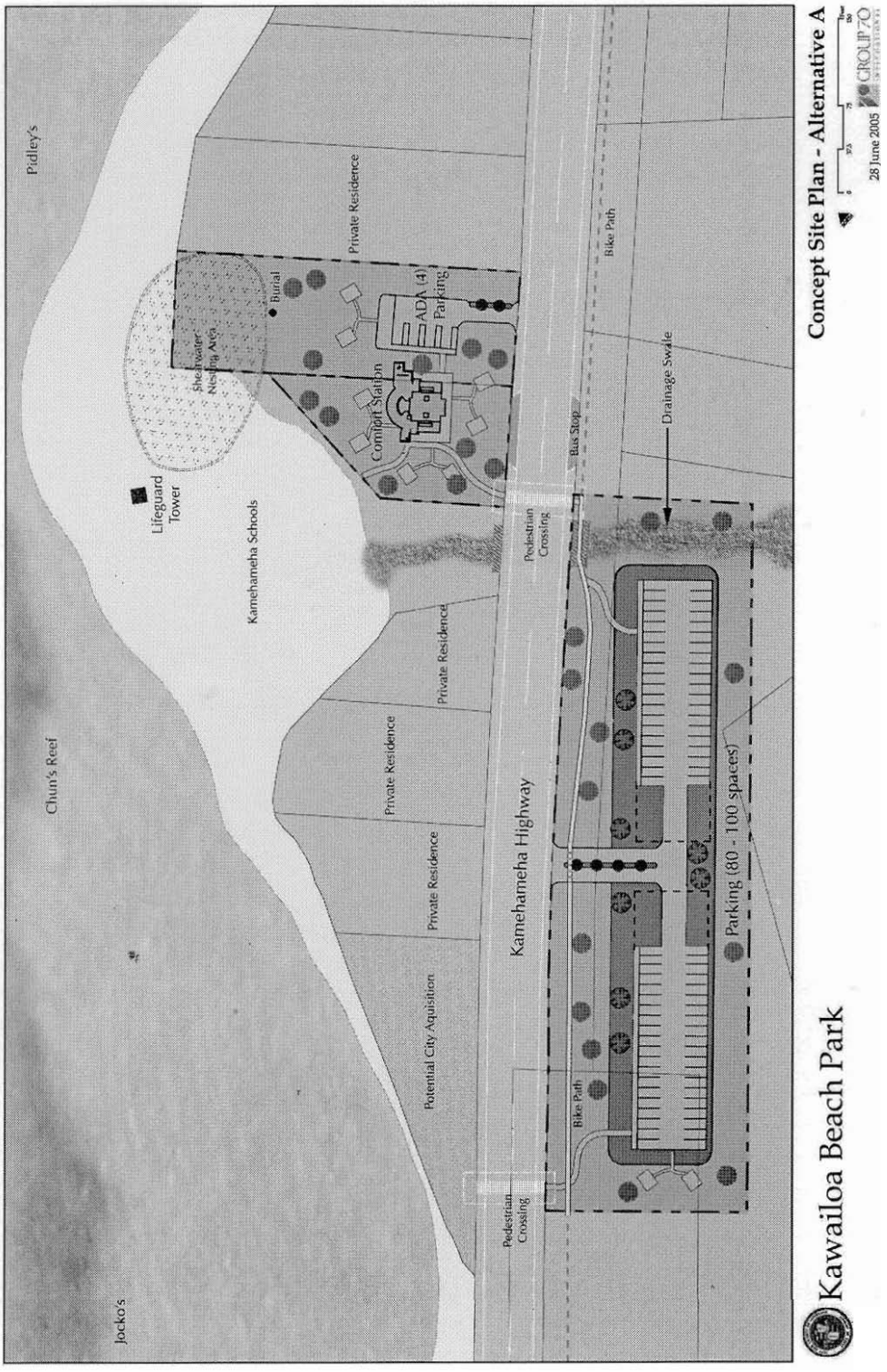
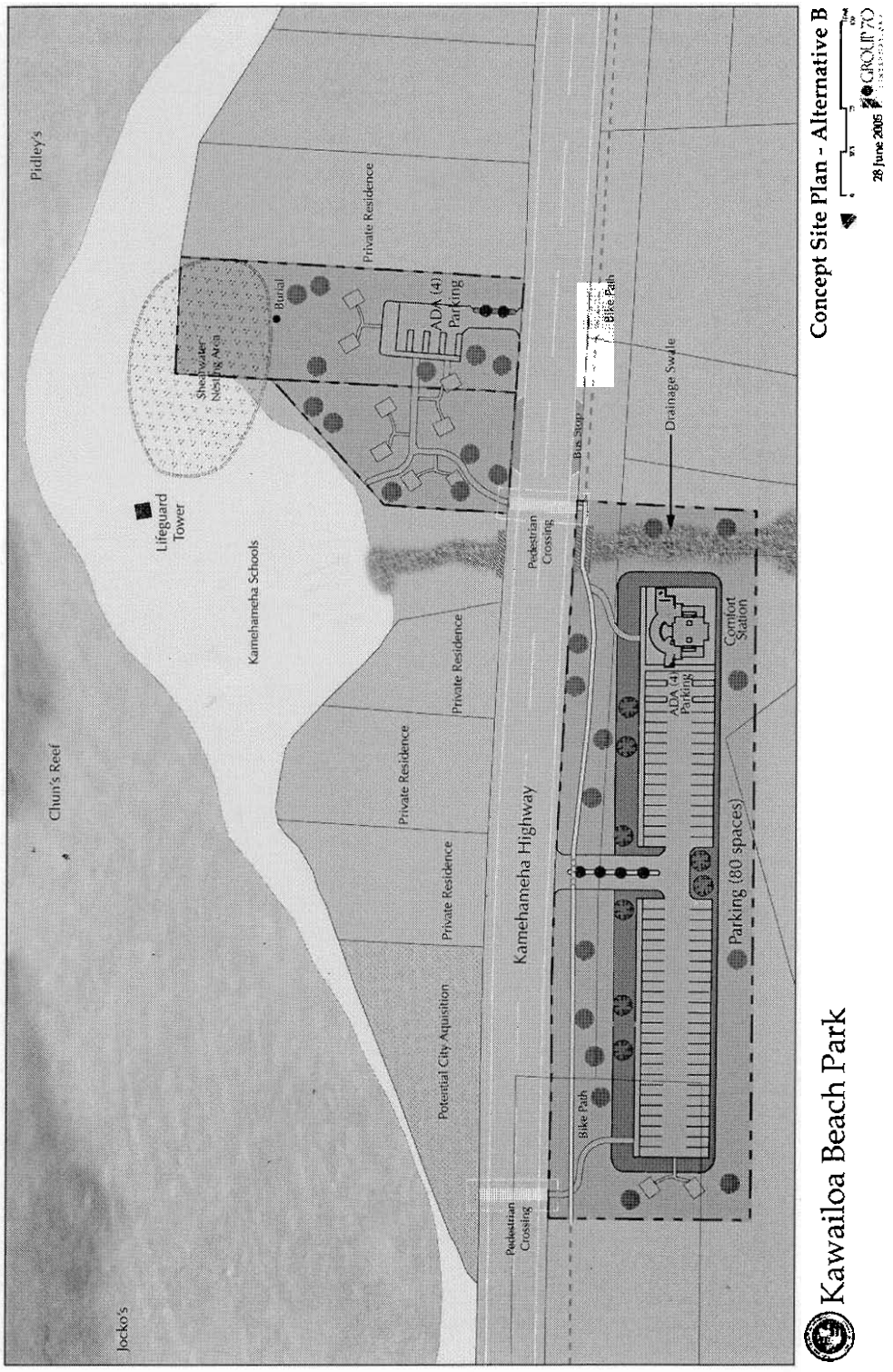

Concept Site Plan - Alternative A
28 June 2005
GROUP 70
Kawailoa Beach Park
Pidley's
Chun's Reef
Jocko's
Lifeguard Tower
Kamehameha Schools
Shelter/ Nesting Area
Burial
Comfort Station
ADA (4) Parking
Private Residence
Bike Path
Drainage Swale
Bus Stop
Pedestrian Crossing
Kamehameha Highway
Parking (80 - 100 spaces)
Potential City Aquisition

Figure 2.


Concept Site Plan - Alternative B
28 June 2005
Kawailoa Beach Park
Pidley's
Chun's Reef
Jocko's
Lifeguard Tower
Kamehameha Schools
Private Residence
Private Residence
Private Residence
Private Residence
Potential City Aquisition
Shoreline Nesting Area
Burial
ADA (4) Parking
Private Residence
Bike Path
Bus Stop
Drainage Swale
Pedestrian Crossing
Kamehameha Highway
Comfort Station
ADA (4) Parking
Parking (80 spaces)
Bike Path
Pedestrian Crossing

Figure

The proposed master plan for the mauka portion of the property includes an 80-100 stall parking area. The master plan for the makai portion of the property includes four (4) parking stalls, which would be in compliance with the Americans with Disabilities Act of 1990, a lifeguard tower, a vehicle drop-off/pick-up area, walkways, picnic tables and benches, and landscaping. A new bathhouse with a covered lanai is planned for either the makai or mauka portion of the project site. The proposed master plan is expected to be implemented by the Year 2010.

Methodologies

The highway capacity analysis is based upon procedures presented in the "Highway Capacity Manual" (HCM), Transportation Research Board, 2000. Level of Service (LOS) is defined in the HCM as "a quality measure describing operational conditions within a traffic stream". Several factors may be included in determining LOS, such as: speed, travel time, freedom to maneuver, traffic interruptions, driver comfort, and convenience.

The Level of Service for a two-lane highway is based upon average speed and "percent time-spent-following" (PTSF), which is a result of vehicle platoons following slow-moving vehicles combined with limited opportunities for passing. Intersection LOS is based primarily on vehicle delay (*d*), which is expressed in terms of average seconds of delay per vehicle.

LOS "A", "B", and "C" are considered satisfactory Levels of Service. LOS "D" is generally considered a "desirable minimum" operating Level of Service. LOS "E" is an undesirable condition, and LOS "F" is an unacceptable condition. Table 1 summarizes the LOS criteria.

Table 1. Level of Service Criteria (HCM)

LOS	Two-Lane Highway		At-Grade Intersections Delay (d)
	PTSF (%)	Average Speed (mph)	Unsignalized Control (sec/veh)
A	≤ 35	> 55	≤ 10
B	> 35 – 50	> 50 – 55	> 10 – 15
C	> 50 – 65	> 45 – 50	> 15 – 25
D	> 65 – 80	> 40 – 45	> 25 – 35
E	> 80	≤ 40	> 35 – 50
F	v/c > 1.00	Varies	> 50

"Volume-to-capacity" (v/c) ratio is a measure indicating the relative traffic demand to the roadway's capacity. HCM defines capacity as "the maximum number of vehicles that can pass a given point during a specified period under prevailing roadway, traffic, and control conditions." A v/c ratio of 0.50 indicates that the traffic demand is utilizing 50 percent of the roadway's capacity.

The trip generation methodology is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in Trip Generation, 7th Edition. ITE

trip rates are developed by correlating the total vehicle trip generation data with various activity/land use characteristics, such as the vehicle trips per hour (vph) per acre. The trip generation characteristics for the proposed project are based upon the maximum ITE trip rates for a beach park.

Existing Roadway and Traffic Conditions

Kamehameha Highway is a two-lane, two-way arterial highway, which provides access to the North Shore of Oahu. The posted speed on Kamehameha Highway is 35 miles per hour between Haleiwa Town and the Turtle Bay Resort (Kuilima Resort).

The field investigation was conducted from 2:30 PM to 4:30 PM on Saturday, May 14, 2005. The peak hour of Saturday traffic occurred between 3:15 PM and 4:15 PM, when Kamehameha Highway carried about 1,600 vehicles per hour (vph), total for both directions. The directional split in Saturday peak hour traffic was 56 percent eastbound and 44 percent westbound. Traffic typically flowed in platoons, which were created by vehicles turning on and off Kamehameha Highway or traffic stopping for pedestrians crossing the highway. Kamehameha Highway operated at LOS "E" with a v/c ratio of 0.52, during the Saturday peak hour of traffic.

About 70 pedestrians were observed crossing Kamehameha Highway during the study period. The existing drainage culvert also was used as a pedestrian underpass during the field investigation period. About 55 vehicles were parked along the shoulders of Kamehameha Highway in the vicinity of the project site during the study period.

The most recent available weekday traffic data on Kamehameha Highway, dated February 11-12, 2003, were obtained from the Hawaii State Department of Transportation (DOT). Kamehameha Highway carried a total of 14,685 vehicles per day, total for both directions. The AM peak hour of weekday traffic occurred between 11:00 AM and 12 Noon, with Kamehameha Highway carrying a total of 950 vph. The PM peak hour of weekday traffic occurred between 3:15 PM and 4:15 PM, with Kamehameha Highway carrying 1,268 vph, total for both directions.

Projected Traffic Conditions Without Project

Linear regression analysis of historical traffic count data, obtained from DOT, indicated that traffic on Kamehameha Highway grew at an annual rate of about 3.28 percent. The Year 2010 planning horizon was selected for this traffic access analysis. By the Year 2010, Kamehameha Highway is expected to carry a total of about 1,870 vph during the Saturday peak hour of traffic without the proposed project. Kamehameha Highway is expected to continue to operate at LOS "E". The v/c ratio is expected to increase to 0.60.

Projected Traffic Conditions With Project

The trip generation characteristics of the proposed beach park are summarized in Table 2.

Table 2. Trip Generation Characteristics

Land Use (ITE Code)	Units	Trip Rate			Saturday Peak Hour (vph)		
		Enter	Exit	Total	Enter	Exit	Total
Beach Park (415)	6.3 Acres	1.2	1.4	2.6	8	9	17

It was assumed that one half of the trips arriving at the beach park would drop off passengers, beach equipment, etc. at the makai side of the beach park, then return to the mauka parking lot. Similarly, it was assumed that one half of the trips departing the beach park would pick up passengers, etc., on the makai side of the beach park before leaving the area.

The left-turn movements from both park accesses onto Kamehameha Highway are expected to operate at LOS "F". Widening Kamehameha Highway to provide median shelter lanes – westbound at the mauka access and eastbound at makai access – to facilitate the left-turn movements from the driveways would improve the left-turn movements from the park access from LOS "F" to LOS "C". However, widening Kamehameha Highway would require extending the existing drainage culvert, which is not part of this project.

Kamehameha Highway is expected to operate at LOS "E" and a v/c ratio of 0.61. Through traffic on Kamehameha Highway can be expected to experience average delays of about 20-25 seconds per vehicle, due to vehicles turning off the Highway and pedestrians crossing the Highway. Figure 4 depicts the existing Saturday peak hour traffic, the Year 2010 Saturday peak hour traffic without the proposed project, and the Year 2010 Saturday peak hour traffic with the proposed project

Conclusions

The Saturday peak hour traffic volumes on Kamehameha Highway are higher that during the AM or PM peak hours of weekday traffic. Stop-and-go conditions on Kamehameha Highway, during Saturday peak hour of traffic, were caused by vehicles turning on an off the Highway and pedestrians crossing the Highway.

The traffic assessment was conducted on "typical" Saturday afternoon. This traffic assessment does not analyze traffic conditions during winter storm surf conditions or when a special event is held, such as a surfing contest.

Exclusive left-turn lanes and median shelter lanes on Kamehameha Highway at the mauka and makai accesses are not recommended at this time. While the median turning lanes would improve traffic operations, the projected left-turn volumes are relatively low and do not warrant exclusive left-turn storage lanes. Furthermore, the improved through traffic flow, resulting from the median turning lanes, would increase operating speeds and reduce the number of gaps in traffic, thereby limiting the opportunities for pedestrians to cross Kamehameha Highway. Finally, widening the Highway would increase the crossing time for pedestrians.

The proposed master plan would relocate the existing parking along the Highway shoulders to off-street parking lots. Furthermore, the pedestrian crossings would be consolidated at or between the mauka and makai accesses.

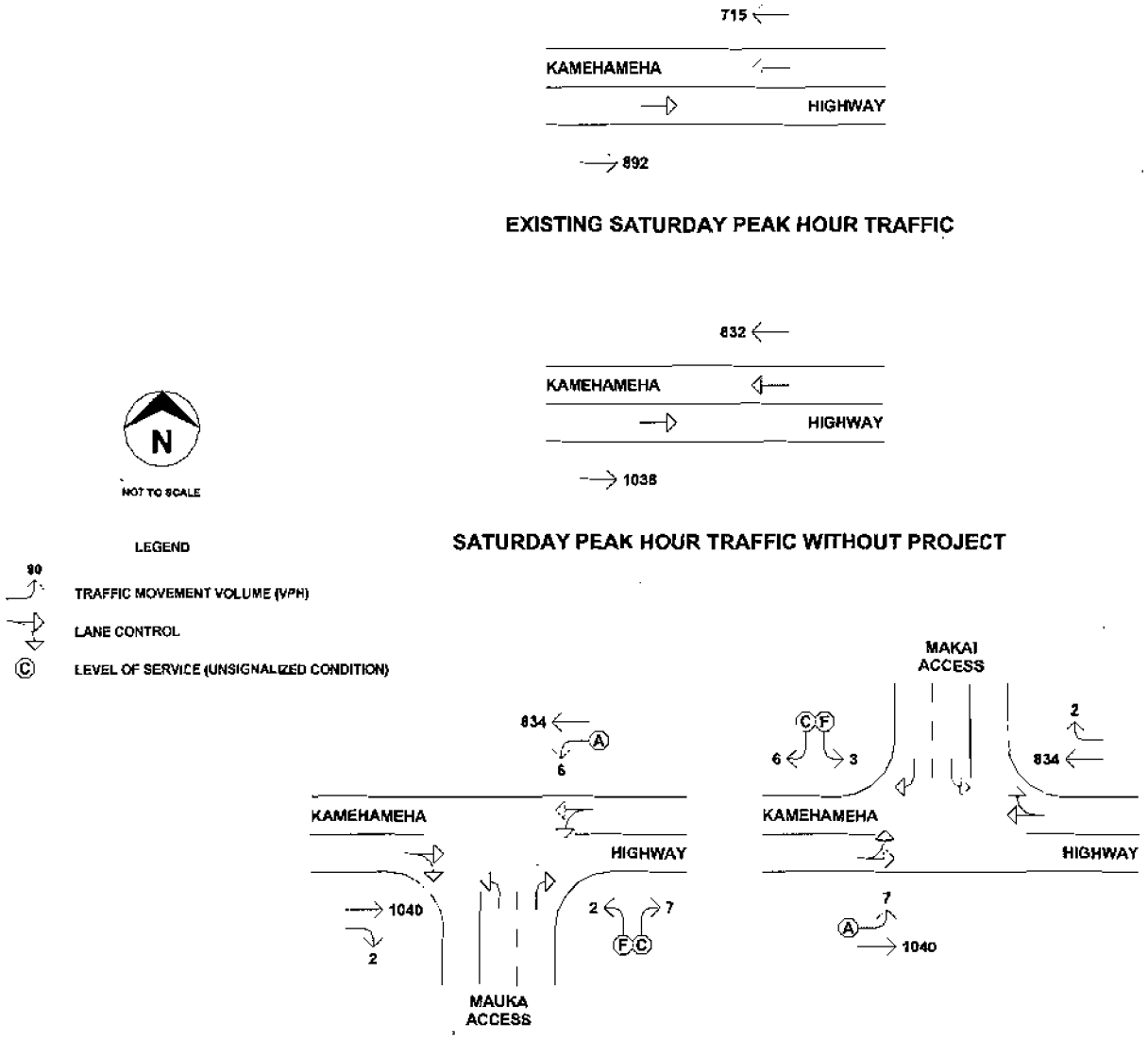


Figure 4. Saturday Peak Hour Traffic

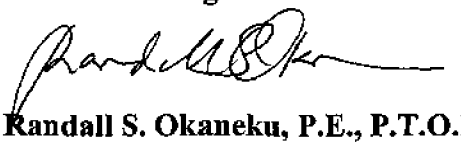
Recommendations

1. The proposed comfort station should be constructed on the makai side of Kamehameha Highway to reduce the pedestrian traffic crossing the Highway.
2. Separate left-turn and right-turn lanes are recommended on the mauka and makai accesses.
3. The makai parking area should be designed to accommodate vehicle drop-off/pick-up activities and to facilitate traffic flow.

If you require clarification on any of the above material or have any other questions, please do not hesitate to call me.

Very truly yours,

The Traffic Management Consultant

By 

Randall S. Okaneku, P.E., P.T.O.E.
Principal

Appendix C
Archaeological Inventory Survey

ARCHAEOLOGICAL INVENTORY SURVEY
CHUN'S REEF SUPPORT PARK/KAWAILOA BEACH PARK ADDITION
KAWAILOA *AHUPUA'A*, WAIALUA DISTRICT, O'AHU ISLAND
(TMK 6-1-08:5,17,18)

by
Jeffrey Pantaleo, M.A.
and
Paul Titchenal, M.A.

for
Group 70 International, Inc.

JULY 2005

Jeffrey Pantaleo Consultants, LLC
3075 Ala Poha Place #1206
Honolulu, Hawaii 96818

ABSTRACT

Jeffrey Pantaleo Consultants, LLC, of Honolulu, conducted an archaeological inventory survey of the proposed Chun's Reef Support Park and Kawailoa Beach Park Addition, Kawailoa *ahupua'a*, Waialua District, O'ahu Island (6-1-08:5, 17, 18). The survey was conducted in accordance with the National Historic Preservation Act of 1966, as amended, Chapter 6E of the Hawaii Revised Statutes (HRS), and guidelines established by the State Historic Preservation Division (SHPD), State Department of Land and Natural Resources (DLNR).

Archaeological and historical literature and documents research was undertaken to enhance the predictability of the nature and extent of potential cultural resources in the subject area. No previous archaeological work was conducted in Parcels 17 and 18; however, a reconnaissance survey was conducted in Parcel 5. Results of this survey revealed rock walls, probable remnants of Pu'upea Heiau off the project site, near the southwestern boundary. A boulder and cement bridge was found in the northeastern corner of the parcel, and remnants of the O.R.& L. railroad right-of-way paralleling Kamehameha Highway.

No cultural remains were encountered during the surface survey. Due to previous disturbances and absence of surface remains, subsurface testing was conducted by backhoe. Five backhoe trenches were placed in Parcel 5 and five backhoe trenches were placed in Parcels 17 and 18. Results of testing revealed Site 50-80-10-6768, human skeletal remains, in Trench 5 in Parcel 17, Kawailoa Beach Park Addition. Upon discovery of the remains, all work at Trench 5 was halted, and SHPD and Oahu Burial Council were notified. The burial was located in a pit feature. At the base of the pit was a probable platform constructed of stacked subrounded basalt cobbles and boulders. A total of 21 light blue glass beads were found in association with the burial. Based on the historical reference of these beads, the burial probably was an adult Native Hawaiian female interred between ca. 1850 and ca. 1880.

No subsurface cultural remains or deposits were encountered in any of the other trenches. Generally, two to three stratigraphic layers were exposed during trenching in Parcel 5. Layer I was overburden consisting of silty clay with abundant roots/rootlets. Underlying the overburden was Layer II, silty clay to clay with abundant rocks. Underlying Layer II was Layer III, silty clay to clay. Two to three stratigraphic layers were also exposed in Parcels 17 and 18. Layer I varied from silt with wind blown sand to sand. Layer I in T5 was fill material for construction of a house. Layer II varied from clay along the southern end of Parcel 17 to silty clay to sand along the northern end. Layer III, present only in T3 and 4, consisted of clay. A pit consisting of sand and recent debitage was exposed in T2.

Site 50-80-10-6768 is considered significant under Criteria D and E, and recommended for permanent preservation. Probable remnants of Pu'upea Heiau, situated off the project site in the southwestern portion of Parcel 5, is situated outside the proposed development portion of the parcel and recommended for permanent in-situ preservation. A buffer zone will be established at this site prior to commencing construction-related activities. Due to the presence of a human burial in Parcel 17 and probable remnants of Pu'upea Heiau off the project site in Parcel 5, archaeological monitoring is recommended during initial construction activities. Prior to commencing any construction activities, a monitoring plan shall be prepared for approval by SHPD.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

At the request of Group 70 International, Inc., Jeffrey Pantaleo Consultants, LLC, of Honolulu, conducted an archaeological inventory survey of the proposed Chun's Reef Support Park and Kawailoa Beach Park Addition, Kawailoa *ahupua'a*, Waialua District, O'ahu Island. The survey was conducted to ensure compliance with the National Historic Preservation Act of 1966, as amended, Chapter 6E of the Hawaii Revised Statutes (HRS), and guidelines established by the State Historic Preservation Division (SHPD), State Department of Land and Natural Resources (DLNR).

PROJECT AREA

The project area consists of three parcels of land (TMK 6-1-08:5, 17, and 18) situated in Kawailoa *ahupua`a*, Waialua District, O'ahu Island (Fig. 1). Parcel 5 (Chun's Reef Support Beach Park), comprised of approximately 3 acres, is bounded by Kamehameha Highway to the north, Ashley Road to the west, an existing cane road to the south, and open land to the east. Parcel 17 (Kawailoa Beach Park Addition), comprised of 30,047 square feet, is bounded by Kamehameha Highway to the south, residential development to the west, Parcel 18 to the east, and the Pacific Ocean to the north. Parcel 18 (Kawailoa Beach Park), comprised of 17,127 square feet, is bounded by Kamehameha Highway to the south, residential development to the east, Parcel 17 to the west, and the wedged-tail shearwater bird reserve to the north (Fig. 2).

ENVIRONMENT

Terrain of Parcel 5 is relatively level, with the exception of a drainage along the northeastern portion of the parcel and pahoehoe outcrop and probable remnants of Pu'upea Heiau off the project site along the southwestern portion of the parcel (Fig. 3). The majority of the parcel has undergone extensive previous disturbances from bulldozing activities. Elevation ranges between 10 and 40 feet above mean sea level. Rainfall averages between 20 and 35 inches annually, predominantly occurring during the winter months between November and March. Vegetation consists of *kiawe* (*Prosopis pallida*), *koa haole* (*Leucaena leucocephala*), banyon trees (*Ficus microcarpa*), date palms (*Phoenix* sp.), and various grasses and weeds. Soil includes Waialua silty clay, 0-3% slopes (Foote et al. 1972). This series consists of moderately well drained soils on smooth coastal plains. Permeability is moderate, runoff is slow, and the erosion hazard is no more than slight. This soil is used for sugarcane, truck crops, and pasture.

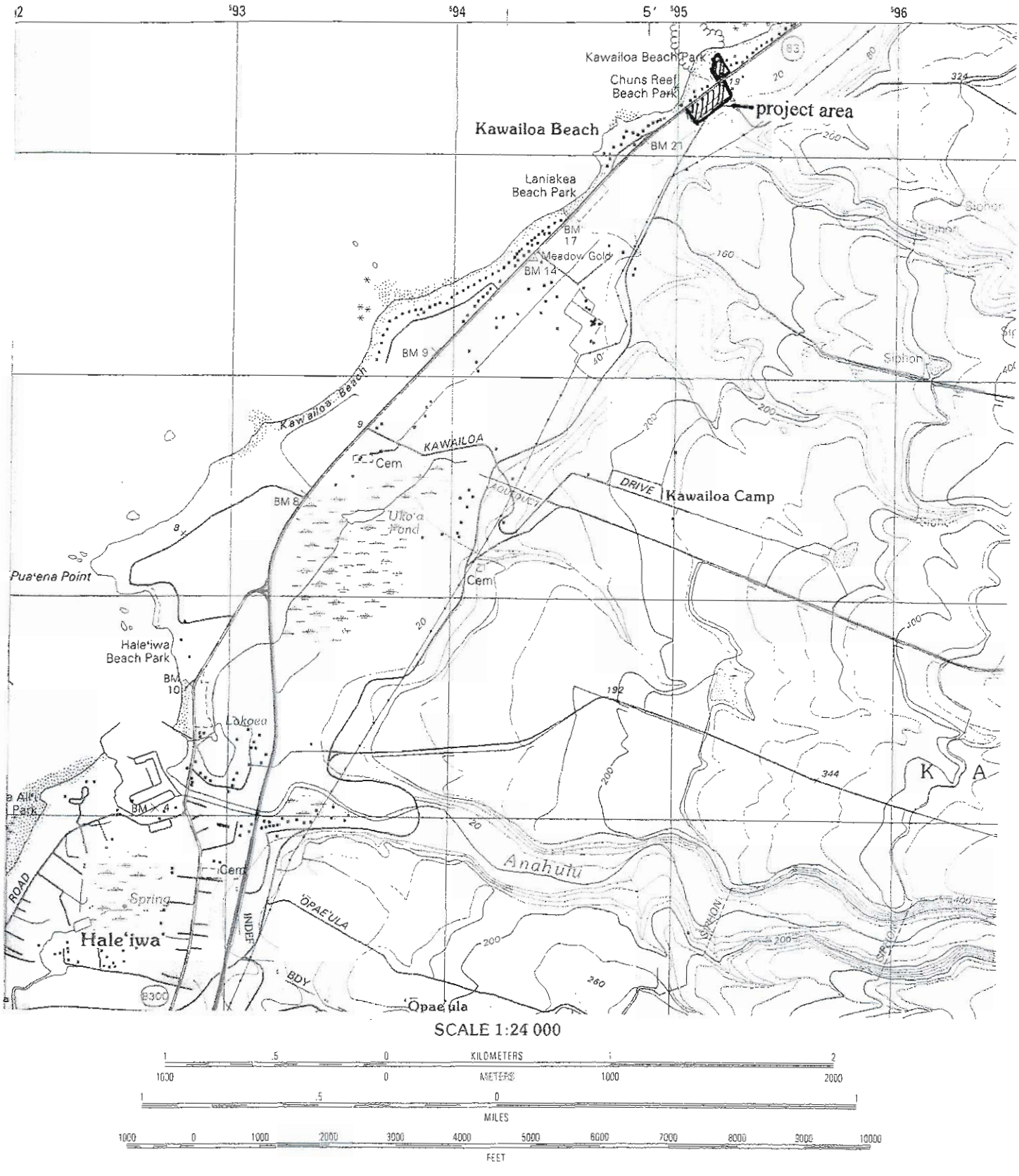


Figure 1. Location of Project Area on U.S.G.S. Haleiwa Quadrangle

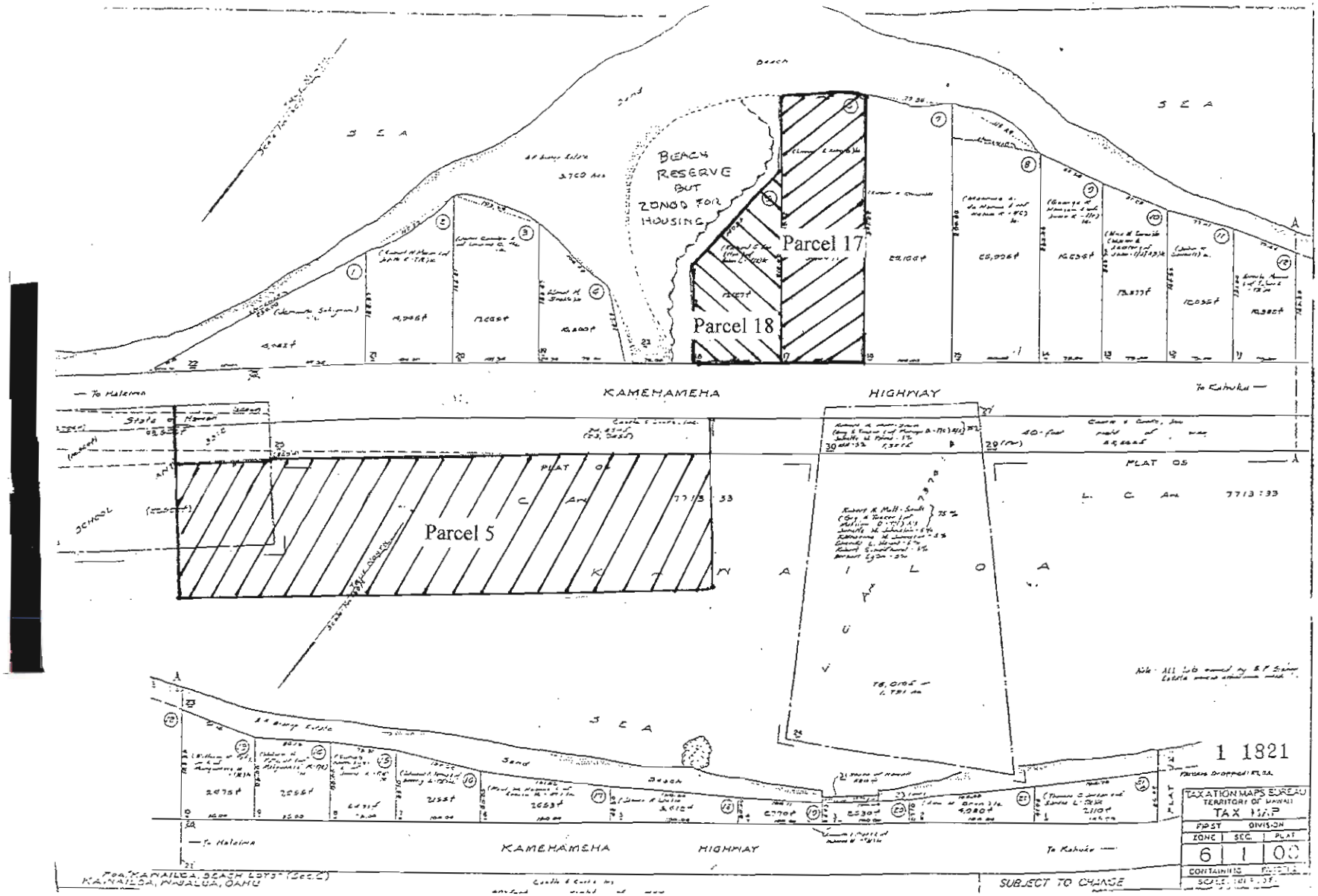


Figure 2. Project Area on Tax Map 6-1-08

Figure 3. Top: Overview of Parcel 5 Showing Pohoehoe Outcrop, View to East.
Bottom: Probable Remnants of Puupea Heiau, View to South

Terrain of Parcels 17 and 18 is relatively level. Extensive modifications including concrete slabs of a former two-story house and one-story building, a pool, a concrete driveway, and foundations for other structures were located in Parcel 17 (Fig. 4), and remnants of a former two-story wooden house and a concrete stairway were located in Parcel 18 (Fig. 5). Vegetation consists of banyon (*Ficus microcarpa*), monkeypod (*Samanea saman*), coconut (*Cocos nucifera*), banana (*Musa* sp.), African Tulip (*Spathodea campanulata*), *koa haole* (*Leucaena leucocephala*), Norfolk Pine (*Araucaria heterophylla*), rubber trees (*Hevea brasiliensis*), bougainvillia (B. *spectabilis*), plumeria (*Plumeria acuminata*), milo (*Thespesia populnea*), ironwood (*Casuarina equisetifolia*), and various grasses and weeds. Soils include Jaucas sand, 0-15% slopes, and Beaches. Jaucas sand, 0-15% slopes, consists of excessively drained, calcareous soils on narrow strips on coastal plains. Permeability is rapid, runoff is very slow to slow, and the hazard of water erosion is slight but wind erosion is severe where vegetation has been removed. This soil is used for pasture, wildlife habitat, and urban development. Beaches occur as sandy, gravelly, or cobbly areas washed and rewashed by ocean waves, and consist of light-colored sands derived from coral and seashells. This soil is used for recreational uses and resort development.

HISTORY

Historical research of Kawailoa *ahupua'a* and the Waialua District was summarized in Borthwick et al. (1998), Colburn (in prep.), and Hammatt et al. (2004). The reader is referred to these studies for detailed information. Only a brief summary of the history and land use of the subject project area is included here.

The project area is located in Kawailoa *ahupua'a*, Waialua District. The literal meaning of Kawailoa is "the long water" (Pukui et al. 1974: 98). "The name comes from the Kawailoa gulch (and Anahulu river) which extends from the beach to the Koolau Mountains and is the longest river on Oahu." (Sterling and Summers 1978:117). Waialua was a favorite place for royal residence:

> The presence of no less than eleven temples, several of luakini class and therefore associated with ruling chiefs, testifies to the importance of these lands to the Hawaiian chiefs. The political importance of the district, of course, was grounded in the system of agricultural and aquacultural production, notably the extensive taro irrigation complexes and 'Uko'a and Loko'ea fishponds (Kirch 1992:19).

Waialua was known for its agricultural and aquacultural resources, making it a focus for population and *ali'i* residence:

Figure 4. Top: Overview of Parcel 17, View to South.
Bottom: Parcel 17 Showing Concrete Slabs, View to North

Figure 5. Top: Overview of Parcel 18, View to North.
Bottom: Parcel 18 Showing Concrete Steps, View to South

> Waialua, on its seaward slopes, was as generously endowed with water as any area on Oahu. Much of the gently sloping and level land was formerly covered with wet-taro terraces. And beyond there was a great spread of *kula* land with red soil which was ideal terrain for sweet potato planting. The Wai'anae range gave this area a rich hinderland. Waialua had a fine bay with a broad beach, and there were several fishponds...Altogether this was the most bounteously endowed area on the sunset coast [of Oahu] (Handy and Handy 1972:466-7).

Legendary accounts of Kawailoa included the fate of O'ahu Chief Elani. In 1783, Maui Chief Kahekili gained control of O'ahu by defeating Kahahana. Kahekili then killed Elani, father of Kahahana, and other O'ahu chiefs. Elani's body was left on a ledge at Puaena Point to decompose:

> The place became known as Kahakakau Kanaka. As the odor came to the sands at Haleiwa they became known as Maeaea; the point on the other side became known as Kupava (McAllister 1933:141-142).

Hu'eu, one of Kahekili's Maui chiefs, was killed at Waialua. While Kahekili and the other Maui chiefs had been warned of the O'ahu chief's plot and escaped, "Hu'eu, who was living at Ka'owakawaka, Kawailoa, in Waialua, was killed on one of the Kaloa nights while his guards were asleep" (Kamakau 1992:138). In 1794, Ka'eokulani recruited warriors of Waialua and Wai'anae to make war on his nephew, Kalanikupule, ruler of O'ahu (Kamakau 1992:168).

The fishing settlement of Kapaeloa and the royal fishpond of 'Uko'a were originally included in Kamananui *ahupua'a*, but were later consolidated into Kawailoa *ahupua'a*.

> Kapaeloa was administratively part of the center of Waialua, the *ahupua'a* of Kamananui, until Governor Kekuanao'a succeeded in attaching it to Kawailoa, and thus to his daughter Kamamalu, rather than see it slip away with Kamananui as government lands...the Kapaeloa people still consider themselves affiliated to Kamananui, some at least holding lands under Naukana, a longtime *konohiki* of that place (Sahlins 1992:180).

Waialua was an important area during the sandalwood trade. However, the demand for sandalwood throughout the Orient caused many fields to become fallow and unused. The sandalwood trade was initially the monopoly of Kamehameha, who purchased six vessels between 1816 and 1818 to transport his own wood to the Orient (Kuykendall 1965:87). After Kamehameha's death in 1819, Liholiho (Kamehameha II) allowed his chiefs to share in the sandalwood trade, resulting in an increase demand for wood.

During the Mahele, the majority of Waialua, including the current project area, was awarded to Victoria Kamamalu, sister of Kamehameha IV and Kamehameha V, as Land Commission Awards (LCA) 7713 (Royal Patent 4475, Apana 33). LCA's were subsequently granted in 1850, with approximately 140 LCA's recorded in Kawailoa *ahupua'a*. Following the death of Kamamalu in 1866, her entire estate, including Kawailoa, was inherited by her father, Matatio Kekuanao'a. Kamehameha V inherited Kekuanao'a's estate, and following Kekuanao'a's death in 1872, Ke'elikolani, Kamehameha's half-sister, petitioned and was awarded the entire estate in 1873. Ke'elikolani died in 1883, and the estate was inherited by her cousin, Bernice Pauahi Bishop. Kamehameha Schools currently owns most of Kawailoa *ahupua'a*.

In 1889, Benjamin Dillingham founded the Oahu Railway and Land Company (O.R.&L.). The O.R.&L. right-of-way is located along Kamehameha Highway, adjacent to the northwest of Parcel 5. The railroad extended from Honolulu to Pearl City in 1890, Waianae in 1865, Waialua in 1898, and Kahuku in 1899 (Kuykendall 1967:100). The railroad opened the Waialua area to large-scale sugar cultivation. Dillingham persuaded Castle & Cooke to lease land in Waialua already in sugarcane cultivation. In 1898, Castle & Cooke formed the Waialua Agricultural Company and began a program of land purchases and leases to increase the plantation's sugar producing capacity. The Waialua Agricultural Company, later named Waialua Sugar Company, expanded during the first decades of the 20th Century, eventually reaching over 12,000 acres and producing approximately 5000 to 20,000 tons between 1900 and 1905. A large portion of Kawailoa *ahupua'a* was leased from Bishop Estate. Kawailoa was the site of one of three camps that the plantation was divided. Kawailoa Camp provided housing, social, and recreational facilities for the workers and their families. The O.R.&L. Company terminated its rail line in 1947.

During World War II, Hale'iwa and the surrounding area underwent major construction, including bunkers, housing and storage buildings, and improvements to the Hale'iwa Auxiliary Field.

In 1957, the Dairymen's Association moved to Kawailoa. In 1959, the Dairymen's Association became Meadow Gold Dairies Hawaii. In 1990, Meadow Gold Dairies Hawaii moved to its present location in Waimanalo.

PREVIOUS ARCHAEOLOGY

No previous archaeological investigations were conducted in Parcels 17 and 18; however, a reconnaissance survey was conducted in Parcel 5 by Cultural Surveys Hawaii (Masterson et al. 1995). Results of this survey identified rock walls, probable remnants of Pu'upea Heiau, near the southwestern boundary, a boulder and cement bridge in the northeastern corner of the parcel, and remnants of the O.R.& L. railroad right-of-way (Site 50-80-12-9714) paralleling Kamehameha Highway. The remainder of the parcel exhibited previous disturbances from bulldozing activities.

Pertinent studies conducted in the vicinity of the current project area included Athens et al. (1995), Avery et al. (1993), Barrera (1979), Borthwick et al. (1998, 2002, 2003), Hammatt et al. (2004), Kirch (1992), McAllister (1933), McDermott et al. (2000), McGerty et al. (2000), and Moore et al. (1993)(Fig. 6).

McAllister (1933) initially recorded Pu'upea Heiau as Site 238:

> ...The old Hawaiians of the region have only a hazy recollection of the site of Puupea heiau. This site, which may be the heiau, is located on the beach not more than 50 feet from the water...The wall on the sea side, which is about all that remains, is composed of a single row of stones standing on end and averaging from 2 to 3 feet in height. These are probably only the large foundation stones of a wall that was much higher...The erect stones are nearly in a straight line for a distance of 250 feet...The north end probably contained a number of small enclosures. The Cooper House is built in the midst of the site, of which but little remains (Sterling and Summers 1978:121).

Chiniago, Inc. (Barrera 1979) conducted a survey for the Hale'iwa bypass highway. A total of five new sites (50-80-04-1439, 1440, 1441, 1442, and 1443) and three previously recorded sites (50-80-04-229, 233, 236) were identified. Site 229 is Kawaipuolo spring, Site 233 is Loko'ea fishpond, and Site 236 is 'Uko'a pond. Site 1439 is a historic rubbish dump dating between A.D. 1880 and 1920; Site 1440 is a stacked stone wall remnant; Site 1441 is probable *lo'i* terraces; Site 1442 is the former homestead of missionary John S. Emerson; and Site 1443 is the remains of an old church.

Kirch (1992) conducted an archaeological and ethnological study in Anahulu Valley. Results of this study determined population expansion into the inland areas of Kawailoa during the Expansion Period (A.D. 1100-1650) to exploit the native birds and forest products, with limited shifting cultivation (Kirch 1992:165). Temporary camps were established in rock shelters. Occupation subsequently changed to permanent house sites with irrigated terrace complexes following the occupation of O'ahu by Kamehameha's forces in A.D. 1804.

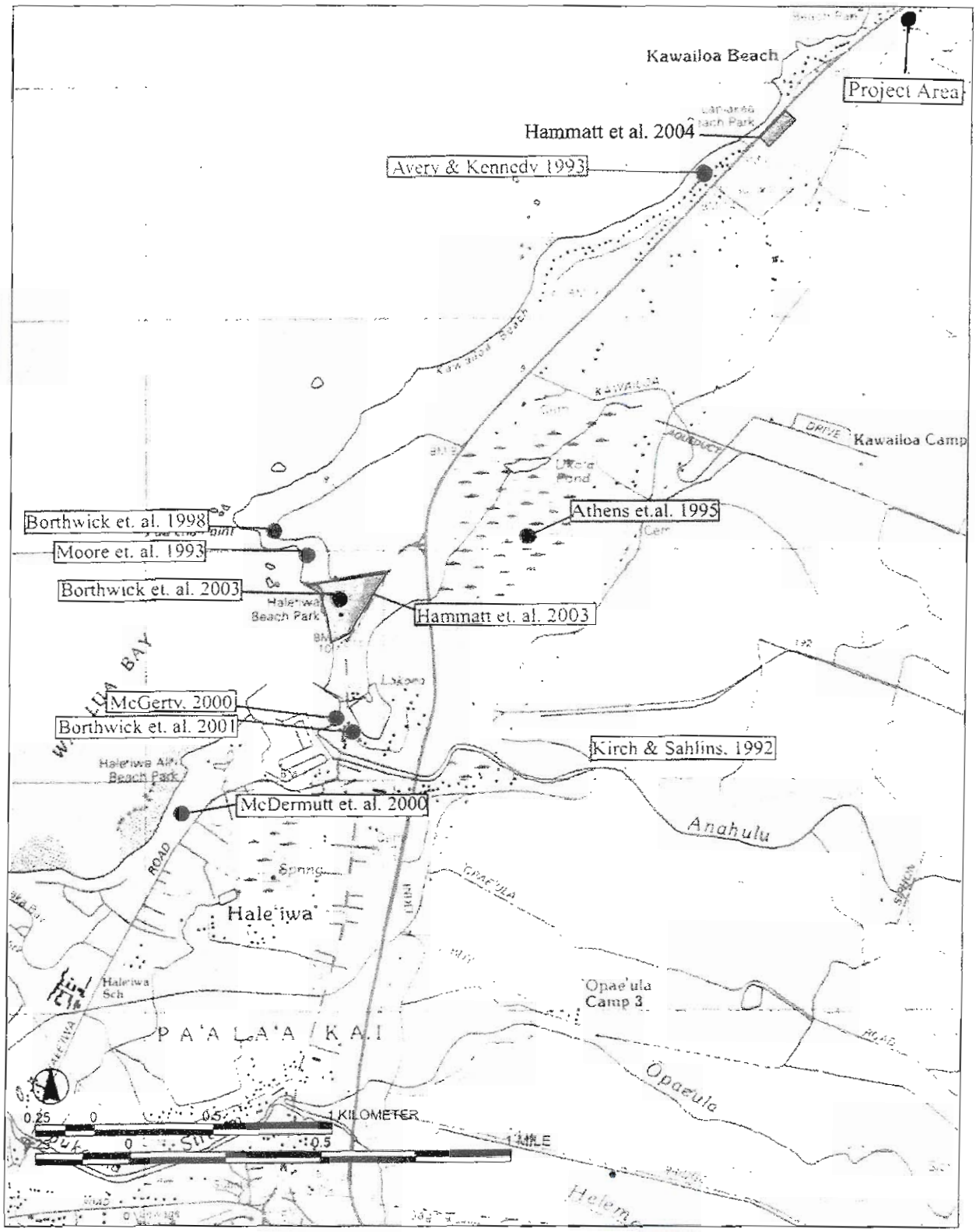


Figure 6. Previous Archaeological Studies (Adapted from Hammatt et al. 2004:22)

Archaeological Consultants of Hawaii, Inc. (Avery et al. 1993) recorded skeletal remains of three individuals inadvertently discovered across from the former Meadow Gold dairy in a houselot off Kamehameha Highway. The inadvertent finds, designated as Site 50-80-04-4670, were encountered during excavation of footing trenches for a house. Examination of the trenches indicated that no further burials were present. "No stratigraphic associations could not be made due to the nature of the backhoe disturbance and no *in situ* human remains were found (Avery et al. 1993:1).

Archaeological Consultants of Hawaii, Inc. (Moore et al. 1993) conducted an inventory survey for the Hale'iwa Beach Park expansion. A total of seven sites were recorded outside the project boundary. Site 50-80-04-235, previously identified by McAllister, is a stone with curative powers, near Puaena Point (Sterling and Summers 1978:118); Site 4589 is a historic house site; Site 4590 consists of three fire pits; Sites 4593 through 4595 consist of two intact and four partial burials; and Site 4601 consists of a posthole and charcoal lens. Radiocarbon dating at Site 4590 yielded an age range between A.D. 1399 and 1672.

International Archaeological Research Institute, Inc. (Athens et al. 1995) conducted paleo-environmental investigations at Site 236, 'Uko'a Pond. A total of four sediment cores were extracted from the pond wetlands, revealing up to 18 stratigraphic layers. Results of this study indicated environmental conditions for over 8,000 years. Zone A dated between 7500 to 3400 years B.P.; Zone B dated between 3400 to 1600 years B.P.; Zone C dated between 1000 to 500 years B.P.; and Zone D dated between 500 years to the present. Zones A and B included an abundance of arboreal types, with a decline or expiration of all arboreal types in Zone C, suggesting the clearing of the lowland forest during initial Polynesian occupation by A.D. 950.

Cultural Surveys Hawaii (Borthwick et al. 1998) conducted an inventory survey and subsurface testing of a 140-acre parcel in Kawailoa *ahupua'a*. A total of 44 backhoe trenches were excavated throughout the project area. Eight sites were recorded, including Site 50-80-04-234, a prehistoric coral ledge; Site 50-80-04-235, a prehistoric stone with curative powers; Site 50-80-04-5495, a single historic human burial; Site 50-80-04-5641, eight probable WWII concrete foundations; Site 50-80-04-5642, remnants of the WWII Hale'iwa Airfield; Site 50-80-04-5643, a WWII concrete bunker and a large rectangular raised level soil terrace; Site 50-80-04-5644, a probable pre-WWII trash dump; and Site 50-80-04-5661, a discontinuous prehistoric/historic cultural layer. Sites 234 and 235 were assessed as significant under Criteria A-E, and recommended for in-situ

preservation; Site 5495 was assessed as significant under Criteria D and E and recommended for in-situ preservation; Site 5642 was assessed as significant under Criteria A and D and data recovery was recommended; and Sites 5641, 5643, 5644, and 5661 were assessed under Criterion D and data recovery was recommended.

Scientific Consultant Services Inc. (McGerty and Spear 2000) conducted an inventory survey at TMK 6-2-03:por. 6 and 9, south of Loko'ea Pond in Kawailoa. A total of six backhoe trenches were excavated just south of Loko'ea Pond. Site 50-80-04-5795, charcoal deposits and burning events, and Site 5839, a stacked basalt boulder wall, were recorded. One charcoal sample was submitted for radiocarbon dating and returned a date of A.D. 1420-1530, which represents a pre-Contact cultural deposit.

Cultural Surveys Hawaii (McDermott et al. 2000) conducted an inventory survey in a 5-acre portion of Hale'iwa Ali'i Beach Park. Site 50-80-04-5850, a cultural layer containing charcoal, midden, artifacts, a posthole, an earthen oven, and a human burial, was recorded. Two charcoal samples were submitted and returned a date A.D. 1430-1680.

Cultural Surveys Hawaii (Borthwick et al. 2002) conducted an inventory survey for 5 parcels proposed for the Hale'iwa Beach Park Skate Park. Site 50-80-04-5791, a segment of the O.R.&L. railroad right-of-way, Site 5915, a basalt boulder structure, and Site 5916, a subsurface cultural layer, were recorded. Site 5915 was interpreted as a foundation for wooden water tanks associated with the O.R.&L.

Cultural Surveys Hawaii (Borthwick et al. 2003) conducted an inventory survey for the proposed wastewater improvements at Hale'iwa Beach Park. No significant subsurface cultural deposits were encountered during backhoe trenching. Monitoring was recommended during construction activities due to the presence of beach sand underlying park landscaping.

Cultural Surveys Hawaii (Hammatt et al. 2004) conducted an inventory survey for the proposed Laniakea Beach Support Park. No cultural remains were identified on the surface. Due to previous disturbances and absence of surface remains, subsurface testing was conducted by backhoe. A total of nine backhoe trenches were excavated throughout the parcel. No cultural remains or deposits were encountered during testing. Three stratigraphic layers, including Jaucas sand isolated in the southwestern corner of the project area, deep alluvial soils east of the Jaucas

sand deposit, and shallow alluvial soils over bedrock in the northern portion of the project area, were exposed. Due to the presence of human burials in sand deposits in Kawailoa, archaeological monitoring during construction activities was recommended.

SETTLEMENT PATTERN

General settlement patterns for Kawailoa *ahupua'a* can be inferred from information obtained from historical and archaeological studies (Athens et al. 1995, Borthwick et al. 1998, Hammatt et al. 2004, Kirch 1992). Based on available radiocarbon dates and pollen analysis, initial prehistoric settlement of Kawailoa *ahupua'a* probably occurred between A.D. 800 and 950, with permanent occupation along the coastal area to exploit the marine resources and temporary occupation in the inland areas to exploit the forest resources (Athens et al. 1995). Coastal settlements concentrated around Waialua Bay and areas surrounding 'Uko'a and Loko'ea fishponds.

From the late 1800s through the late 20th Century, Kawailoa *ahupua'a* was extensively used for the cultivation of sugarcane. The O'ahu Railway and Land Company (O.R.&L.) connected Honolulu to Waialua, and spurred the development of large-scale sugarcane cultivation. Waialua Sugar Plantation established numerous residential camps, including Kawailoa Camp, which provided housing, and social and recreational facilities for the plantation workers. The permanent coastal settlements were replaced by parks, roadways, and commercial ventures, with houses clustered into plantation camps. During WWII, extensive modifications including water systems, barracks, bunkers, and improvements to Hale'iwa Airfield occurred in Waialua in preparation for war. Currently, Parcel 5 is used for cattle ranching, and Parcels 17 and 18 are used as a beach park.

SITE PREDICTABILITY

Based on the results of previous archaeological investigations in the vicinity of the current project area, together with information obtained from L.C.A. awards in Kawailoa *ahupua'a*, prehistoric sites associated with habitation and agriculture are expected in high density. Types of sites that may be encountered include pre- and post-Contact subsurface cultural layers and human burials. Remnants of Pu'upea Heiau, including walls, were previously identified along the southwestern boundary of Parcel 5 and excluded from the current project. Historic sites associated with cattle ranching including walls and corrals, dairy farming, the O.R.&L. railroad, and WWII military features also may be encountered. However, due to extensive previous disturbances from neighboring construction activities, the probability of encountering intact cultural remains is low.

METHODS

Archaeological and historical literature and documents researches were undertaken, not only to gain some insight into the prehistoric and historic background of the project area, but also to enhance the predictability of the nature and extent of potential cultural resources in the subject area. This research was conducted at the State Historic Preservation Division (SHPD) library of the Department of Land and Natural Resources (DLNR) in Kapolei, and the Bureau of Conveyances and Land Management Branch of DLNR in Honolulu.

The surface survey was conducted by walking systematic transects spaced at 1-5 meter intervals throughout the project area. Results of the surface survey revealed no significant surface cultural manifestations. Due to previous disturbances and absence of surface remains, subsurface testing was conducted by backhoe. The ensuing subsurface testing employed a wheeled backhoe with a 24" bucket. Five backhoe trenches were placed in selected localities in Parcel 5 and five backhoe trenches were placed in Parcels 17 and 18 to allow representative sampling of the entire project area.

The location of each trench was plotted onto the project area map. A stratigraphic profile of a representative column on a trench sidewall was recorded for each trench. A color photographic record on APS format was obtained for each trench and soil colors were described in reference to Munsell color designations. Project area overviews were also photographically recorded. Paul Titchenal, M.A., and Jeffrey Pantaleo, M.A. conducted the fieldwork on March 8, 2005.

All procedures followed generally accepted archaeological methods and standards. All field notes, maps, and photographs generated in connection with the current project will be temporarily curated at Jeffrey Pantaleo Consultants, LLC, in Honolulu.

RESULTS OF SURVEY

Site 50-80-10-6768, a human burial, was recorded during the current investigation (Fig. 7). This site, located in Parcel 17, Kawailoa Beach Park Addition, was encountered during backhoe trenching at T5. Upon discovery of the remains, all work was halted and Ms. Mary Carney and Mr. Kana'i Kapeliela of the State Historic Preservation Division (SHPD) and Mr. Thomas Shirai of the O'ahu Island Burial Council (OIBC) were notified. Ms. Carney and Mr. Kapeliela conducted a site visit on March 10, 2005, and Mr. Thomas Shirai conducted a site visit on March 11, 2005. Following documentation of Site 6768, all displaced skeletal remains and artifacts were reinterred in the trench, and the trench was then backfilled.

Examination of the north wall profile revealed a pit feature overlying a probable rock platform (Fig. 8). The pit extended from the base of Layer II at 80 cmbs to the top of a probable platform at 130 cmbs. The probable platform measured 1.7 meters long and 0.5 meters high, and was constructed of stacked subrounded basalt cobbles, 2-3 courses high. Human skeletal remains of an adult individual in addition to basalt cobbles from the platform were recovered in the backdirt pile. Artifacts including 21 glass beads were found in association with the burial, suggesting a historic burial (see Artifacts). The majority of the individual, including skull, mandible, ribs, vertebrae, humerus, radius, ulna, wrist, hand, pelvis, femur, tibia, and foot, were recovered in the backdirt. Due to extensive disturbances from trenching, no *in situ* portions of the burial were identified and no stratigraphic associations between the burial and platform could be determined.

No subsurface cultural remains or deposits were encountered in any of the other trenches. Table 1 presents the dimensions and stratigraphic information for each of the 10 trenches. Representative stratigraphic columns for T1-5 in Parcel 5, and T1-5 in Parcels 17 and 18, are depicted on Figure 9. Figures 10-14 present photographic overviews of selected trenches.

Generally, two to three stratigraphic layers were exposed during trenching in Parcel 5. Layer I was overburden consisting of silty clay with abundant roots/rootlets. Underlying the overburden was Layer II, silty clay to clay with abundant rocks. Underlying Layer II was Layer III, silty clay to clay.

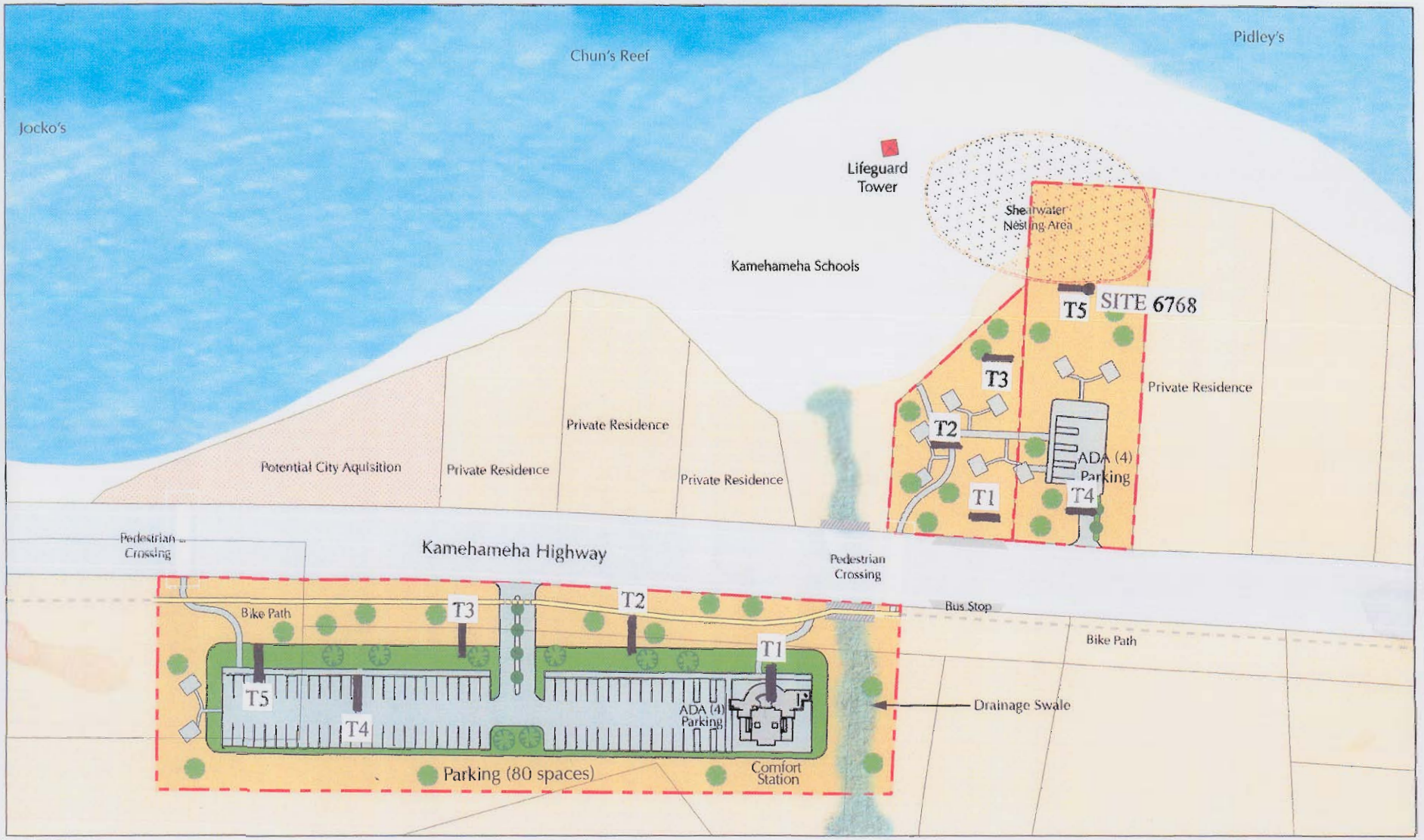


Figure 7. Location of Site 6768 and Trenches 1-5 in Parcel 5 and Trenches 1-5 in Parcel 17 & 18

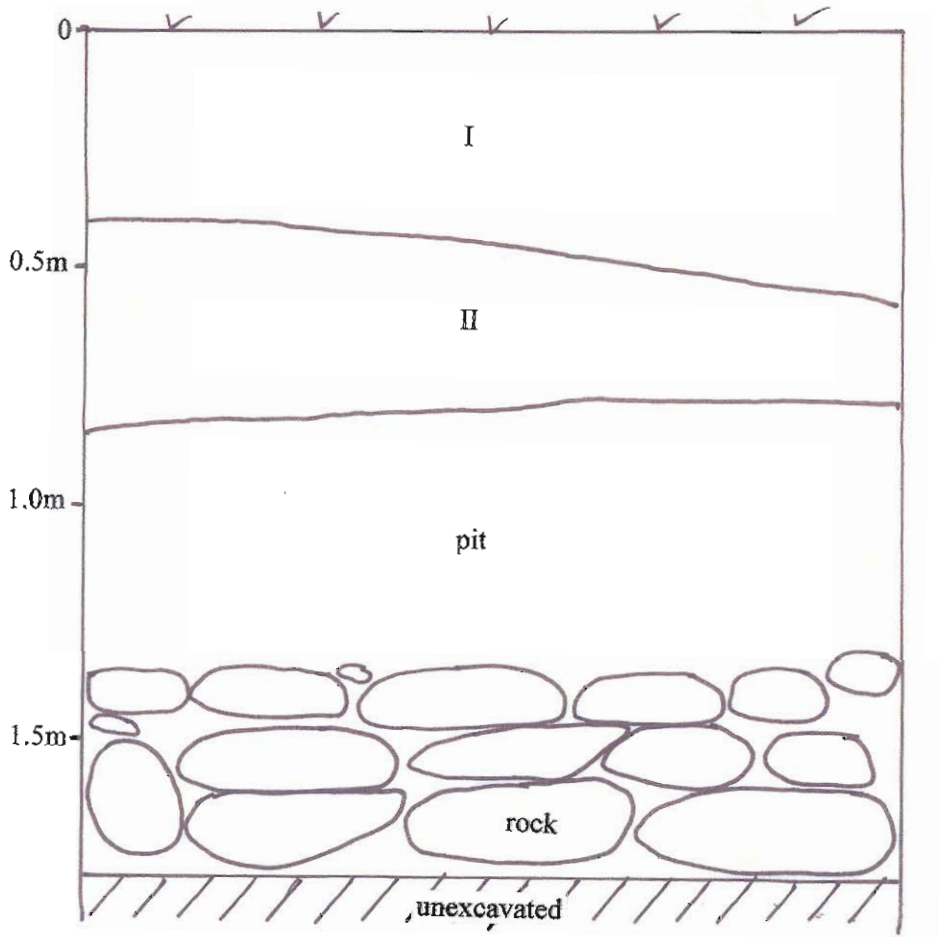


Figure 8. Top: Parcel 17, T5, North Wall Profile. Bottom: Probable Rock Platform

Table 1. Dimensions and Stratigraphic Information of Parcel 5, T1-5, and Parcels 17 and 18, T1-5

Chun Reef Support Park									
T-	Length	Width	Depth	Orient.	Layer I	Layer II	Layer III	Layer IV	Cultural
1	6.0m	0.8m	2.3m	120/300	silty clay	silty clay	clay		none
2	6.0m	0.8m	2.1m	130/310	silty clay	clay	silty clay	outcrop	none
3	6.5m	0.8m	1.6m	115/295	silty clay	silty clay	outcrop		none
4	6.0m	0.8m	1.5m	115/295	silty clay	silty clay	outcrop		none
5	6.0m	0.8m	1.6m	125/305	silty clay	clay	outcrop		none
Kawailoa Beach Park Addition									
T-	Length	Width	Depth	Orient.	Layer I	Layer II	Layer III	Layer IV	Cultural
1	6.3m	0.8m	2.3m	40/220	sandy silt	clay			none
2	7.2m	0.8m	2.4m	30/210	sand	clay	sand (pit)		none
3	6.0m	0.8m	2.0m	30/210	sandy silt	sand	clay		none
4	6.0m	0.8m	1.5m	40/220	sandy silt	silty clay	clay		none
5	6.0m	0.8m	1.7m	40/220	clay	sand	sand (pit)		yes

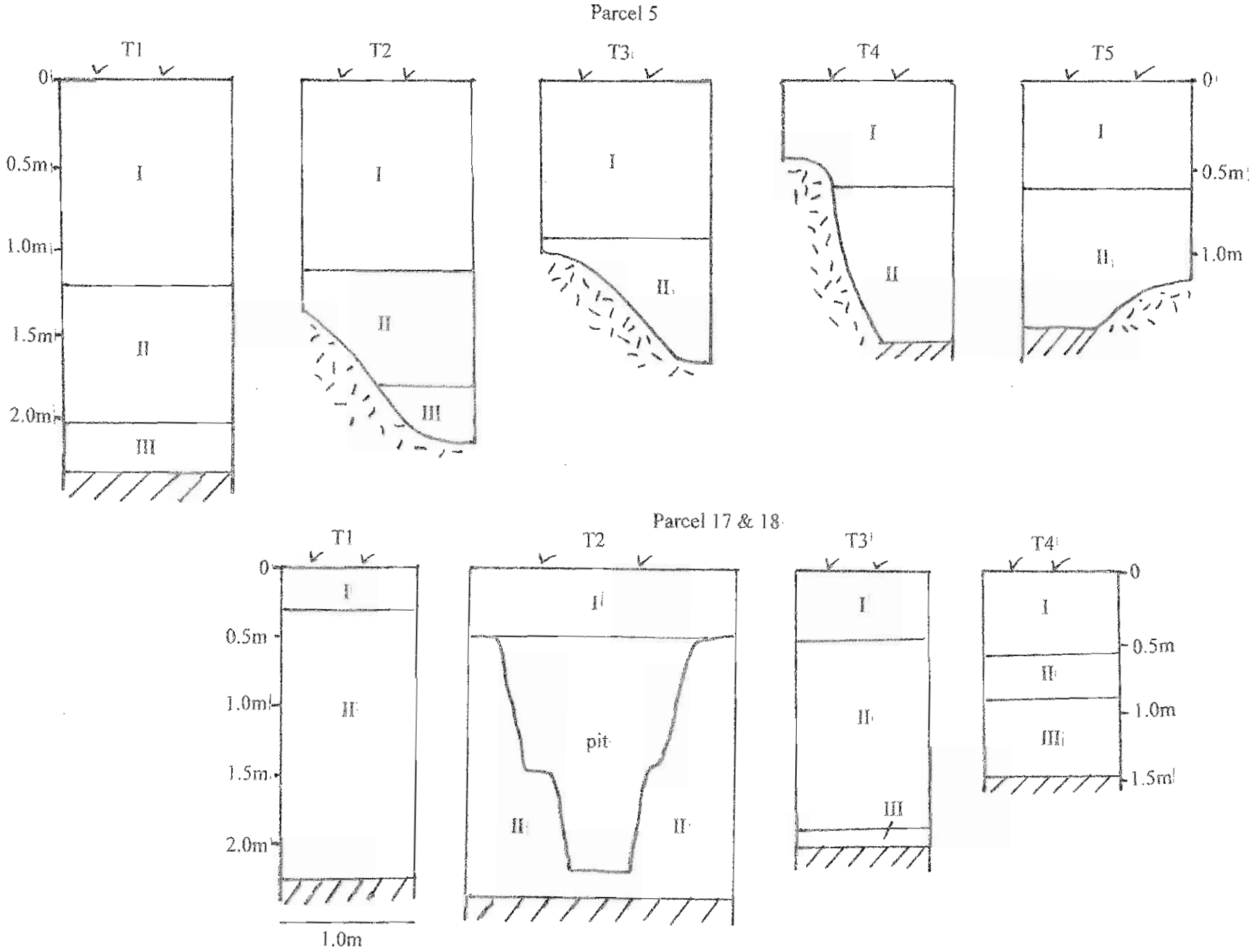


Figure 9. Representative Stratigraphic Columns for T1-5 in Parcel 5 and T1-4 in Parcels 17 & 18

Figure 10. Overview of T1 in Parcel 5, View to South

Figure 11. Overview of T3 in Parcel 5, View to South

Figure 12. Overview of T2 in Parcel 18, View to East

Figure 13. Overview of T3 in Parcel 18, View to East

Figure 14. Overview of T5 in Parcel 17, View to East

Two to three stratigraphic layers were also exposed in Parcels 17 and 18. Layer I varied from silt with wind blown sand to loose sand. Layer I in T5 was fill material for construction of a house. Layer II varied from clay along the southern end of Parcel 17 to silty clay or sand along the northern end. Layer III, present only in T3 and 4, consisted of clay. A pit consisting of loose sand and recent debitage was exposed in T2.

The stratigraphic components of T1-T5 in Parcel 5 are as follows:

> Layer I (60-120 cm thick): dark brown to dark reddish-brown (7.5YR 3/3 – 3/4; 5YR 3/3), silty clay with abundant amounts of roots/rootlets and rocks; fine, slightly sticky, non-plastic; non-cultural
>
> Layer II (70+ cm thick): dark brown to dark reddish-brown (7.5YR 3/4; 5YR 3/4), clay to silty clay with abundant rocks and minimal amounts of roots; fine, slightly sticky, slightly plastic; non-cultural
>
> Layer III (30+ cm thick): in T1 was brown (7.5YR 4/4) compact clay with moderate amounts of rocks; fine, sticky, slightly plastic; non-cultural. Layer III in T2 was dark yellowish-brown (10YR 4/4), loose, silty clay with moderate amounts of rocks; fine, non-sticky, non-plastic; non-cultural

The stratigraphic components of T1-T5 in Parcels 17 and 18 are as follows:

> Layer I in T1 was dark reddish-brown (5YR 3/4), loose, dry, fine, silt with some wind blown sand and minimal amounts of roots/rootlets and rocks; non-sticky, non-plastic; non-cultural. Layer I in T2 was dark yellowish-brown (10YR 4/6), loose, gritty, medium sand with some silt and roots/rootlets and rocks; non-sticky, non-plastic; non-cultural. Layer I in T3 was very dark grayish-brown (10YR 3/2), fine silt with some sand and abundant roots/rootlets and rocks; non-sticky, non-plastic; non-cultural. Layer I in T4 was dark brown (10YR 3/3), loose, moist, fine silt with some sand and abundant roots/rootlets and rocks; non-sticky, non-plastic; cultural material included recent debitage such as string and metal fragments. Layer I in T5 was dark reddish-brown (2.5YR 2.5/4) compact clay with abundant roots/rootlets; sticky, non-plastic; soil was probably imported during construction activities.
>
> Layer II in T1 and T2 was dark reddish-brown (5YR 3/4), homogenous clay; sticky, slightly plastic; non-cultural. Layer II in T3 was (10YR6/4) loose, homogenous, gritty, coarse, sand; non-sticky, non-plastic; non-cultural. Layer II in T4 was very dark brown (7.5YR 2.5/3), mottled, moist, fine, silty clay; sticky, non-plastic; non-cultural. Layer II in T5 was (10YR 5/4) loose, dry, medium, gritty, sand; non-sticky, non-plastic; non-cultural.
>
> Layer III in T3 and 4 was dark reddish-brown (5YR 3/4), compact, fine, homogenous, clay; sticky, slightly plastic; non-cultural.

A pit in T2 was fill material consisting of brownish-yellow (10YR 5/6), loose, gritty, sand with abundant roots/rootlets and recent debitage including wood and beer bottles.

A burial pit consisting of (10YR 4/2), moist, gritty, medium, sand and human skeletal remains was encountered in T5.

ARTIFACTS

A total of twenty-one glass beads, all of a similar size, shape, and color, were recorded in association with Site 6768. These were the only artifacts found in association with the interment, and so represent the sole element through which the cultural and temporal aspects of the burial may be more completely understood. The primary purpose of this section is to provide a description that may be used for comparison by future researchers; and secondarily to describe the evidence related to the manufacturing origins, distribution, temporal, and cultural implications of these beads.

The work of previous investigators allows that specific groups of glass beads, or bead complexes, can be dated on several increasingly specific levels ranging from the identification of the manufacturing origin of the bead to the entity which purveyed or distributed it. In the case of the present analysis, the pertinent center of manufacture was Canton. The principal entity connecting this manufacturing center to Hawaii was the Hudson's Bay Company, which maintained and operated trading outposts and regular sailing routes connecting Canton, Honolulu, and Fort Vancouver on the Columbia River between around 1830 and 1855. These relationships are discussed in detail below.

The following discussion is organized in five parts. Part I provides a description of the bead assemblage from Site 6768, prefaced by a brief summary of the methodologies and terminologies applied in the classification of these beads. Part II reviews the evidence related to the manufacturing origins of this group of beads. Part III outlines a regional comparison with assemblages from around the Pacific Rim. Part IV describes the process and entity through which Native Hawaiian consumers acquired similar items in the mid-19th century. Part V provides a summary discussion suggesting the date range through which the bead assemblage was most probably acquired and subsequently interred, and its social and cultural implications.

Methods and Description

The classification imposed on the glass bead assemblage from Site 6768 is modeled after the system proposed by Kenneth and Martha Kidd (1970), as modified and expanded by Karlis Karklins (1982a). All of the variations represented in the present sample can be described through Karklins' classification methodology. Additionally, the system incorporates terminologies and classification hierarchies, which have been adopted by most researchers. The glass beads were examined in the field with the aid of an 8X hand held loupe. Bead measurements were taken to the nearest half-millimeter. Length is measured parallel to the long axis of the hole, and diameter is the maximum distance perpendicular to the hole. Colors are described through Munsell (1966) color codes and the Liquitex (1993) color chart. The terminology describing bead shape is primarily from Beck (1928).

The classification employs a hierarchical system of attribute description. The primary criterion for sorting glass beads into typological categories is the technique of manufacture. Six major manufacturing categories are distinguished in the Karklins system: drawn, wound, wound on drawn, mold pressed, blown, and molded (Karklins 1982a: 87). All of the twenty-one glass beads recorded in association with Site 6768 were of the wound variety.

In Karklins' methodology, beads are then divided into classes according to their structure. Structure refers to the physical composition of the bead. There are four structural categories: Simple – beads composed of a single, undecorated layer of glass; Compound – beads composed of two or more undecorated layers of glass; Complex – simple specimens with adventitious decoration; and Composite – compound specimens with adventitious decoration. Structural classes are then segregated into types based on shape, size, and the color and diaphaneity of the structural elements.

For the purpose of the present analysis, it is important to recognize the difference between the manufacturing characteristics of drawn and wound beads. Drawn beads, also known as tube or hollow cane beads, are formed in the following manner. A purchase or glob of molten glass is gathered on an iron blowpipe and a bubble is blown into the glob; the resulting hollow globe is then modeled on an iron anvil to resemble a thick walled bottle. While still plastic, workers attach iron rods to both ends of the globe and run in opposite directions – elongating the globe into a long, thin, hollow tube up to 300 meters in length. The tubes are allowed to cool then broken into manageable sections. These tubes are then cut into bead lengths by chopping on an iron anvil.

The resulting beads are then either left unaltered, ground, or submitted to a series of reheating and tumbling processes to round the rough edges resulting from the chopping process (Karklins 1982a, Bussolin 1847).

Wound beads are produced one at a time by an individual worker. In this process a thin glass rod, or ribbon, is heated until plastic and then wound around a slightly tapering wire or mandrel until the desired size is reached. While still plastic, the bead may be molded or shaped. When the glass cools and hardens, the bead is slid off the mandrel wire (Bussolin 1847). When viewed under magnification, microscopic bubbles, trapped in the wound glass beads, are elongated parallel to the equatorial axis of the bead, perpendicular to the axis of the bead hole.

In accordance with Karklins' (1982a) system, the 21 beads from Site 6768 are all manufactured by the same method, are all of a rigidly similar size, shape, and color, and so are considered to represent one specific bead type. They are all simple, wound beads, ranging in shape from oblate to spheroid. The length ranges from 8 to 10 mm and the diameter ranges from 9 to 12 mm in the 21 examples. The beads are constructed of opaque light blue glass: the Munsell equivalent is 5.0B and the Liquitex equivalent is light blue 770. Evidence of winding is visible to the naked eye in slight variations in color forming irregular banding oriented parallel to the equatorial axis of the bead. The surfaces of these beads are pitted with numerous clay inclusions and large and small bubbles elongated perpendicular to the axis of the hole. The finish of the beads is dulled by a rind of hydration and many of the 21 examples exhibit longitudinal fractures. Figure 15 provides a photograph of this bead type extracted from Titchenal (1994) for comparative purposes.

Manufacturing Origins

The overwhelming majority of glass beads distributed across the planet during the 18th and 19th centuries were of Venetian origin. These include the well-documented assemblages of the New World, Africa and Asia (Dubin 1987:107). From the 14th century, and continuing through the latter decades of the 19th century, the glass factories of Murano in Venice, Italy, established an effective global monopoly over the technology, manufacture, and primary export of glass products. It was through this monopoly that the city of Venice acquired a substantial portion of its wealth. The glassworks of Venice included factories making glassware, mirrors, and window glass; but the most significant product of its factories were glass beads (Bussolin 1847:51-63; Francis 1979:5-9; J.P.B. 1856:315). Through a system of merchant exporters, glass beads were

Figure 15. Simple Wound Beads (from Titchenal 1994)
(Diameter of Large Bead is 12mm)

distributed to native populations around the planet (Dubin 1987; Karklins 1982b: 4; Francis 1979). Only a few historic documents concerning the glass bead industry of Venice exist because this information was traditionally censored (Bussolin 1847). The most comprehensive first-hand account, Dominique Bussolin's (1847) treatise on *The Celebrated Glassworks of Venice and Murano*, has only recently been translated and brought to the attention of North American researchers by Karlis Karklins and Carol F. Adams (1990). The rise of Venice to monopolize the glass bead industry corresponded to the decline of the industry in western Asia.

> After Tamerllane's Mongol armies overran Damascus, Tyre, Aleppo, and Sidon in 1401, glass beadmaking practices that had lasted over three thousand years were effectively ended, and quality glass was no longer produced in the region. The Venetians filled this void, successfully inheriting the role of glass bead maker for the western world and subsequently taking over markets in Africa and Southeast Asia that had been supplied by India for centuries (Dubin 1987:107).

China developed a glass bead industry, supplying regional demands, with glass technologies reaching about a thousand years into the past. Large quantities of glass beads were manufactured in China during the Qing (Manchu) dynasty (1644-1912). These were primarily sold to the Russians and the Ainu of Hokkaido, Japan, during the 18th century and to Indians, East Africans, and Americans in the 19th century (Dubin 1987:163). The Chinese bead industry, centered in Canton, also suffered a decline due to the expansion of the Venetian bead trade, but around 1840 with the expanded Western trade the Chinese bead industry again flourished and within ten years China became a fairly significant exporter of beads (Dubin 1987:163), but clearly remained only a secondary center of manufacture compared to the output of the Venetian industry.

Several distinctive characteristics allow the separation of Chinese from Venetian bead types. Chinese export beads were the products of cottage industries in a number of Chinese provinces (Liu 1995:67), while the Venetian beads were all manufactured at the large industrial glass complex in Murano (Bussolin 1847). The Chinese glass is distinctly inferior in quality to the Venetian glass and contains many large bubbles, visible to the naked eye, and clay inclusions (Liu 1995:59,67-68). Bubbles trapped in the Venetian glass are generally microscopic indicating the attainment of higher temperatures during the manufacturing process. The second clear distinction is that almost all Chinese beads are simple wound monochrome beads of either round, oval, or donut shapes. Most of the Venetian varieties are drawn beads and include a broad range of shapes. The Venetians also produced many varieties of wound beads but these were generally polychrome or decorated beads produced of the same high quality glass as the drawn varieties

(Bussolin 1847). Although there are similarities, given these distinctions, Chinese bead types have no true counterparts in the Venetian assemblage and conversely the Venetian bead types have no comparable counterparts in the Chinese assemblage.

The identification of beads manufactured in Venice in the mid-19th century is made through comparison with two collections housed in the Museum of Mankind in London, which have been photographed and analyzed in detail by Karlis Karklins (1982b, 1982c). The two collections, the Levin Catalogue and the Venetian Bead Book, are merchants sample displays of the 1850s that advertise beads employed in the Africa trade for slaves, gold, ivory, and palm oil; and in North America for furs. In combination, the two collections represent over 500 varieties of drawn, wound, and mold pressed beads attributed to the factories of Murano in the mid-19th century.

Beads similar to the current assemblage are not present among the Venetian varieties, however, direct counterparts to the wound beads in the current assemblage can be identified in the Chinese glass bead assemblages photographed and described by Roderick Sprague and An Jiayou (1990). The basic elements (types) and employed methods of manufacture appear to have been carried over from the 19th century if not earlier. Direct counterparts to the wound bead types from Site 6768 can also be identified in the discussions of 19th century Chinese beads provided by Peter Francis (1989), and Fenstermaker and Williams (1979). A comprehensive bibliography of Chinese glass bead research has been compiled by Robert Liu (1995:246-246).

Regional Comparative Analysis

An extensive comparative analysis of the current bead assemblage was undertaken utilizing other glass bead assemblages of the late 18th and 19th centuries from around the Pacific Rim. The comparison included: assemblages of the Spanish Mission Period in California and Mexico between 1785 and 1816 (Gibson 1975, Greenwood 1976, Titchenal 1994); the California fur trade from 1830 through 1845 (Titchenal 1994); the California gold rush from 1849 through 1856, and subsequent Indian wars from 1859 through 1864 (Titchenal 1994); assemblages from sites and regions of the Pacific Northwest (Carley 1982, Fenstermaker and Williams 1979, Ross 1990); Alaska and Siberia (Fitzhugh and Crowell 1988); China (Jiayao 1987, Sprague and Jiayao 1990); the Philippines (Villegas 1983); and Indonesia (Adhyatman and Arifin 1993). Glass beads of the type described at Site 6768 were found to occur in only one other documented regional assemblage; that of the areas influenced by the Hudson's Bay Company outpost at Fort Vancouver on the Columbia River in the State of Washington.

The Hudson's Bay Company Fort Vancouver complex has been extensively documented both historically and archaeologically through numerous investigations spanning the past 50 years. In 1947 the National Park Service acquired the site of Fort Vancouver. At that time nothing remained of the stockade or surrounding buildings. Since this acquisition, no fewer than forty formal investigations and reports have been undertaken, sponsored primarily by the National Park Service and the University of Washington. The Fort Vancouver glass bead component has been meticulously documented by Caroline Carley (1982) and Lester Ross (1990). Ross's (1990) report analyzes over 100,000 glass beads of 152 varieties recovered from archeological contexts within the fort compound. Carley's (1982) report describes many of the same varieties and some additional types plus an array of accompanying artifacts recovered from archaeological excavations of the Kanaka Village complex located adjacent to the fort, the residence of a large contingent of Native Hawaiians who were employed at the fort. Beads of the same type accompanying Site 6768 are identified in both of these reports: Carley (1982:165) Type 9, and Ross (1990: Plate 3,s). Similar beads can be identified in regional assemblages associated with Fort Vancouver from the Columbia River (Woodward 1976), and the State of Washington (Fenstermaker and Williams 1979).

A distinction can be made between an early (ca. 1828 – ca. 1845) and late (ca. 1845 – ca. 1860) period Hudson's Bay Company glass bead assemblage. The beads from Site 6768 are representative of the latter period. Briefly, the early Hudson's Bay Company assemblage was dominated by drawn tubular monochrome and polychrome beads with rounded ends, of Venetian manufacture. Prior to around 1844, beads other than these were uncommon in the Fort Vancouver assemblage (Ross 1990:59). Facetted beads and the wound bead types present at Site 6768 were introduced between ca. 1844 and ca. 1852 (Ross 1990:59). This sequence has also been demonstrated in stratigraphic deposits of Hudson's Bay Company assemblages in California and the western Great Basin (Titchenal 1994).

The Hudson's Bay Company in Honolulu

The Hudson's Bay Company (HBC) began under a charter granted by King Charles II of England in 1670. Throughout the 18th and the first half of the 19th centuries; the HBC became the premier trading company in North America concentrating on the acquisition, trade and market of furs. Two major mercantile centers were operated by the HBC in the 19th century: Lower Fort Garry on the Red River, near present day Winnipeg; and Fort Vancouver on the Columbia River, near what is now Portland, Oregon. By the 1830s the HBC expanded its commercial operations in North

America by selling imported manufactured goods to Euroamericans moving into the Red River District of the Canadian prairies, the Willamette Valley of the American Oregon Territory, and the Columbia Plateau of the American Washington Territory (Ross 1990:29). Between around 1830 and 1855 a large contingent of Native Hawaiians was employed by the Hudson's Bay company at Fort Vancouver. The settlement of these Hawaiians comprised a significant element of the fort complex, which was called Kanaka Village. Several archaeological investigations have specifically addressed the Kanaka Village element of the fort complex (Kardas 1970, Carley 1982).

Established in 1824 as the administrative headquarters and primary fur deposit of the HBC Western Department, Fort Vancouver serviced no less than 38 forts, stores and warehouses throughout present-day Oregon, Washington and British Columbia. The administrative responsibilities of the Western Department included maintaining a network of forts and houses to acquire furs for European and Asian markets, and maintaining mercantile and trading stores in San Francisco and the Sandwich Islands (Ross 1990:29). To support these operations, manufactured goods were imported from London, England, and China; on ships owned or chartered by the company and chartered cargoes aboard Boston merchantmen trading in the Sandwich Islands. Extensive documentation of the goods imported to Fort Vancouver, from merchants in London and Canton, exist in the form of ships manifests, invoices, and correspondence, which are housed in the Canada National Archives of the Hudson's Bay Company. Among the imported goods were tons of glass beads both from Venice via English merchants, and from China via Canton fur brokers (Ross 1990:31). These glass beads represented the primary medium through which the company acquired its furs and other local produce and provisions. Between ca. 1830 and ca. 1855, Hudson's Bay Company dominated this trade in the northern Pacific to the point of absolute monopoly.

Being a charter company of the English Crown, and representing English interests, the offices of the Hudson's Bay Company played a significant role in political and social developments in the Hawaiian Islands throughout the decades between 1830 and 1855 and significantly influenced the material culture of the Native Hawaiian population during this period. The following summary of the Company's history in Honolulu was extracted from the quarterly publication of the HBC in 1930 (Watson 1930:6-8):

> Comparatively few people even now are aware that the Hudson's Bay Company had a supply depot at Honolulu and carried on a considerable trade in sandalwood, besides supplying native foodstuffs to their own and other ships, also importing for native consumption shiploads of merchandise of British manufacture.
>
> As far back as 1829, Richard Charlton, English consul at Honolulu, is recorded as receiving shipments from the Hudson's Bay Company at Columbia River and acting as the Company's agent. In 1834, Mr. George Pelly was sent out by the Company from London, when a permanent agency was established by the Company as an outlet for salmon and lumber from the Canadian Northwest.
>
> The earliest location of the Company's premises was on the Ewa, or north side of Nuuanu Street, adjoining the "Blonde" lot cornering on King Street. The premises were named "Aienui," meaning "great debt," perhaps in reference to the Company's liberal policy of granting credit on reasonable security, such as was and still is granted to the Indians on their prospective winter catch.
>
> In 1846 the Company arranged for the removal of its premises to the corner of Queen and Fort streets, and the best part of that year was spent in the erection of a two-story coral building with slate roof, fronting on Queen street, and one-story storage buildings along Fort street.
>
> On November 26, 1859, the Hudson's Bay Company advertised its withdrawal from business on the islands and in August, 1860, Mr. Bissett, the Company's agent, with his wife and child, left for Victoria by the Jenny *Ford,* thus terminating an interesting if not financially profitable period of trading. (Watson 1930:6-8)

Mercantile entities doing business in Honolulu during the mid-19th century were limited in number and historically well documented. The offices of the Hudson's Bay Company in Honolulu, throughout the decades of the 1840s and 1850s, are prominent in historical discussions of the era (Scott 1968:57-95), and in the periodicals of the time in which Honolulu merchants advertised (*Polynesian, Sandwich Island Gazette*). A review of these historical sources suggests that the Hudson's Bay Company, during its tenure in Honolulu between ca. 1830 and ca. 1860, may have been the only mercantile entity purveying glass beads and similar products to native consumers.

Discussion

Few previous archaeological reports can be cited that address Hawaiian protohistoric or historic burial assemblages. Buck's (1957) discussions of burial practices and *Ornaments and Personal Adornment*, based on records and collections of the Bishop Museum, provides the most comprehensive ethnographic overview. The correspondence of the glass beads from Site 6768 to types present at the Hudson's Bay Company complex at Fort Vancouver leaves little doubt that the two are contemporary. The well documented presence of the Hudson's Bay Company store in

downtown Honolulu (Watson 1930), spanning the same period as the Fort Vancouver company headquarters, between ca. 1830 and ca. 1860, provides the vector through which the native Honolulu population acquired these items.

The concurrence that the wound bead types recorded at Site 6768 were not introduced at Fort Vancouver (Ross 1990:59) or into the Hudson's Bay Company assemblages of California and the western Great Basin (Titchenal 1994:81-89) until around 1845, strongly suggests that the beginning date for the range of acquisition of the beads which accompany the burial at Site 6768 should be placed at ca. 1845. The ending date for the period of acquisition most probably corresponds to the closing of the Hudson's Bay Company store in Honolulu in 1860.

Pit burial without the accompaniment of a coffin is a uniquely Hawaiian tradition. European burials of the period would probably have been accompanied by a coffin of which no evidence is present. European interments of the period are usually accompanied by full dress, including footwear that is extremely durable, and of which no evidence is present. Chinese interments of the period would most probably have been within a coffin, and ethnic Chinese clothing elements are distinctly different from European. Glass bead necklaces of type represented by the current assemblage are uniquely Hawaiian preferences that are not found among the accoutrements of either European or Chinese emigrants of the mid-19th century.

The selective adaptation among Native Hawaiians of European material culture, including glass beads, appears to carry the additional implications of gender, and status or rank. A general review of drawings, portraits and early photographs reveal that among females the adaptation of European jewelry, primarily glass beads, commonly augmented traditional ornamentation.

Buck (1957: 546) and Summers (1999:122) describe numerous examples of similar glass bead types in collections of the Bishop Museum. Most of the examples, strung in necklaces that include ivory or shell beads, were collected by J. S. Emerson in the 1880s (Summers 1999:122). Describing the ivory bead necklaces, Buck (1957:546) states "The 17 necklaces examined have four to seven ivory beads, but the lengths have been increased by three to five glass beads, usually red, between the ivory ones. These modern necklaces were worn by women of rank who had the means to acquire them".

It is noteworthy that the spindle-shaped ivory beads which most commonly accompany the glass beads in the ethnographic Hawaiian collections described by Buck (1957) and Summers (1999) are also clearly present in the Hudson's Bay Company assemblage at Fort Vancouver and described by Carley (1982:172), suggesting that these ivory beads may also have been an item of commerce purveyed through the Hudson's Bay Company store in Honolulu. That Emerson was able to acquire numerous examples of these necklaces in the mid-1880s for as little as a dollar apiece (see Summers 1999:122) suggests that by around this time the cultural significance attached to these items may have been in decline. Given the historical parameters described above, it seems most probable that the burial at Site 6768 was interred between ca. 1850 and ca. 1880.

DISCUSSION

Site 50-80-10-6768 was recorded during the current investigation. This site, located in Trench 5 in Parcel 17, included the skeletal remains of one individual. The burial was placed in a pit and associated with a probable rock platform. However, due to extensive disturbances from backhoe trenching, no stratigraphic associations between the burial and platform could be determined. Based on associated artifacts including 21 light blue wound beads, the burial was preliminary interpreted as a probable adult Native Hawaiian female interred between ca. 1850 and ca. 1880.

No subsurface cultural remains or deposits were identified in the remaining trenches. The negative results indicated that Parcel 5 was extensively altered by cattle ranching and bulldozing activities, and Parcels 17 and 18 were disturbed by recent construction activities.

Backhoe testing showed that subsurface cultural remains were absent in all exposed stratigraphic layers in Parcel 5. Two to three stratigraphic were exposed, consisting of silty clay and clay. Two to three stratigraphic layers were also exposed in Parcels 17 and 18. Layer I varied from silt with wind blown sand to unconsolidated sand. Layer I in T5 was fill material for construction of a house. Layer II varied from clay along the southern end of Parcel 17 to silty clay to sand along the northern end. Layer III, present only in T3 and 4, consisted of clay. A pit consisting of loose sand and recent debitage was exposed in T2.

PRELIMINARY SIGNIFICANCE EVALUATIONS

Initial significance has been assessed for Site 50-80-10-6768. This assessment is based on the criteria outlined in the Hawaii Register of Historic Places significance evaluation criteria. A site may be considered significant is it meets one or more of the following criteria:

> **Criterion A:** associated with events that have made an important contribution to the broad patterns of our history;
>
> **Criterion B:** associated with the lives of persons important in our past;
>
> **Criterion C:** embody the distinctive characteristics of a type, period, or method of construction; represents the work of a master; or possesses high artistic value;

Criterion D: have yielded, or is likely to yield, information important for research on prehistory or history; and

Criterion E: have an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with traditional cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts; these associations being important to the group's history and cultural identity.

Based on the above criteria, Site 50-80-10-6768 is considered significant under Criterion D and E. This site has important traditional cultural value and yielded or has the potential to yield more information significant to our understanding of the history of this region and O'ahu Island.

RECOMMENDATIONS

No further inventory-level work is recommended at Site 50-80-10-6768. The burial will be preserved and integrated into the shearwater nesting preserve. Sufficient information was obtained during the current investigation for Site 6768; thus, no further work is recommended. Probable remnants of Pu'upea Heiau, situated off-site in the southwestern portion of Parcel 5, are located outside the development portion of the parcel and excluded from the current investigation. This site will be preserved *in situ*, and a buffer zone will be established at this site prior to commencing construction-related activities.

Based on the negative results of the limited subsurface testing in the remaining portion of Parcel 17, and Parcels 5 and 18, together with evidence for previous disturbances, no further inventory-level archaeological work is recommended. However, due to the presence of a human burial in Parcel 17 and probable remnants of Pu'upea Heiau off-site in Parcel 5, archaeological monitoring is recommended during initial construction activities. Prior to commencing any construction activities, a monitoring plan shall be prepared for approval by SHPD.

REFERENCES

Adhyatman, Sumarah and Redjeki Arifin
1993 *Mankik-Manik di Indonesia: Beads in Indonesia.* Penerbit Djambatan

Athens, J.S., J. Ward, and D. Blinn
1995 *Paleoenvironmental Investigations at 'Uko'a Pond, Kawailoa Ahupua'a, O'ahu, Hawaii.* International Archaeological Research Institute, Inc., Honolulu

Avery, S., and J. Kennedy
1993 *Archaeological Report Concerning the Inadvertent Discovery of Human remains and Monitoring of Subsurface Excavation at 61-669 Kamehameha Highway, TMK 6-1-10:6, Kawailoa Ahupua'a, Waialua District, Island of Oahu.* Archaeological Consultants of Hawaii, Inc., Hale'iwa

Barrera, W.
1979 Cultural Resources Survey of Kamehameha Highway Realignment (Hale'iwa, O'ahu). Chiniago, Inc.

Beck, Horace C.
1928 Classification and nomenclature of beads and pendants. *Archaeologia* 77:1-76

Borthwick, D., B. Colin, R. Chiogioji, and H. Hammatt
1998 *Archaeological Inventory Survey and Subsurface Testing Report of a 140-acre Parcel within Kawailoa Ahupua'a, Waialua District, Island of O'ahu (TMK 6-1-4:23, 58 and 6-2-1:1, 10).* Cultural Surveys Hawaii, Kailua

Borthwick, D., D. Perzinski, and H. Hammatt
2002 *Archaeological Inventory Survey Report for the Proposed North Shore Skateboard Park, Kawailoa, Waialua, O'ahu Island, Hawaii (TMK 6-2-3:17, 19, 20, 22, and 38).* Cultural Surveys Hawaii, Kailua

Borthwick, D., A. Bush, J. Yorck, and H. Hammatt
2003 *Archaeological Inventory Survey Report for the Proposed Wastewater Improvements to the Hale'iwa Beach Park, Kawailoa, Waialua, O'ahu Island, Hawaii (TMK 6-2-01:por. 2).* Cultural Surveys Hawaii, Kailua

Buck, Peter H.
1957 *Arts and Crafts of Hawaii.* Bernice P. Bishop Museum Special Publication 45. Bishop Museum Press, Honolulu

Bussolin, Dominique
1847 *Les celebres verreries de Venise et de Murano.* H.P. Munster, Venice. English translation by Karlis Karklins and Carol Adams in *Beads* 2:69-84 (1990)

Carley, Caroline D.
1982 HBC Kanaka Village/Vancouver Barracks 1977. University of Washington Office of Public Archaeology, *Reports in Highway Archaeology 8*, Dubin, Lois Sherr

1987 *The History Of Beads, from 30,000 B.C. to the Present.* Harry Abrams, Inc., NY

Fenstermaker, G.B., and Alice T. Williams
1979 *The Chinese Bead and the Romance of the Bead-Jewelry Trail.* G.B. Fenstermaker Publications

Fitzhugh, William, and Aron Crowell
1987 *Crossroads of Continents: Cultures of Siberia and Alaska.* Smithsonian Institution Press, Washington D.C.

Foote, D., E.L. Hill, S. Nakamura, and F. Stephens
1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* U.S. Dept. of Agriculture, U.S. Government Printing Office, Washington D.C.

Francis, Peter J.
1979 The Venetian Beads. *World of Beads Monograph Series No. 1,* Lake Placid

1987 Glass Beads of China. *Arts of Asia 20, 3:118-127.* Arts of Asia Publications, Kowloon

Gibson, R.O.
1975 The Beads Of Humaliwo. *The Journal of California Anthropology* 2(1):110-119

Greenwood, Roberta S.
1975 *The Changing Faces of Main Street: Ventura Mission Plaza Archaeologicl Project.* Redevelopment Agency City of San Buenaventura

Hammatt, H., S. Freeman, K. Souza, and D. Borthwick
2004 *Archaeological Inventory Survey for the Proposed Laniakea Beach Support Park, Kawailoa, Waialua, O'ahu Island, Hawaii (TMK 6-1-05:14 por.).* Cultural Surveys Hawaii, Inc., Kailua

Handy, E.S. Craighill, and Elizabeth G. Handy
1972 *Native Planters of Old Hawaii: Their Life, Lore, and Environment.* B.P. Bishop Museum Bulletin 233. Bishop Museum, Honolulu

J.P.B.
1856 Venentian glass -- how they make beads. *Scientific American* 11(40): 315

Jiayao, An
1987 Early Chinese Glassware. *Kaogu*

Kamakau, S.
1992 *Ruling Chiefs of Hawaii, Revised Edition.* The Kamehameha Schools Press, Honolulu

Kardas, S.
1970 *1969 Excavations at the Kanaka Village Site, Fort Vancouver, Washington.* Ms. on file, National Park Service

Karklins, Karlis

1982a Guide to the Description and Classification of Glass Beads. *History and Archaeology* 59:83-117

1982b The Levin Catalogue of Mid-19th Century Venetian Beads. *History and Archaeology* 59:5-38

1982c A Sample Book of 19th-Century Venetian Beads. *History and Archaeology* 59:39-82

Karklins, Karlis, and Carol F. Adams

1987 Dominique Bussolin on the glass-bead industry of Murano and Venice (1847). *Beads* 2:69-84

Kidd, Kenneth, and Martha A. Kidd

1970 A Classification System for Glass Beads for the Use of Field Archaeologists. *Canadian Historic Sites: Occasional Papers in Archaeology and History* 1:45-89

Kirch, P.V., and M. Sahlins

1992 *Anahulu: The Anthropology of History in the Kingdom of Hawaii, 2 Volumes.* Volume 1, Historical Ethnography by Marshall Sahlins. Volume 2, The Archaeology of History by Patrick Kirch. University of Chicago Press, Chicago

Kuykendall, R.

1965 *The Hawaiian Kingdom, Vol. 1.* The University Press of Hawaii, Honolulu

Liu, Robert K.

1995 *A Universal Aesthetic: Collectible Beads.* Ornament, Inc., Vista, California.

Masterson, I., D. Borthwick, and H. Hammatt

1995 *An Archaeological Reconnaissance Survey of the Proposed Chun's Reef Support Beach Park at Kawailoa, Waialua, Oahu (TMK 6-1-05:por. 14).* Cultural Surveys Hawaii, Kailua

McAllister, J.G.

1933 *Archaeology of O'ahu.* Bishop Museum Bulletin 104. Bishop Museum, Hon.

McDermott, M., S. Kikiloi, V. Creed, D. Shideler, and H. Hammatt

2000 *Archaeological Inventory Survey of a 5-acre Portion of Hale'iwa Ali'i Beach Park, Pa'ala'a Ahupua'a, Waialua District, O'ahu Island (TMK 6-6-02:01).* Cultural Surveys Hawaii, Kailua

McGerty, L., and R. Spear

2000 *An Archaeological Inventory Survey in the Ahupua'a of Kawailoa, Waialua District, Island of Oa'hu (TMK 6-2-3:por. 6 and 9).* SCS, Inc., Honolulu

Moore, J., J. Kennedy, and L. Brennan

1993 *Archaeological Inventory Survey with Subsurface Testing Report for the Hale'iwa Beach Park Extension Located at TMK 6-2-01:4, 6, and 8, in Kawailoa Ahupua'a, Waialua District, Island of O'ahu.* Archaeological Consultants of Hawaii, Hale'iwa

Pukui, M., S. Elbert, and E. Mookini
1974 *Place Names of Hawaii.* University of Hawaii Press, Honolulu

Ross, Lester A.
1990 Trade Beads from Hudson's Bay Company Fort Vancouver (1829-1860), Vancouver, Washington. *Beads: Journal of the Society of Bead Researchers,* 2:29-68

Sahlins, M.
1992 *Anahulu: The Anthropology of History in the Kingdom of Hawaii.* University of Chicago Press, Chicago

Scott, Edward B.
1968 *The Saga of the Sandwich Islands: Vol. 1.* Sierra-Tahoe Publishing Co., Crystal Bay, Nevada

Sprague, Roderick, and An Jiayao
1990 Observations and Problems in Researching the Contemporary Glass-Bead Industry in China. *Beads: Journal of the Society of Bead Researchers* 2:5-14

Sterling, E., and C. Summers
1978 *Sites of O'ahu.* Dept. of Anthropology, B.P. Bishop Museum, Honolulu

Summers, Catherine C.
1999 *Material Culture: The J.S. Emerson Collection of Hawaiian Artifacts.* Bishop Museum Press, Honolulu

Titchenal, Paul B.
1994 *A Chronology for Glass Beads from California and the Western Great Basin.* Masters Thesis, California State University, Chico

Villegas, Ramon N.
1982 *Kayamanan: The Philippine Jewelry Tradition.* Central Bank of the Philippines, Manila

Watson, Robert
1930 HBC in the Hawaiian Islands. *The Beaver* 1:10

Woodward, Arthur
1975 Indian Trade Goods. *Oregon Archaeological Society Publication.* Thomas Binford, Portland

Appendix D
Cultural Impact Assessment

Kawailoa Beach Park & Chun's Reef Support Park

Cultural Impact Assessment

Kawailoa Ahupua`a, Moku o Waialua, Oahu Island

Prepared for
Jeffery Pantaleo Consultants, LLC (JPC)

By Jo`Lin Kaleonahenaheokalani Colburn
July 2005

Cover Page: Satellite Photograph
Kawailoa Beach Park & Chun's Reef
Kawailoa Ahupua`a, Moku o Waialua, Oahu Island
http://maps.google.com/

EXECUTIVE SUMMARY

A Cultural Impact Assessment for Kawailoa Beach Park was undertaken as part of the master planning effort for the Kawailoa Beach Park Addition/Chun's Reef Support Park, Kawailoa *ahupua`a* (traditional land division), *moku* (traditional district) of Waialua, Oahu Island. The purpose of this cultural impact assessment is to gather information about traditional cultural practices and pre-historic and historic cultural remains that may be affected by the implementation of this development project.

This study is in compliance with Act 50 SLH 2000 (HB 2895 H.D.1) as it amends the State of Hawai`i Office of Environmental Quality Control [QEQC] Guidelines for Environmental Impact Statement law [Chapter 343, HRS]. To this end, the targeted "audience" of this report is the people who will be reviewing it. Therefore, it was written with this in mind and includes an overview of the history of the land and sea use.

The level of ethnographic study included five interviews. The designated area of expansion will be to the existing Kawailoa Beach Park. This area has been populated and under cultivation for over 100 years. However, descendants of people who have lived and worked on these lands and fished in these waters are still alive. While the original families of the land do not occupy most of the area, it cannot be overlooked that the surrounding areas [gullies/gulches/valleys/ocean] may have been and still be used for gathering purposes. Another consideration is that this area is frequented daily by the endangered green sea turtle population and the endangered monk seal but more importantly the nesting of the *`Ua u kani* [Wedge-tailed Shearwater Bird] located in and around the proposed site.

It would be advantageous for the development project to have a cultural advisory group comprised of various cultural experts of the immediate community. It is highly recommended that a Cultural Monitor be present for any grading, excavating, and/or any other intrusive work to the *`aina* [the land and the sea]. It is also recommended that access to significant cultural sites and cultural gathering places are a part of the master development plan. Consider granting access privileges to Native Hawaiian cultural groups. It is a Hawaiian traditional practice to *malama* or care for *Kupuna* [ancestors].

ACKNOWLEDGMENTS

This project could not have been completed without the assistance, support and *mana`o* of the two formal and three informal consultants: Mrs. Helen Mark Bajo; Mr. Clarence Keli`inamoku Solomon who came from Maui to be interviewed; an anonymous fisherman I call "Uncle Pa`ipa`i"; the Lifeguard who preferred to be anonymous; and to the *kane* (male) who has be surfing at Chun's since the late 60's and also chose to remain anonymous.

Special *mahalo* to Keona Mark who graciously allowed us to use the facilities of the Historical Waialua Court House to interview Mrs. Helen Mark Bajo. *Aloha* to Marlu A. Oliphant-West, President, "Save the Turtles International"; President, "Adopt a Beach Hawaii"; and resident, Kawailoa Beach & Chun's Reef for over twenty-five years, for her generosity in providing valuable maps, information and personal records of the activities along the shoreline of Kawailoa *ahupua`a.*

Additional *aloha* to Marie Kaimipono Orr, Anthropologist & Cultural Expert, with her background in Hawaiian History, Hawaiian Language, & Hawaiian Archaeology for her time, expertise, format and guidance during the process of this study; Daniel Au, Friends of Kukaniloko, Cultural Practitioner, Botanist and Hawaiian Studies Teacher for his *mana`o* on the flora and fauna, Hawaiian language, *mo`olelo* (oral history and legends), and his *mana`o* on *oli* (traditional chant) and *mele* (song); and Tom Lenchanko, *Kahu o Kukaniloko,* Cultural Expert and *ohana,* for his inspiration and *aloha `aina.*

And last, but certainly not least, *mahalo nui loa* to Caprice Salvador for dedicated assistance, stamina, and support in bringing this project to completion.

Ua mau ke ea o ka `aina i ka pono
eo Hawai`i eo

TABLE OF CONTENTS

TABLE OF CONTENTS
(continued)

LIST OF APPENDICES

LIST OF FIGURES

LIST OF PHOTOGRAPHS

INTRODUCTION

A Cultural Impact Assessment for Kawailoa Beach Park was undertaken as part of a master planning effort for the Kawailoa Beach Park Addition/Chun's Reef Support Park, Kawailoa *ahupua`a* (traditional land division), *moku* (traditional district) of Waialua, Oahu Island. The purpose of this cultural impact assessment was to gather information about traditional cultural practices, ethnic cultural practices and pre-historic and historic cultural remains that may be affected by the implementation of the development project. This study is in compliance with Act 50 SLH 2000 (HB 2895 H.D.1) [Appendix A] as it amends the State of Hawaii Office of Environmental Quality Control [QEQC] Guidelines for Environmental Impact Statement law [Chapter 343, HRS] to include:

> *effects on the cultural practices of the community and State. Also amends the definition of "significant effect" to include adverse effects on cultural practices.*

This report is organized into five parts. Part I describes the area in terms of location, in the context of *ahupua`a* (traditional land division), *moku* (traditional district) and Oahu Island. Part II explains the methods and constraints of this study. Part III summarizes the review of traditional and historic literature in the context of the general history of Hawai`i, the island of Oahu, *moku* (traditional district) of Waialua, Kawailoa *ahupua`a* (traditional land division). Part IV presents the analysis of the ethnographic survey: the local history as it pertains to cultural resources, land and water use in the project area. Part V summarizes the findings of this cultural impact assessment.

SCOPE OF WORK

The scope-of-work (SOW) [Appendix B] was based on the QEQC *Guidelines for Assessing Cultural Impacts* (1997) [Appendix C] and focuses on the three cultural resource areas (traditional, historical and archaeological), conducted on two levels: archival research (literal review) and ethnographic survey (oral histories). This study will include brief overviews of previous archaeological studies and Land Commission Awards (LCA).

The research for this cultural impact assessment was conducted within the broader context of the *ahupua`a* (traditional land division) and *moku* (traditional district), as well as the history of the fishing industry in the area. The level of effort included five interviews due to a preliminary assessment that Kawailoa Beach Park Addition/Chun's Reef Support Park development project will be an addition to an existing beach park. Research on traditional resources entailed a review of the literature of Hawaiian *mo`olelo* or stories/legends, late nineteenth century and early twentieth century ethnographic works, and interviews with knowledgeable consultants.

Part I: PROJECT AREA

Project Location

The Kawailoa Beach Park Addition & Chun's Reef Support Park project is located adjacent to the south of Kamehameha Highway and west of Ashley Road. This is on the North Shore of Oahu Island, Hawai`i, in the Kawailoa *ahupua`a* (traditional land division) [Figure 1], in the *moku* (traditional district) of Waialua [Figure 2].

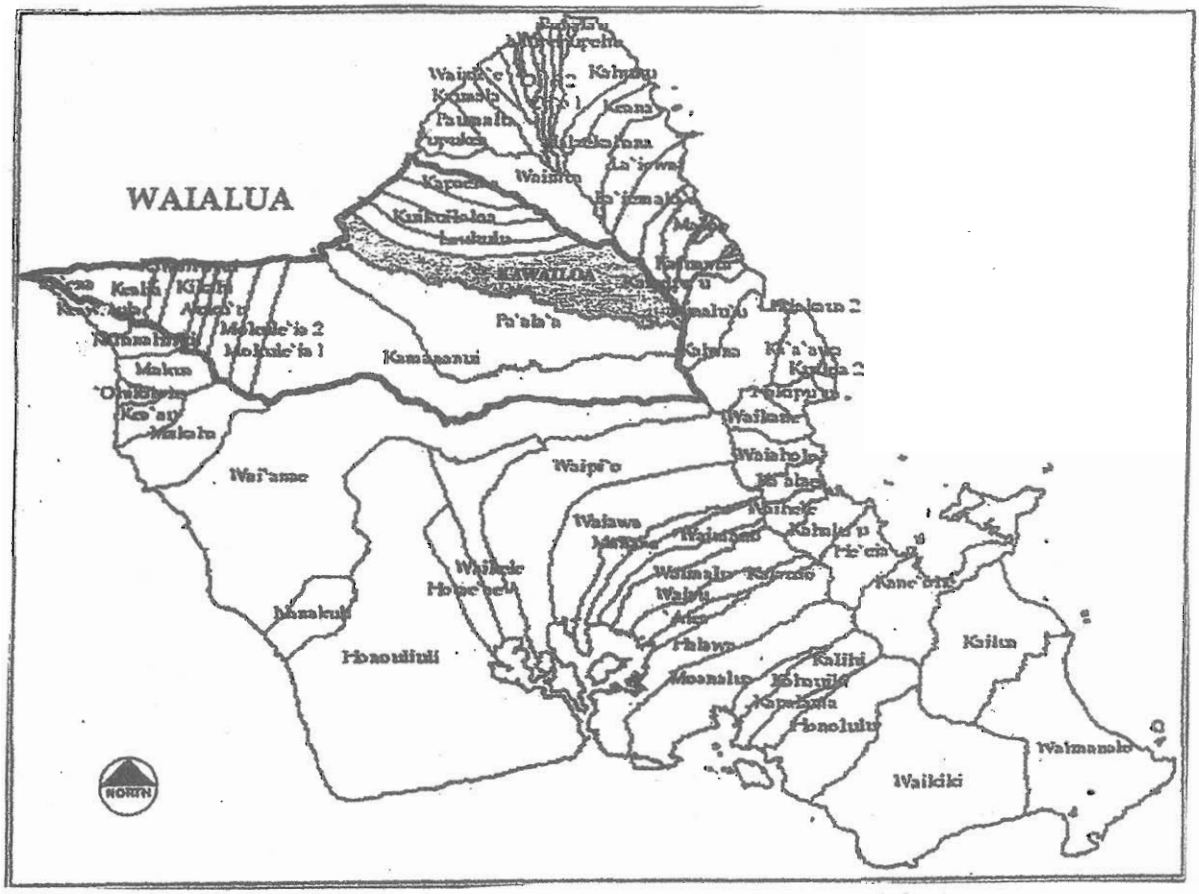


Figure 1. Ahupua`a Map of Oahu Island

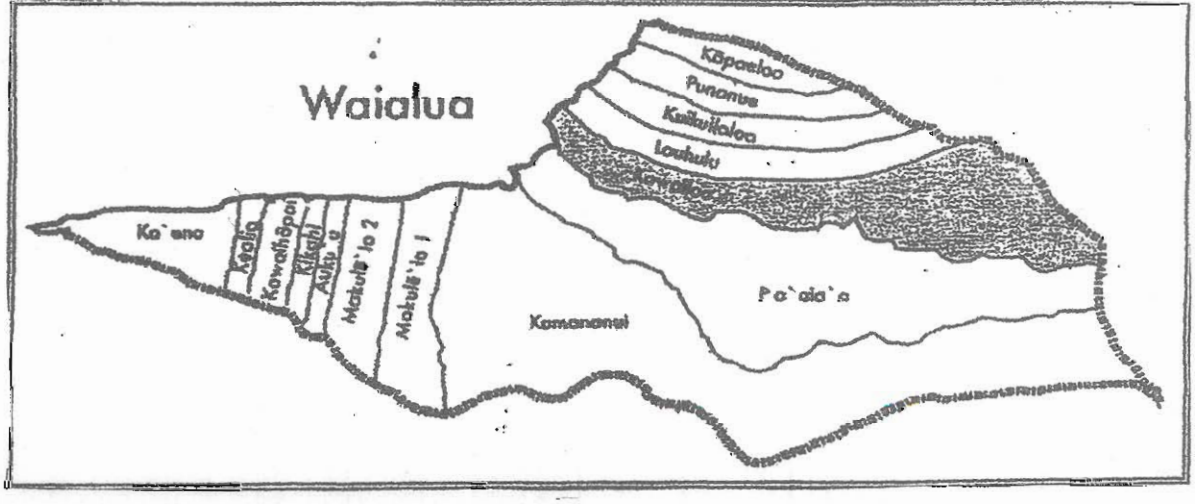


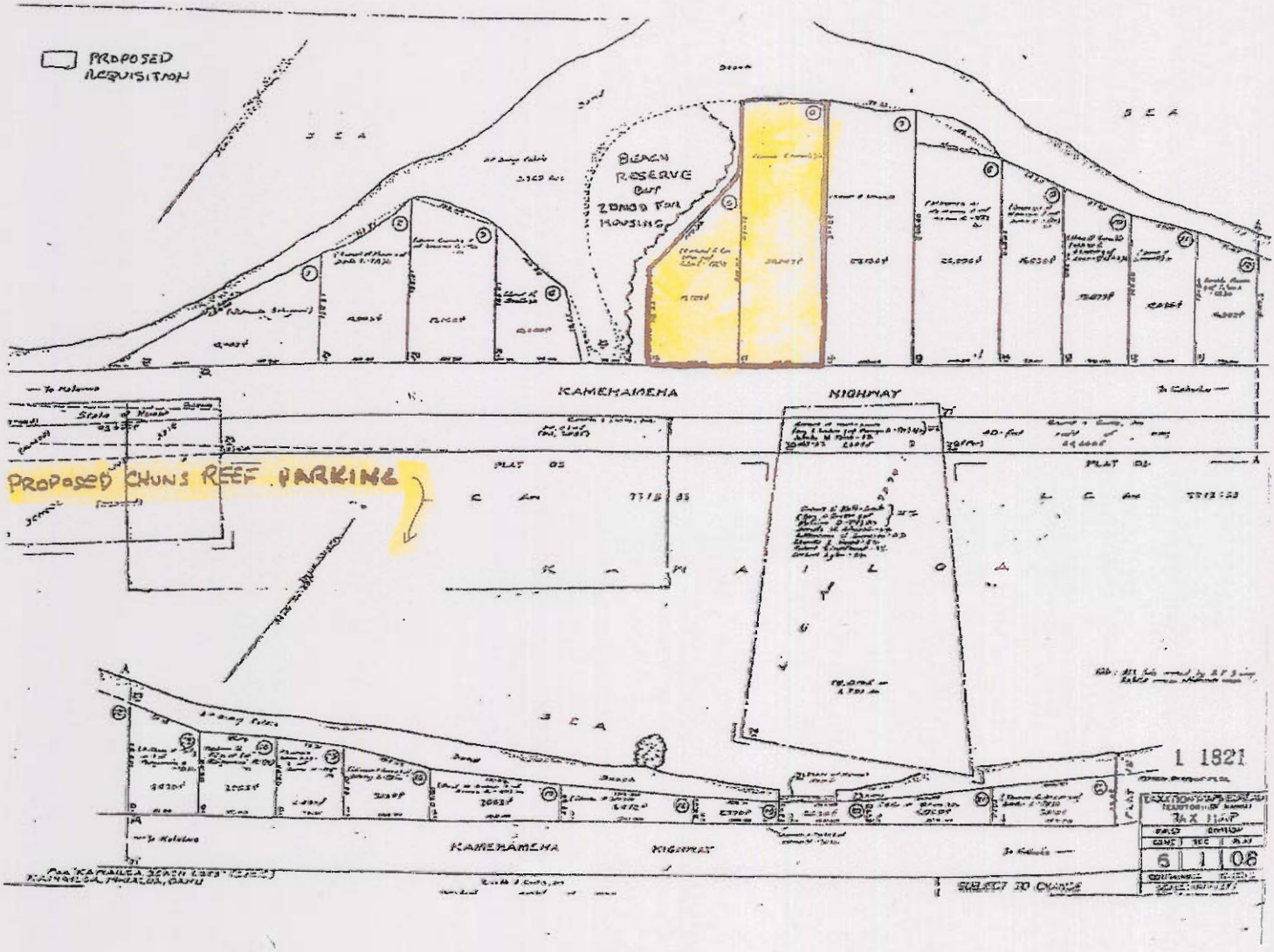
Figure 2. Moku o Waialua

The existing Kawailoa Beach Park & Chun's Reef, City & County Beach Parks-Oahu-North Shore [Photo 1] is located to the east of Laniakea along the 1000 foot long section of basalt rocks and boulders. Kamehameha Highway runs parallel to the shoreline. The only public access is located at the very western end near Chun's Reef. This popular surf spot extends to the center of the prominent sandy foreland formed to the lee of the reef.

[Photo 1] Aerial view of existing Kawailoa Beach Park (highlighted in yellow)

Environment. The existing Kawailoa Beach Park is located on former residential property. A giant Monkey Pod tree is near the Kamehameha Highway entrance. There are also African Tulip, Banyan, and Coconut Trees, bougainvillea vines on the fence, hibiscus patches and some ti leaf. There has been much neglect in caring for the plants and trees in the park. Most are overgrown. In the adjacent lot there is a large swimming pool where debris from the demolished residence was discarded. The ocean remains pristine while endangered green sea turtles and monk seals come to feed. Many *Ua u Kani* [Wedge-tailed Shearwater Bird] nests are in the grass and sand.

Taxation Maps Bureau, Territory of Hawaii TMK 6-1-08 contains (lot 5) and adjacent (lot 6) [Figure 3]. Beach access has been through the existing park (lot 5). Two "no trespassing" signs are located on the grounds; beach patrons and surfers only pass through the park. The adjacent property (lot 6) is currently fenced in. The foundations of a former house and driveway remain exposed. Signs protecting the *Ua u Kani* [Wedged-tailed Shearwater Bird] during nesting season [March and April each year] are posted throughout the *makai* (ocean) side of (lot 6) within the property boundaries and on the *makai* (ocean) side of (lot 5) skirting the property boundaries.



[Figure 3] TMK 6-1-08 specifically (lot 5) & (lot 6) also proposed parking lot location

Part II. METHODS

The Kawailoa Beach Park Addition & Chun's Reef Support Park Project Cultural Impact Assessment was conducted between the end of March through the end on July 2005. The study consisted of three phases:

(1) cultural and historical archival research (literature review); (2) ethnographic survey (oral history interviews), transcribing interviews, analysis of ethnographic data; and (3) report writing.

Personnel. The personnel consisted of the principle investigator who is *Kanaka Maoli* [to be one with the *`aina*] Cultural Expert. As a steadfast practitioner of *Kahunana* (families of the land working group to administer an oversight), there is *kuleana* [responsibility] to *malama* [care fore] in perpetuity, all of our natural resources to include but not limited to: traditional cultural properties, water, the habitat of endangered native species (flora and fauna), sustenance zones, burial sites, our sacred complexes – their associate sites and objects – for their protection and preservation. *Kahunana* [literal translation--become the caretaker of that which is shown] is dedicated to perform this oversight to limit and/or minimize the negative impact to our *ohana* (family)*`aina* (the land and sea). To embrace the *mana* (source energy) of our *Kupuna* (forefathers) is to have sincere *aloha* (love) for the *`aina* (the land and sea) and all that emerge from it.

Level of Effort. The level of effort for the ethnographic survey included five interviews as the project consists of an addition to the already existing Kawailoa Beach Park. Most of the *Kupuna* (elders) of Kawailoa *ahupua`a* (traditional land division) have *ua hala* [passed away] and the generations remaining are not familiar with the cultural practices of the past. Current residents in the area consist of non-natives who are not familiar with cultural traditions or practices of this area. Most of those who live in the area are against further development and refused to be interviewed.

Archival Research. Compiling data took several weeks of intermittent archival research. The majority of the archival research [primary and secondary] took place in the Hawaiian Collections of the University of Hawaii Hamilton Library (Manoa Campus), the Bishop Museum Archives, and the State Historic Preservation Division library. Primary source material included annual reports and other records; as well as Land Court records, maps, Ka Nupepa Kuokoa & Star Bulletin newspaper articles, visitor journals, genealogies, oral histories and other studies. Secondary source material included translations of 19th century ethnographic works, historical texts, indexes, archaeological reports, and Hawaiian language resources (i.e., proverbs, place names, *na mele* [songs], *oli* [chants not danced to] and the Hawaiian dictionary).

Interview Process. The interview process included a brief verbal overview of the study. Then the consultant was provided with an informed consent or agreement to participate form to review, which was drafted for the edification and protection of each consultant (Appendix D). An ethnographic research instrument (Appendix E) was

designed to facilitate the interview; a semi-structured and open-ended method of questioning based on the person's answers to questions ('talk story' style). Each interview was conducted at the convenience (date, place and time) of each consultant. A *makana* (gift) was given to each consultant in keeping with traditional reciprocal protocol. [Format with permission of Marie Kaimipono Orr]

Ethnographic Interview Procedures. Interviews were conducted at various places, at the request of the interviewees, using a Sony V-O-R Clear Voice Plus microcassette-Corder M-560V to record the interviews. Notes were taken as needed, but more attention was given to listening intently to each consultant. One interview was conducted at the Historical Waialua Court House and the other interviews were conducted on location at the existing Kawailoa Beach Park & Chun's Reef at the request of the remaining consultants.

Transcribing Process. The taped interviews were transcribed verbatim by the principle investigator. Each consultant was given a hard copy of the interview transcripts along with a *mahalo* letter that explained the transcript review process, and a self-addressed, stamped envelope for return of the edited transcripts. This allowed for corrections (i.e., spelling of names, places, etc.), as well as a chance to delete any part of the information if so desired.

Analysis Process. This analysis process followed a more traditional method, as a qualitative analysis software program was not necessary. For the purpose of this study, it was also not necessary to go beyond the first level of content and thematic analysis, as this was a more focused study. However, sub-themes or sub-categories were developed from the content or threads of each interview [i.e., camping at Kawailoa Beach Park, artesian pools, fishing industry].

Research Problems. A typical constraint for most studies is not enough time for archival research as there is a lot of material to review, with limited institutional time available [i.e., Bishop Museum Archives open from 12 – 4pm Tuesday through Saturday] and UH Manoa parking problems in the always-full parking lots was difficult.

- Many *Kupuna* [elders] of Kawailoa *ahupua`a* (traditional land division) have *ua hala* [passed away]. *Na mamo* [lineal descendants] are either too young to remember cultural traditions and practices of the "old folks" [even to the extent of those in their seventy's and older]; are not interested in cultural traditions and practices; and/or no longer live in the area to be contacted or available for an interview.

- Current residents in the area consist of *haole* [literal translation of "having no breath" has evolved to present-day referral to primarily fair-skinned non-natives] who are not familiar with cultural traditions or practices of this area. They are very resistant to any more development to the North Shore. Any attempt to find out any information about the immediate area stirs a rage from these residents. A home owner very near the existing Kawailoa Beach Park threatened to have her home qualified as a Historical Site [she is the second owner in 120 years] out of spite just to stop any more development along the shoreline.

- Several potential consultants approached agreed and then had second thoughts about doing a taped interview.

- Neighborhood concern of possible disturbance and/or destruction of the nesting areas of the *Ua u Kani* [Wedge-tailed Shearwater Bird] [Photo 2] located *makai* (ocean) side of (lot 5) and situated inside the property boundaries on the *makai* (ocean) side of (lot 6) beneath the Ironwood tree grove. Warning signs are posted in these locations to caution beach patrons and raise their level of awareness. The *Ua u Kani* [Wedge-tailed Shearwater Bird] is especially protected during the nesting season beginning in March and lasting for fifty-two days. No disturbances of any kind are permitted during this period. The *Ua u Kani* [Wedge-tailed Shearwater Bird] is not an endangered species. They have, however, been nesting in this particular location for many, many years [Marlu Oliphant-West].

[Photo 2] *Ua u Kani* [Wedge-tailed Shearwater Bird]

Part III. CULTURAL & HISTORICAL BACKGROUND REVIEW

The Cultural and Historical Background Review entailed a broad search of primary and secondary source literature. The majority of the research took place in the Hawaiian Collections of the University of Hawaii Hamilton Library (UH Manoa Campus), the Bishop Museum Archives, and the State Historic Preservation Division Library. Primary source material included annual reports and other records; as well as Land Court records, maps, newspaper articles, visitor journals, genealogies, oral histories, and other studies. Secondary source material included translations of 19th century ethnographic works, historical texts, indexes, archaeological reports, and Hawaiian Language resources (i.e., proverbs, place names, and Hawaiian language dictionary). A review of the archival material is presented in this section.

HISTORICAL BACKGROUND

A. Origin of Place Names –

Hawaiians of old named everything: *kamakani* [wind], *kuahiwi* [mountains], *pohaku* [stones], *wa`a* [canoes], plants, *kalo* [taro] patches, favorite places, not so favorite place, places loved, places feared, and "tiniest spots where miraculous or interesting events are believed to have taken place" (Elbert and Pukui et al., 1974:x). They all become stories – some only told locally and some become legendary and are passed down for generations.

B. *Mo`olelo* [legends and stories]

Legends, stories or *mo`olelo* are a great cultural resource as well as entertaining. Leib and Day (1979) state in their annotated bibliography of Hawaiian legends, that legends "are a kind of rough history." They noted Luamala's idea of the value of legend and myth in the serious study of a culture and her following quote. "To a specialist in mythology, a myth incident or episode is as objective a unit as an ax, and the differences and similarities of these units can be observed equally clearly and scientifically." The following definitions of terminology, including Hawaiian classification of prose tales – *mo`olelo* or *ka`ao*, come from their work (Leib and Day 1979:xii,1):

Tradition	used to refer to that which is handed down orally in the way of folklore
Folklore	a rather inclusive term, covering beliefs, proverbs, customs and literature (both prose and poetry of a people)
Myth	a story of the doings of godlike beings
Legend	deals with human beings and used interchangeably with 'myth'...because the collectors and translators of the tales often failed to make the strict distinction
Ka`ao	"pure fiction"
Mo`olelo	deals with historical matters and somewhat didactic in purpose...included tales of the gods, as well as tales of historical personages...many have recurring patterns, plots, and types of characters

During the century following Captain Cook's arrival in Hawaii, legends were collected and written in Hawaiian. Documentation was printed in journals of the missionaries and travelers, *Ka Nupepa Kuokoa* [Newspaper produced in the Hawaiian language] and further printed in several languages other than English. It wasn't until 100 years after the discovery of the Hawaiian Islands that the first book in English dealing with Hawaiian mythology and oral histories was written. Through *mo`olelo* [legends and stories], *na mele* [songs], and *oli* [chant], oral histories have been kept alive until this day. The following is a *mo`olelo* [story] describing *moku* [traditional district] o [of] Waialua.

O Wai alua, kai leo nui	Waialua, land of the sounding sea,
Ua lono ka uka o Lihu`e;	With audience in upland Lihu`e;
Ke wa la Wahi awa, e	A voice that reaches Wahi awa
Kuli wale, kuli wale i ka leo;	Our ears are stunned by this voice
He leo no ke kai, e	The voice, I say of old Ocean!
O Wai alua, la`i eha, e	Wai alua has a fourfold calm,
Eha ka malino lalo o Wai alua	That enfolds and broods o`er the land

Emerson, N.B.
Pele and Hi`iaka - - Mo`olelo [myth]
Page 99

This *mo`olelo* [myth/legend] speaks of Hi`iaka, younger sister of Pele as she stood on the high grounds of Kehuohapu`u. Hi`iaka was in awe of the sound of the ocean as it crashed against the shores below. Her referral to the uplands of *Lihu`e* (present day Waianae *ahupua`a* [traditional land division] specifically *Lihu`e* and *Kukaniloko Heiau* [Birth Stones]. The landscape held her in awe as she continued to hear the ocean roar. In times to follow her discovery, Waialua continues to hold beauty, can still be seen from *Kukaniloko Heiau* [Birth Stones] as one leaves the plateau of Wahiawa and descends into *moku* [traditional district] o [of] Waialua.

Waialua has many different meanings and several origins. The most used is "twice as graceful". This name referred the grandson of Wakea, father of the *`aina* [land and seas], whose name was Waia. This is the *kaona* [hidden, secret meaning]. These being Crown Lands, the *Mo`i* [King/Queen] frequently visited the north shore for rest and relaxation. Recreation in Waialua, the bountiful natural resources of the *kanahele* [forest], *ma uka* [uplands], *awaawa* [valley], *kahawai* [rivers] and *kai* [ocean], but especially all *wahi pana* [sacred spaces] were *kapu* [privileged] for *Ali`i Nui* [Royalty] only. This [*moku o Waialua*] was their favorite place for royal residence.

Another meaning of Waialua includes "two rivers" which are a great part of this *moku* [traditional district]. *Wai* [fresh water] and *alua* [two, twice] is the literal translation of the name.

C. Mahele Lands of the Ali`i

In 1848, during the reign of, Kauikeaouli, Kamehameha III, western concept of land division was established with the Mahele. Possession rights and private title were not a previous practice of *kanaka maoli* [true Hawaiian]. The lands became divided into three categories: Crown Lands (land belonging to the *Mo`i* [King] and other Royal family members); Government Land; and *Konohiki* (person with jurisdiction over the *ahupua`a* [traditional land division]) Land.

All *ahupua`a* [traditional land division] flowed from the mountain to the sea. All natural resources and sustenance was provided to the people including but not limited to: fresh water--*kahawai* [rivers], fish ponds, *wai aniani* [artesian waters], *wailele* [waterfalls], *kanahele* [forests], *ma uka* [the uplands], *kula* [dry plains], *loi* [taro lands], *one* [sands] and *o ke kai* [the ocean and her abundance]. The Kawailoa *ahupua`a* [traditional land division] was no different.

As a result of the Mahele, *Ali`i Nui* [Princess] Victoria Kamamalu became the landholder of the *moku* [traditional district] o [of] Waialua. From the Mahele boundaries of Waimea *ahupua`a* [traditional land division] to the north and Pa`ala`a *ahupua`a* [traditional land division] to the south, Kawailoa *ahupua`a* [traditional land division] extended into the *kai* [ocean]. It was referred to as "Ahupua`a of Kawailoa and its Appurtenant Fishery" [Mahele map No. 23 Hawaiian Islands -15 of 27]. [Figure 4] Kawailoa and Pa`ala`a *Kai lawai`a* [Fishery] encompassed a total of 3,970 acres from Wananapaoa in Waimea to Kaiaka Bay in Hale`iwa [Figure 5].

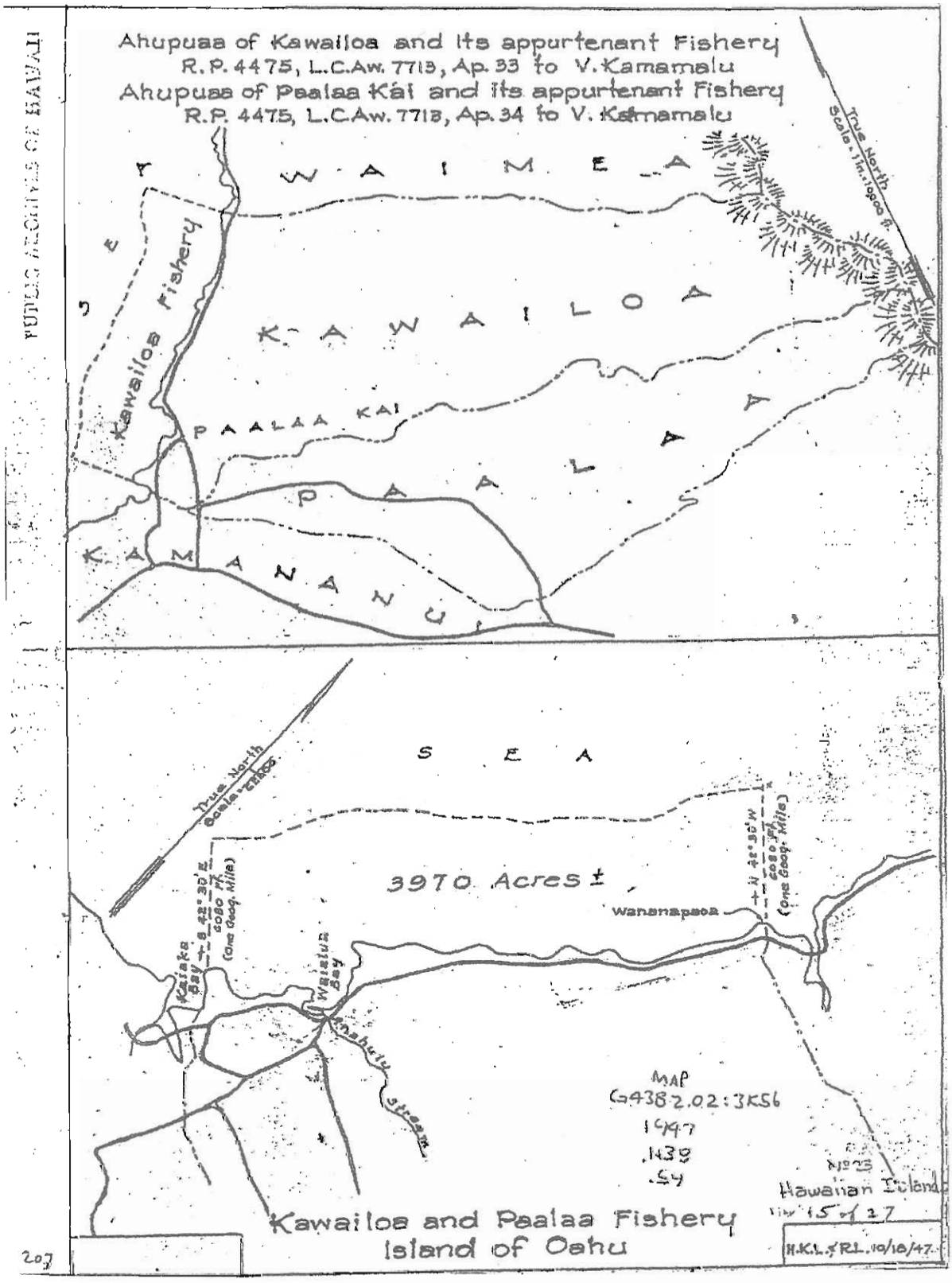
With the passing of *Ali`i Nui* [Princess] Victoria Kamamalu in 1866, the Crown Lands were inherited by her father, Matatio Kekuanao`a. Two years later, in 1868, he passed away and his son, Lot Kapuahiwa, who later became Kamehameha V, inherited the lands. After his death in 1872, the land was inherited by his half-sister, *Ali`i Nui* [Princess] Ruth Ke`elikolani. Upon her death, her entire estate was willed to her cousin, *Ali`i Nui* [Princess] Bernice Pauahi Bishop, the last of the Kamehameha line. She passed away in 1884, thus leaving all of her Crown Lands in trust for the establishment of Kamehameha Schools.

The death of *Ali`i Nui* [Princess]Bernice Pauahi Bishop meant there were no more heirs and the King was now to be elected. King Lunalilo was elected after the death o King Kamehamhea V. His term was shortened by an early death. When King David Kalakaua was elected as Sovereign King of the Hawaiian people, he continued to enjoy the beauty of the *moku* [traditional district] o [of] Waialua. He visited and stayed in Kawailoa *ahupua`a* [traditional land division]. It was his favorite resting place and he often visited. On one occasion there he wrote "*Koni Au I Ka Wai*" [literal translation – I Throb for Liquid] fondly recalling the fresh waters of Pua`ena.

The following are four verses of this *mele* [song] written by King David Kalakaua. It's a "good fun song" in modern times often sung during *inu i ka wai* [drinking of spirits]. There is, of course, *kaona* [hidden meaning] understood only by a few [Daniel Au].

Koni Au I Ka Wai	(I Throb For Liquid)
Koni au, koni au i ka wai,	I throb, I throb for liquid
Koni au i ka wai hu`ihu`i	I throb for cool liquid
I ka wai ali`i, `o ke kini la	Royal liquid, gin
`Olu ai ka nohona o ka la`i	To make life cool and peaceful
Ho`ohihi kahi mana`o	In me springs desire
I ka `ehu kai o Pua`ena	For the sea spray of Pua`ena
Kai hawanawana i ka la`i la	The whispering water and peace
I ka la`i wale a`o Waialua	Of the shores of Waialua
Alia `oe e ka `ehu kai	Wait o sea spray
E lelehune nei i ke one	Misting the sand
One hanau o ke kupuna la	The birth sand of ancestors
Pu `ili lau li`i o ka uka	Small leafed bamboo of the uplands
`Akahi ho`i au la `ike	Finally I have known
I na la`i elua	Two fold peace
`Elua maua i ka la`i la	We two in peace
Kapipi i ka pali	Liquid splattering on the cliff

Written By King David Kalakaua



[Figure 4 - 5]. Mahele Land Division - - Lands of *Ali'i Nui* Victoria Kamamalu

D. Kawailoa Ahupua`a

When Kaihukoa decided to stay in Waianae, the remaining sisters continued on to Waialua, where Kawailoa met Ihukoko. Kawailoa was a single man and as he fell in love with Ihukoko the two were united and became husband and wife. Ihukoko remained here and the fish that accompanied her from her home was the aholehole.
'Legend of Maikona"
Collection of Hawaiian Antiquities and Folklore, 1916-1920
Abraham Fornander

Literal translation of Kawailoa is "the long water". The Kawailoa *ahupua`a* [traditional land division] is located in the *moku* [traditional district] *o* [of] Waialua. The shoreline runs from Waimea Bay to Pua`ena Point. The land division took its name from the Kawailoa Stream that is one of the longest streams on Oahu Island.

The *ahupua`a* [traditional land division] is land and all natural resources from the mountain to the sea. Kawailoa *ahupua`a* [traditional land division] is especially noted as Kawailoa *Kai lawai`a* [Fishery]. The fishing industry was flourishing in this area during the ownership of *Ali`i Nui* [Princess] Victoria Kamamalu and has continued through out the history of this area. No information could be found on when *Kawailoa Kai lawai`a* [Fishery] ended. It was a natural abundant fishery in ancient times. The industry survives until this day but mostly as a recreational fishing area instead of fishing as a livelihood. That dwindled in the late 1960's.

CULTURAL RESOURCES & PRACTICES

A. Cultural Resources

The significance of this category is substantial as it entails sites or places that reflect the beliefs of the *Kupuna* [ancients]. *Kanaka Maoli*, literal translation is--one with the land and sea--was and is exactly that. To remain connected to the *mana* [source energy] of the *kupuna* [ancestors] was and is primary. The *`aina* [the land and sea] was the mirror, an outward sign, of this connection. Therefore, everything had a purpose and a reason for existence. From the tiniest drop of *wai* [water] to the largest *kuahiwi* [mountain], the seen and unseen were revered. *Kupunaha* [supernatural] was never ignored. *Ho`ailona* [natural phenomenon, signs] were a way of life. The *keanuenue* [rainbow], the *kamakani* [wind], the *wailele* [waterfall], the thirsty or quenched *`aina* [lands], *na manu* [birds], *`ia* [fish], *la`au* [leaves], *kumu* [trees] and many more creations brought a messages from *Akua* [God]. But it was the sites and places on the *`aina* [the land and sea] where these messages originated that made them noteworthy. The sites and places were the focus of the messages, after all a sign only gives direction. In connection to the *`aina* [land and sea] *kanaka maoli* [one with the land] is always guided; in ancient times and today as we live and breathe.

Pule [prayer] was the essence of the people. No one proceeded in any endeavor without *pule* [prayer]. There were prayers of protection, appreciation, love for others, love for the self, for peace, for *keiki* [children], for *kanalani* [abundance], and especially for *alaka`ina* [guidance]. How and when were important factors of *pule* [prayer] but not as primary as "where" *pule* [prayer] took place. Thus, the understanding of why *wahi pana* [sacred spaces] was and is the most valuable of all Cultural Resources.

A. *Wahi Pana* [Sacred Spaces]

Sacred spaces that include cultural properties encompass the concept of "*wahi pana*" and were "*kapu*"[privileged]. These were specific cultural properties namely *heiau* [temple] sites; sacred *pohaku* [stone] e.g., *Kukaniloko* [Birth Stones]; *kanu ana* [burial sites]; *ho`ailona* [unexplained phenomenon, signs]; or any natural or geographical features associated with the gods or significant events for the *kanaka maoli* [true Hawaiian]. These places are important cultural resources. *Wahi Pana* [sacred spaces] further enforces that even if any tangible evidence of any sacred place no longer exists, the imprint upon the natural and cultural landscape remains: *mana* [source energy] of all previous persons and activities of this *wahi pana* [sacred space] remains forever. Often it is not the lack of interest but the lack of knowledge of whereabouts or more likely, lack of access that prevents native Hawaiians from visiting these sites. Here are a few of the most prominent *Wahi Pana* [Sacred Spaces] located in and around the Kawailoa *ahupua`a* [traditional land division] in ancient times.

Punanue Point

" Punanue" - - to the right of the point are fresh water springs - - *enenue* fish came into the bay congregated around springs. (old Frank Wright house)

Kauahikaua, William
May 1954

(Described by consultants in this study as the "healing ponds" description "*pu*" abbreviation for *puna* [spring] and *nenue* a tiny fish that came into these fresh water springs from the ocean. It is located at Punanue Point as part of Pu`upea Heiau situated on the southern end of the Kawailoa Beach Park Addition & Chun's Reef Support Park.)

Pu`upea (?) Heiau

Site 238. Puupea (?) Heiau, Punanue Point

(few scattered stones remaining). The old Hawaiians of the region have only a hazy recollection of the site of Pu`upea Heiau. This site, which may be the heiau, is located on the beach not more than 50 feet from the water. The south end, which appears to have been approximately 100 feet wide and 250 feet long...

McAllister, Arch. Of Oahu
B.M. Neg. #157278a(m49), 15279(m50)

Kahokuwelowelo Site

Site 240. Said to be the former dwelling place of Kahuna. (Destroyed)

The commoner never approached the oval-shaped elevation upon which the site is located, and had the utmost fear and respect for this place. To the north, west, and south, the approach is steep, in places precipitous, but to the east the slope is more gradual...

McAllister, Arch. Of Oahu

...Less than half a mile beyond "the stone aborning" [*Pohaku Hanau]* and a furlong (1/8 mi.) inland from the railroad is Kahokuwelowelo, "The comet"...the site of the ancient priests' monastery or college, and a place greatly venerated by the Hawaiians until recent years.

Honolulu Advertiser, Feb. 12, 1933
B.M.Newsp. Scrap Book, Vol "1931"

Midway between Hale`iwa and Waimea--Kahokuwelowelo Heiau for priests only at Punanue—remains gave evidence of populous village—since Hawaiians did not build heiau near villages Thrum doubts that this was *heiau* [temple].

Thrums Hawaiian Annual 1906

Kahoku-welowelo Heiau

...(Kaopulupulu)...set out toward Punanue there was a temple (*heiau*) for priests only, called Kahokuwelowelo. This was crown land at Waialua in ancient times. Entering the temple he prayed for success in his journey, after which he proceeded along the plains of Lauhulu till reaching Anahulu stream, thence by Kemoo to Kukaniloko, the shelter of whose prominent rock the chieftainesses of Oahu were wont to choose for their place of confinement.
Thrum, Hawaiian Folk Tales, p. 205

A. Cultural Practices

Gathering practices of the *`aina* [land and sea] are essential to *kanaka maoli* [one with the land]. It is a Hawaiian traditional practice to *malama* or care for *Kupuna* [ancestors] that have *ua hala* [passed on]. We bury their *iwi* [human remains] and they return to the *`aina* [the land or the sea]. Thus, they become the *`aina* [the land or the sea]. Access to *malama* [take care of] the *`aina* [the land and sea] was and is primary for in doing so, we *malama* [take care of] our *Kupuna* [ancestors] and they in turn continue to guide us while we are still here on earth. Fishing and marine resources were substantial in ancient times, and continue to have need for access today. Gathering practices must not be inhibited by development. The harmony and balance of *ola* [life] will be further compromised.

Part IV. ETHNOGRAPHIC SURVEY

Research Themes or Categories

In order to comply with the scope of work of this cultural impact assessment, the ethnographic survey was designed so that information from consultants interviewed would facilitate in determining if any cultural sites or practices would be impacted by the implementation of the proposed Kawailoa Beach Park Addition & Chun's Reef Support Park development.

A. Consultant Background

Each consultant was asked to talk about their background; where they were born and raised; where they went to school and worked; and a little about their parents, grand parents and great grandparents if they could. This category helps to establish the consultant's connection to the project area, their area and extent of expertise, and how they acquired their proficiency. In other words, how the consultant met the research criteria. Three consultants grew up in the Kawailoa *ahupua`a* (traditional land division). One consultant is a cultural practitioner [i.e., perpetuate traditional Hawaiian customs in a manner that is accepted by the greater native Hawaiian community and/or have standing in the greater Hawaiian community]. Two consultants are *na mamo* [lineal descents] of *ohana* [family] from the Kawailoa *ahupua`a* (traditional land division).

All of the excerpts used are in the exact words of each consultant or paraphrased to insert words that are "understood" or to link sentences that were brought up as after thoughts or additions elsewhere in the interview. The following excerpts in "Consultant Background" provide a summary of each consultant, as well as information about their parents and grandparents. First names will be used.

> Good morning, my name is **Helen Mark Bajo**. I was born in Waialua, North Shore, Oahu, in 1935. My father was Andrew Mark and he was born in Kalihi in 1912. My mother was Louisa `Anana who was born in Waialua in 1921. My father lived in Kalihi until he was 12 years old and then he moved to Waialua. My mother is from the Mahu -Weed *ohana* [lineage] that extends from the Waimea to Waialua area. I presently reside in Hale`iwa and have been here for my whole life. I'm the first born. There are seven of us: four girls and three boys. My father came from 20 children and he was the fourth youngest. My grandfather came from China and his name was Dang Mark and then my grandmother's name was Mary Wong, also from China. In the 1800's, my grandfather worked on the ship that brought the plantation workers from China and on the fifth trip he decided that he wanted to live here and they settled in Kohala. The plantations there were flourishing. They moved from Kohala, to Hilo, then to Honolulu. One of his daughters had a meat market here in Hale`iwa. And one uncle lived across the street from the

meat market so my dad came too. He lived and grew up with Aunty Irene Lam. That's how he met my mom.

When I was growing up the houses were scattered and there were just a few of them. In the 1950's a lot of *haoles* [fair-skinned non-natives] started moving in and we didn't know who they were. They were not native to the area.

****

Aloha, my name is **Clarence Keli`inamoku Solomon**. I was born in Wahiawa on November 24, 1948. I grew up in Wahiawa, Oahu Island and now reside in Maui and work for the City & County of Maui. My *makuahine* [mother] is Edna Kamila Keohokapu. She was born in Kohala, Hawi, Hawaii Island. Her *makuakane* [father] was Joseph K...[I cannot remember his Hawaiian middle name but I know it has twenty-seven letters in it and I also know it's in our genealogy records if I need it] Keohokapu. His wife was Theresa Asiu. They moved here to Honolulu, Oahu Island then later to Waipahu. My *makuakane* [father] was David K...[I can't say his name from memory either] Solomon. He was born in Honolulu and moved to Wahiawa when he was a child. Now here is where it gets kind of tricky. My *kupunakane* [grandfather] on my father's side was Keli`i, my namesake. I understand he had several last names in his lifetime. It seems that he was born with a clef lip. It was misinterpreted as *lepala* [leprosy] and he was banished to Kalaupapa, the *lepala* [leprosy] village on Moloka`i Island. Western Doctors and Hawaiian Practitioners correctly diagnosed him as without *lepala* [leprosy] and he returned to Kawailoa *ahupua`a* [traditional land division]. He was ashamed. He changed his name several times and used Apiki, Makakoa, and finally, Kolomoa [Solomon]. His wife was Mary Jane Davis of Kawailoa *ahupua`a* [traditional lad division]. Through these *kupuna* [grandparents], I am *na mamo o Kawailoa ahupua`a* [lineal descendent of Kawailoa *ahupua`a*]. We went to Kawailoa every weekend and spent many summers there too. We had *ohana* [relatives] that lived in the surrounding area too. There were many *ohana* [relatives] to visit on the North Shore. [This investigator along with Keli`i went out to the existing Kawailoa Beach Park to finish the interview]. Our *Ohana* [family] lived in this area since the early 1900's. I don't remember to many *mo`olelo* [legends/stories] but the old folks always told stories. It was a happy time for all of us. We fished here, surfed here, swam here, partied here, camped at the beaches, as well as *malama* [cared for] the *`aina* [the land and sea]. There is no one living at this time from our *ohana* [family] still living down this side at Kawailoa. Kawailoa was my brothers' and mine, and all my cousins, and all our *ohana* [family] ... our backyard.

****

information about the current use of the area and their viewpoint of the proposed development of the park addition. Most declined to be interviewed but were happy to give their opinion.

****

(A ***kane*** [man] sitting in the "healing ponds" who chose to remain anonymous) I love it here [at the beach]. I really don't care to have a park made here. This place should be kept for the locals. You know we know the good places and the secret places. Once somebody finds out about them, then everything changes. Not so good that they want to make a Parking Lot across the street. Goin' be same trying to get across in the traffic, not safe. Then get too much people. This is not too big of a beach you know. I don't know, just been so long like this that I cannot imagine some more people to fit over here without messing things up from the way it is...just my opinion.

****

(a man in his sixties I'll call – **Uncle Pai`pa`i** – walking on the *pohaku* [stones] to go out to *Pa`ipa`i* [a form of Hawaiian fishing]) My wife is Micronesian and she sits quietly and patiently to wait for me to come back. So I come and I just try every time but the same thing everytime, not like before when small kid time. Gotta be just for fun now but I wish had fish like before. That was so much fun and good fo` eat.

****

(Unnamed **Lifeguard** sitting in his truck on TMK 06-1-08 lot 5) I was here when the excavating took place not too long ago [showed me all four "backhoe" spots]. I sure hope they don't make this into a park. We like it the way it is. I used to work in the house that was over there (pointing to TMK 06-1-08 lot 6) we made t-shirts in there before I became a lifeguard.

****

A. Land Use & Resources

Land use and resources change over time. Often evidence of these changes is documented in archival records. Occasionally cultural remains are evident of the landscape and/or beneath the surface. However oral histories can give personal glimpses of how the land was utilized over time and where resources are or may be. Oral histories also provide indications of cultural practices.

B-1. Local Flora

The 'local flora' located on site (TMK 06-1-08 lot 5) include Banyan, Monkey Pod, African Tulip, Norfork, *Milo*, and Coconut trees. Other plants on site include the Hibiscus, Bougainvillea, Lillie, and some *ki* [ti leaf]. There are remains of a few banana patches. The existing Kawailoa Beach Park surface is covered with grass. The grounds, however, are very uneven with mounds and dips in the surface through out. Neglect is evident.

In the adjacent potential site (TMK 06-1-08 lot 6) the beach property line is a grove of Ironwood Trees. Beneath the Ironwood trees are dense patches of grass growing in a demolished swimming pool covering the debris that fills the pool where the *Ua u Kani* [Wedge-tailed Shearwater Bird] nests. Property surface closer to Kamehameha Highway has Coconut trees, Bougainvillea, Hibiscus, *ki* [ti leaf] and much over growth of various grasses and weeds.

B-2. Local Fauna

The fauna in the project area consist especially of the protected *Ua u Kani* [Wedge-tailed Shearwater Bird]. The Neighborhood community in concern for these birds sought agencies to help with their preservation. Signs are currently posted warning of their presence. Nesting, which occurs from March for a period of fifty-two days is protected from loud noises and human disturbances [Marlu Oliphant-West].

Marine animals that frequent the existing Kawailoa Beach Park ocean shoreline include the endangered and protected *honu* [green sea turtles] who feed on the *limu* [seaweed]. The endangered monk seal also has been noted to be out on Chun's Reef. Federal laws and agencies protect these animals and are notified when there is disturbance or abuse.

B-3 Camping

I am familiar with the existing Kawailoa Beach Park because we used to camp out there a lot. This was in the late fifties and early sixties when us kids were small. We did over night fishing and camping. All these places are all gone. [Helen]

Kawailoa Beach area was so good for camping. I remember in the night when we were camping that you could hear the drums beating. It came from the hills above the plantation homes in the uplands. Quiet, soft drums coming from up there. Gave us the spooks. [Helen]

A. Water Use & Resources

This essence of a waterway (pointing to the dried riverbed on the south side of parcel 3, lot 5) was actually not a river but drainage path for the

water from the plantation homes up on Ashley Road above. Sometime there would be a lot of water but most of the time it was dry. When we surfed out there (present day Chun's Reef) we would have to walk that way to go to the beach because there were a lot of homes there on the property. [Keli`i]

C-1 Artesian Waters, Pump Station and Surrounding Ponds

Back then we didn't have cars. See my tutu mama them were raised in Waimea Bay. On Sundays they would walk all the way to what we call Waialua or Hale`iwa now to go to church. Everything was walk and it wasn't a big deal to walk that far. There was a big fishpond, Ukoa, Ukoa pond. When we were little the fishpond was still active and had fish. [Helen]

Kupunakane [grandfather] Keli`i owned all of the property that is now the pony farm in Kawailoa. They owned all the way back to the Pumping Station and a lot of the area when there were many artesian wells, ponds and waterways. This was in the early 1950's. [ Keli`i]

Further down the shore moving towards Hale`iwa there's jutting of the *pohaku* [stone] out to a point. *Pu`upea Heiau* is situated here. I'll show you the "cleansing pond" and the "healing pond". The "cleansing pond" (I don't know the Hawaiian name) is situated in the ocean in front of a huge *pohaku* [stone]. The sand here in the summer is ice cold under the waves that brush against the shore. The healing pond is over there (pointing to the *pohaku* [stones] forming a small pond area). See, it's ice cold artesian spring water right here in the middle of the ocean. When the tide is low, the water is so pure and clean you can drink it and there will be no traces of salt water at all. This is where we and everyone else would bathe or rinse off so we wouldn't be salty when we got home. [Keli`i]

D. Marine Use & Resources

Now the surfers use the beach a lot [Photo 3]. I don't think if you oppose development or not in any little area that they can't stop the present day people from going out there to surf. 'Cause any little area you have they are gonna go down and surf. I mean you really can't stop them. To me as long as they respect the land and don't trash the area it's okay. [Helen]

I remember coming to surf here with my brothers and my cousins. We stayed here all day every day that we could. When we surfed here it wasn't called Chun's Reef. The waters were so clean and clear and the favorite place of many. [Keli`i]

I'm sitting here in this fresh water pond in the middle of the ocean where I have sat after a day of surfing at Chun's for many years. I love it here. I have been surfing in this area since the early 1960's. I still come at five o'clock in the morning when the water is so perfect for surfing. I love it here. [unnamed *kane* - man]

[Photo 3]. Current Kawailoa Beach Park/Chun's Reef Favorite Surf Spot North Shore, Oahu Island

D-1 Fish & *Honu* [turtle]

...because he was the *kolohe* [naughty] kid and didn't want to go to school. He just wanted to play and go fishing so they sent him down here [Waialua] when he ran away from home. My father was a fisherman who fished all along the coast from Waimea and Sunset Beach all the way to Kaena Point; and we would go with them when they went to pull up the nets. That's how we became familiar because we actually lived the life of a fisherman throwing nets and boat fishing. He sold his catch. They were big time fishermen. He went with my tutu man, John Hatchie, Henry Ching and some other folks they had a *Hui* [group]going, a fishing *Hui* [group]and they sold the fish all over Honolulu, at the fish market. It was part time because he actually worked for the City and County and Henry Ching was his overseer at the City and County, which was his boss. [Helen]

I don't remember any cultural practices in the area. They used to catch a lot of *honu* [turtles] in the area and I do remember one time they had so many *honu* [turtles] on the boat, the boat sank and they had to be rescued. So what they did was another boat went out and they took inner tubes and they managed to save their catch. In those days, *honu* [turtle] was a big delicacy. They caught all kinds of fish and *honu* [turtles] and it was a good thing in those days. Japanese teahouses and the markets in Honolulu bought everything that they could catch. Back then *honu* [turtle] was not an endangered species and wasn't restricted so we used to make jerk *honu* [turtle] and *honu* [turtle] stew and all kinds. Now cannot. You could make a lot of food from one *honu* [turtle]; the wings and the *na`au* [intestines] was a delicacy to the old folks. I wouldn't be caught dead eating that stuff but to them it was good because the *honu* [turtles] only ate *limu* [seaweed] and when you cut it open and cleaned out the *na`au* [intestines] there was only *limu* [seaweed] in there you know. When they caught the *honu* [turtle] they would take it back home and clean and take just the iced meat to the market. And then for weeks we would have live *honu* [turtles] walking around in the backyard and the really aggressive ones we would turn them upside down so they couldn't move. [Helen]

It was fun growing up back then but you know we would get real tired of eating *honu* [turtle]. We had a house a mile from the beach here in Hale`iwa and my tutu man lived in the back and my uncles were the same age as me and some were even younger. It was the joke of the day back then: "Eh, what you bring for lunch today...*honu* [turtle]". Everyday was *honu* [turtle] for lunch.
[Helen}

Hawaiians should have the right to fish for *honu* [turtle] or whatever to let us have food. It's not for sport, it's for food for the Hawaiian people. We always share our catch and never waste. [Helen]

We never catch the small ones only the big ones. We catch by seasons so there was no abuse. You have to know when but certain seasons were "*kapu*" [forbidden] and my father always honored the "*kapu*" like *moi*, couldn't catch *moi* during certain times. Traditional "*kapu*"[restrictions] was not to take the small ones or ones with eggs and to only take what you could eat for two meals. State laws to regulate fishing guidelines govern modern "*kapu*' [restrictions]. Certain times would be bountiful and certain times would be lean and they [old folks] understood that all was part of nature yeah. [Helen]

I love to *pa`ipa`i* [method of fishing] over here but you know probably going to be like every other time I come now. Just no more fish like before. I grew up two miles up the road, you know Ashley Road over

there (pointing) in the plantation houses and we used to fish everyday and had so much fish to catch back then. [Uncle Pa`ipa`i]

I heard about the older time fisherman, not my dad them but long before them the Hawaiian fisherman would put out the, you know when you bring *ho`okupo* [an offering] to the fishing gods. This is what my dad them used to talk about. I heard about that but I never actually seen it. [Helen]

D-2 *Limu* [seaweed] Gathering

The gathering of *limu* [seaweed] was appreciated by all who got to eat this sea delicacy. The consultants and their *ohana* [families] consumed it, peddled it along with their fish catch of the day, and gave it away as gifts to other *ohana* [family] and friends. *Limu `ele`ele* [black seaweed] was very special and grew in this area. *Limu `ele`ele* [black seaweed] is unique because it grows only in brackish water where the *awai kuahiwi* [moutain rivers] blend into the sea. When biting into this particular kind of *limu* [seaweed] the taste would be that of fresh water and not salty sea waters. Other *limu* [seaweed] found on this part of the coastline were *ogo* [Japanese name – Hawaiian name unknown] and *limu kohu* [soft seaweed].

In 1983, the state established the Pupukea Marine Life Conservation District on Oahu Island. Pupukea Task Force is a community group formed in 2000. Along with other agenda, they propose to monitor the gathering of *limu* [seaweed] along this area of the North Shore, Oahu Island. The task force intends to help monitor and limit collection of *limu kohu* & *limu lipe`ep`e* to picking by hand only and not more that two pounds per day.

Pua`ena,* I'm familiar. That's another area they used to fish quite a bit and we used to go pick *limu* [seaweed] there. In the winter it [ocean] was really, really rough and we couldn't get out to the [*Pua`ena] point but in the summer we used to go pick *limu* [seaweed]. *Pua`ena* is right next to Hale`iwa Park where Police Beach is now. *Pua`ena* is a little cove that goes all the way out to the point and it goes to Kawailoa itself. [Helen]

I feel sorry for the people who have been living there for thirty or forty years or so. You know if they clear the area and make it a park it would be so beautiful but then more people will come and where are they going to go? And too many people damage all the *limu* [seaweed] and then you know the one we call it the sea lettuce that the *honu* [turtles] eats. You know before I used to go to the beach across my house and just pick so much *limu* [seaweed]. Now no more *limu* [seaweed] because the *honu* [turtles] eating all the *limu* [seaweed]. No more *limu* [seaweed], no more small fish, no more small fish, no more big fish, no more big fish, no more fishing. When we were little we could catch *honu* [turtles] and everything was in balance. Now that they [*honu* – turtles] are "endangered" and

cannot catch not even one single *honu* [turtle]. So everything is off balance. [Helen]

When we were little and we would inadvertently pick the *limu* [seaweed] with the rock that the roots would cling to and you take that home you would get good scolding. And the foreign people come and don't respect the *`aina* [the land and sea] and they pick more than what they need. They even pick the roots and throw them away. Now, no more *limu* [seaweed]. It's the abuse. Cannot control the abuse and disrespect for the *`aina* [the land and sea] when have too many people. Who is going to control them when they come? No more nobody to stop the abuse to the *`aina* [the land and sea]. We Hawaiians love our *`aina* [the land and sea]. [Helen]

No more any *limu* [seaweed] so no more small kine fish over here. When no more small kine fish that means no more big kine fish either. [Uncle Pai`pa`i]

Part V. ASSESSMENT SUMMARY

Is it free of inconsistencies and in agreement with common sense?
- E.T. Jaynes (1963/1974)

This assessment summary is based on the cultural and historical background review as well as the information received from consultants interviewed, who met the qualifications according to the QEQC guidelines (Appendix C) and in accordance with Act 50 and SHPD criteria.

Act 50 [State of Hawaii 2000]. H.B. NO.2895 H.D.1 was passed by the 20th Legislature and approved by the Governor on April26, 2000 as Act 50. (Appendix A).

Based on the two guiding documents above, the following categories were selected: Cultural Resources; Cultural Practices; and Historic Resources (native Hawaiian and other ethnic groups). For the sake of clarity, "native Hawaiian" refers to the group of people (ancestors and descendants) who were inhabiting the islands now called "Hawai`i" prior to the arrival of Captain James Cook in 1778. Items within these categories are differentiated according to "native Hawaiian" or "other ethnic group" and both based on archival material and oral histories presented in Part III and Part IV of this report. The "items" will be limited to the project lands or pertinent vicinity. Significance within these categories is based on the definitions/explanations of each criterion (A-E, SHPD 1989).

Cultural Resources. This category entails sites or places associated with significant events and/or people important to the native Hawaiian patterns of prehistory; embody distinctive characteristics; or are likely to yield information important for research on the prehistory of Hawai`i. It also includes sites that yield resources important for native Hawaiian Cultural Practices, past and present; and items that are part of a cultural context. *Wahi Pana* or sacred places are important cultural resources to native Hawaiians regardless that the original sites that may have been there no longer exist. Often it is not the lack of interest but the lack of knowledge of whereabouts or more likely, lack of access that prevent native Hawaiians from visiting these sites.

While the cultural sites of the Kawailoa Beach Park Addition & Chun's Reef Support Park project area have long been compromised, there is still the belief that there are many burials throughout the project area that may be found. For example the burial found at this project site in April 2005. One of the earliest *heiau* in Kawailoa *ahupua`a*, is Pu`aena, on the shore not very far from the project site. Even closer on the south end of the project site is Pu`upea Heiau (Masterson et al. 1995).

Cultural Practices. This category includes items that are essential to the gathering practices that have cultural value to either native Hawaiians or other ethnic groups. This category may overlap Cultural Resources in that the practice of gathering (land and ocean) resources may be affected by this project. It is a Hawaiian traditional practice to

malama or care for Kupuna who have *ua hala* [passed on]; therefore, access to *ohana* [family] graves should be made available. It is also a Hawaiian tradition to gather flora from the upper gulches, valleys and mountains for *lei* [garland], *hula* [dance], food, *la`au lapa`au* [medicine plants] and crafts; just as it is a traditional practice to hunt for feral pigs in the upper gulches and mountains. Some of the consultants grew up in the area and recollect playing or gathering things from the stream, upland and valley. While there are no cultural practices on the Kawailoa Beach Park Addition & Chun's Reef Support Park project area, there is potential that access to gathering and hunting practices in the upper lands/valleys/mountains/ocean may be compromised during the construction phase of the proposed project.

According to consultants, the cultural fishing/gathering practices of Hawaiians in the Kawailoa *ahupua`a* have a potential for being adversely affected by the proposed project.

Historic Resources. This category entails sites associated with significant events and/or people important to the broad patterns of history [post Western contact], which also includes other ethnic groups; embodies distinctive characteristics of an historic era or a master [e.g., noted architect]; or are likely to yield information important for research on the history of Hawai`i.

CULTURAL IMPACT ASSESSMENT

- **Cultural Resources (Land) Impact.** The lands within the project area were heavily impacted by the historic activities of the 19th and 20th centuries. Any cultural sites and/or resources were destroyed or buried by previous activities; therefore there will be no adverse impact to any surface cultural resources. However, it should be noted that cultural sites have been found and several consultants have stressed that there are both unmarked and marked graves/burials throughout the project lands; as well as a *heiau* important in Kawailoa's traditional history. An archaeological and cultural monitor should be available (on-site) for any and all excavation activity to mitigate any subsurface cultural resources found or *iwi* [ancestral bones][e.g., *Kupuna Iwi* dating to the late 1800's disturbed in (lot 6) of Kawailoa Beach Park Addition & Chun's Reef Support Park project April 2005]

- **Cultural Practices/Access (Land) Impact.** Since there are no apparent cultural resources on the surface of Kawailoa Beach Park Addition & Chun's Reef Support Park project lands, there will be little or no adverse effects to cultural practices. However, there are cultural resources in the ocean and shoreline area and they may be adversely impacted or compromised by this project. Therefore a proper buffer zone should be created to mitigate this. Access concerns should also be addressed to assure that cultural gathering, ocean access for gathering and grave practices are not compromised.

- **Cultural Practices: Indirect Adverse Impact.** According to consultants interviewed, there is one condition that has the potential to create an adverse effect or impact on the cultural fishing practices and resources *makai* [ocean] side of the proposed Kawailoa Beach Park Addition & Chun's Reef Support Park – overcrowding with people. The recreational use of these beaches brings a high volume of human activity. Unless they are adequately addressed, development activities for this project may adversely impact both traditional cultural marine resources and practices. Expansion of the park and proposed parking lot will bring more people to Kawailoa Beach. Too many people will also effect the natural cultivation and gathering of *limu* (seaweed).

General Concerns. Descriptions indicate that Pu`upea Heiau (Masterson et.al. 1995) was extremely large. This *heiau* [temple] was significant in ancient times. This area is on the southern border of the Kawailoa Beach Park Addition /Chun's Reef Support Park Project location. Indications are that a buffer zone will be established around the site to ensure protection. What is the demarcation of this potential buffer zone and who will determine this? As this *wahi pana* [sacred space] ...located on the beach not more than 50 feet from the water. The south end, which appears to have been approximately 100 feet wide and 250 feet long...(McAllister, Arch. Of Oahu) presents a very important concern. Will the buffer zone span this vast area? Little tangible evidence of the *heiau* [temple] remains but the *mana* [source energy] is forever. A description of "...50 feet from the water..." (McAllister, Arch. Of Oahu) indicates the shoreline would have had to been extended more that 100 feet from its present position in ancient times. Therefore, the *Wahi Pana* [Sacred space] here is immeasurable. This buffer zone will be during construction, then what? The influxes of new beach patrons are bound to continue to further damage to this sacred space.

While some of the concerns of the consultants do not involve traditional cultural resources or practices, they are valid points that warrant consideration. The potential for impacts to marine communities is inevitable. There is concern for the unusually high population of the protected *honu* [green sea turtles]. This area is a favorable resting habitat with reef formations and the rich supply of *limu* [seaweed] as a food source. The endangered monk seal frequents this area and minimal human contact is required by federal agencies. Wildlife on the shores will directly be impacted. The *Ua u kani* [Wedge-tailed Shearwater Bird] nesting areas are located on site. Posted signs raise awareness to the existence of these protected wildlife birds but does not always gain the respect of those reading them. All of these animals will be directly impacted by an increase in the human recreational population.

- **Recommendation.** It would be advantageous for the development project to have a cultural advisory group comprised of various cultural experts of the immediate community; this could include some of the cultural consultants for this project. It is highly recommended that a Cultural Monitor be present for any grading, excavating, or other intrusive work on the *`aina* [the land and sea]. It is also recommended that access to significant cultural sites and cultural gathering places are a part of the master development plan. Consider granting access privileges to native Hawaiian cultural groups for the purpose of *malama the `aina* [cleaning and caring for the land and seas] located in and around the Kawailoa Beach Park Addition & Chun's Reef Support Park project.

REFERRENCES AND CITED REVIEW

2001 *Na Mele Aimoku, Na Mele Kupuna, a me Na Mele Pono`i o ka Mo`i Kalakaua I*
Honolulu: Hawaiian Historical Society

Chinen, Jon J
1958 *The Great Mahele: Hawai`i's Land Division of 1848*
Honolulu: University of Hawai`i Press.

Elbert, Samuel; Mahoe, Noelani
1970 *Na mele o Hawai`i Nei.*
Honolulu: University of Hawai`i Press

Fornander, Abraham
1919 *Fornander Collection of Hawaiian Antiquities & Folklore*
Bishop Museum Press

1933 Honolulu Advertiser February 12, 1933
B.M. Newspaper Scrapbook Vol "1931"

Kirch, Patrick; Sahlins, Marshall
1992 *Anahulu: Anthropology of History in the Kingdom of Hawai`i.* Volumes 1 and 2
Chicago: University of Chicago Press.

Malo, David
1951 *Hawaiian Antiquities* (Nathaniel B. Emerson, trans.) Special Publication
Honolulu: Bishop Museum Press

Leib, Amos P. and Day, A. Grove
1979 *Hawaiian Legends in English: An Annotated Bibliography.* Second Edition. The University Press of Hawai`i, Honolulu.

Mc Callister, J. Gilbert
1933 *Archaeology of O`ahu* Bernice Pauahi Bishop Museum
Honolulu: The Museum

Pukui, Mary K; Elbert, Samuel
1986 *Hawaiian Dictionary.* Honolulu: University of Hawai`I Press

State of Hawai`i Department of Land and Natural Resources
1998(a) *Chapter 284: Rules Governing Procedures for Historic Preservation Review to Comment On Section 6E-42 Projects.* Hawai`i Administrative Rules, Title 12, Department of Land and Natural Resources, Subtitle 13,State Historic Preservation Division Rules (draft).

State of Hawai`i Department of Land and Natural Resources
1998(b) *Chapter 280: Rules Governing General Procedures During Inadvertent Discoveries of Historic Properties During a Project Covered by Historic Preservation Review Process.* Hawai`i Administrative Rules, Title 12, Department of Land and Natural Resources, Subtitle 13, State Historic Preservation Division Rules (draft)

State of Hawai`i Department of Land and Natural Resources
1998(c) *Chapter 275: Rules Governing Procedures for Historic Preservation Review for Governmental Project Covered Under Section 6e-7 and 6E-8.* Hawai`i Administrative Rules, Title 12, Department of Land and Natural Resources, Subtitle 13, State Historic Preservation Division Rules (draft).

Thrum, Thoms G.
1876 *Hawaiian Almanac and Annual* [In Dorrance 2000:4]

1907 *Hawaiian Folk Tales: A Collection of Native Legends.* Chicago: A.C. Mclurg & Co.

1920 *Hawaiian Annual for 1921* Thoms G. Thrum, Honolulu. [On file at BMA]

APPENDIX A

A BILL FOR AN ACT RELATING TO
ENVIRONMENTAL IMPACT STATEMENTS
[UNOFFICIAL VERSION]

HOUSE OF REPRESENTATIVES H.B. NO, 2895 H.D.1
TWENTIETH LEGISLATURE, 2000
STATE OF HAWAII

A BILL FOR AN ACT
RELATING TO ENVIRONMENTAL IMPACT STATEMENTS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. The legislature finds that there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawai`i's culture, and traditional and customary rights.

The legislature also finds that native Hawaiian culture plays a vital role in preserving and advancing the unique quality of life and the "aloha spirit' in Hawaii. Articles IX and XII of the state constitution, other state laws, and the courts of the State impose on government agencies a duty to promote and protect cultural beliefs, practices, and resources of native Hawaiians as well as other ethnic groups.

Moreover, the past failure to require native Hawaiian cultural impact assessments has resulted in the loss and destruction of many important cultural resources and has interfered with the exercise of native Hawaiian culture. The legislature further finds that due consideration of the effects of human activities on native Hawaiian culture and the exercise thereof is necessary to ensure the continued existence, development, and exercise of native Hawaiian culture.

The purpose of this Act is to: (1) Require that environmental impact statements include the disclosure of the effects of a proposed action on the cultural practices of the community and State; and (2) Amend the definition of "significant effect" to include adverse effects on cultural practices.

SECTION 2. Section 343-2, Hawai`i Revised Statutes, is amended by amending the definitions of "environmental impact statement' or "statement" and "significant effect", to read as follows:

"'Environmental impact statement" or "statement" means an informational document prepared in compliance with the rules adopted under section 343-6 and which discloses the environmental effects of a proposed action, effects of a proposed action on the economic [and] welfare, social welfare, and cultural practices of the community and State, effects of the economic activities arising out of the proposed action, measures proposed

to minimize adverse effects, and alternatives to the action and their environmental effects.

The initial statement filed for public review shall be referred to as the draft statement and shall be distinguished from the final statement which is the document that has incorporated the public's comments and the responses to those comments. The final statement is the document that shall be evaluated for acceptability by the respective accepting authority.

"Significant effect" means the sum of effects on the quality of the environment, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the State's environmental policies or long-term environmental goals as established by law, or adversely affect the economic [or] welfare, social welfare[.], or cultural practices of the community and State."

SECTION 3. Statutory material to be repealed is bracketed. New statutory material is underscored.

SECTION 4. This Act shall take effect upon its approval.

Approved by the Governor as Act 50 on April 26, 2000

APPENDIX B

Scope of Work (SOW)

A. Cultural Assessment [in accordance with OEQC Guidelines]

1. identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or ahupua`a;

2. identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;

3. receive information from or conduct ethnographic interviews and oral histories with person(s) having knowledge of the potentially affected area;

4. conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;

5. identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and

6. assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

B. Ground Survey

1. identify and describe cultural remains e.g., pre-contact and historic

2. identify and describe native and ethnobontanical plants

C. Marine Survey

1. identify endangered and protected marine life e.g., green sea turtles, monk seal

2. identify the protected wildlife e.g., *Ua u Kani* [Wedge-tailed Shearwater]

APPENDIX C

Guidelines for Assessing Cultural Impacts

Adopted by the Environmental Council, State of Hawaii
November 19, 1997

I. INTRODUCTION

It is the policy of the State of Hawaii under Chapter 343, HRS, to alert decision-makers, through the environmental assessment process, about significant environmental effects, which may result from the implementation of certain actions. An environmental assessment of cultural impacts gathers information about cultural practices and cultural features that may be affected by actions subject to Chapter 343, and promotes responsible decision-making.

Articles IX and XII of the State Constitution, other state laws, and the courts of the state require government agencies to promote and preserve cultural beliefs, practices, and resources of native Hawaiians and other ethnic groups. Chapter 343 also requires environmental assessment of cultural resources, in determining the significance of a proposed project.

The Environmental Council encourages preparers of environmental assessments and environmental impact statements to analyze the impact of a proposed action on cultural practices and features associated with the project area. The Council provides the following methodology and content protocol as guidance for any assessment of a project that may significantly affect cultural resources.

II. CULTURAL IMPACT ASSESSMENT METHODOLOGY

Cultural impacts differ from other types of impacts assessed in environmental assessments or environmental impact statements. A cultural impact assessment includes information relating to the practices and beliefs of a particular cultural or ethnic group or groups.

Such information may be obtained through scoping, community meetings, ethnographic interviews and oral histories. Information provided by knowledgeable informants, including traditional cultural practitioners can be applied to the analysis of cultural impacts in conjunction with information concerning cultural practices and features obtained through consultation and from documentary research.

In scoping the cultural portion of an environmental assessment, the geographical extent of the inquiry should, in most instances, be greater than the area over which the proposed action will take place. This is to ensure that cultural practices which may not occur within the boundaries of the project area, but which may nonetheless be affected, are included in the assessment. Thus, for example, a proposed action that may not physically alter gathering practices, but may affect access to gathering areas would be included in the assessment. An ahupua'a is usually the appropriate geographical unit to begin an assessment of cultural impacts of a proposed action, particularly if it includes all of the types of cultural practices associated with the project area. In some cases, cultural practices are likely to extend beyond the ahupua'a and the geographical extent of the study area should take into account those cultural practices.

The historical period studied in a cultural impact assessment should commence with the initial presence in the area of the particular group whose cultural practices and features

are being assessed. The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs.

The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural, including submerged cultural resources, which support such cultural practices and beliefs.

The Environmental Council recommends that preparers of assessments analyzing cultural impacts adopt the following protocol:

1. identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or ahupua`a;

2. identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;

3. receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;

4. conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;

5. identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and

6. assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

Interviews and oral histories with knowledgeable individuals may be recorded, if consent is given, and field visits by preparers accompanied by informants are encouraged. Persons interviewed should be afforded an opportunity to review the record of the interview, and consent to publish the record should be obtained whenever possible. For example, the precise locations of human burials are likely to be withheld from a cultural impact assessment, but it is important that the document identify the impact a project would have on the burials. At times an informant may provide information only on the condition that it remain in confidence. The wishes of the informant should be respected.

Primary source materials reviewed and analyzed may include, as appropriate: Mahele, land court, census and tax records, including testimonies; vital statistics records; family histories and genealogies; previously published or recorded ethnographic interviews and oral histories; community studies, old maps and photographs; and other archival documents, including correspondence, newspaper or almanac articles, and visitor journals. Secondary source materials such as historical, sociological, and anthropological texts, manuscripts, and similar materials, published and unpublished, should also be consulted. Other materials that should be examined include prior land use proposals, decisions, and rulings, which pertain to the study area.

III. CULTURAL IMPACT ASSESSMENT CONTENTS

In addition to the content requirements for environmental assessments and environmental impact statements, which are set out in HAR §§ 11-200-10 and 16 through 18, the portion of the assessment concerning cultural impacts should address, but not necessarily be limited to, the following matters:

1. A discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.

2. A description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.

3. Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained.

4. Biographical information concerning the individuals and organizations consulted, their particular expertise, and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.

5. A discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken. This discussion should include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.

6. A discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site.

7. A discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area, affected directly or indirectly by the proposed project.

8. An explanation of confidential information that has been withheld from public disclosure in the assessment.

9. A discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs.

10. An analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.

11. A bibliography of references, and attached records of interviews which were allowed to be disclosed.

The inclusion of this information will help make environmental assessments and environmental impact statements complete and meet the requirements of Chapter 343, HRS. If you have any questions, please call 586-4185.

APPENDIX D
CONSENT FORMS

Agreement to Participate in this Cultural Impact Assessment

Project Title:	Proposed Kawailoa Beach Park Addition & Chun's Reef Support Park Kawailoa, Waialua, Hawaii Oahu Island
Investigator:	Jo`Lin P. Kaleonahenaheokalani Colburn

You are being asked to participate in a cultural impact assessment [study] conducted by an independent investigator contracted by Jeffrey Pantaleo Consultants, LLC (JPC) for the **Kawailoa Beach Park Addition** [Proposed improvements] and the proposed **Chun's Reef Support Park** The investigator will explain the purpose of the study, the procedures to be used, the potential benefits and possible risks of participation. You may ask the investigator any question(s) in order to help you to understand the study procedures. A basic explanation of the study is written below. If you then decide to participate in the study, please sign on the second page of the form. You will be given a copy of this form to keep.

I. Nature and Purpose of the Study:

The purpose of this cultural impact assessment is to gather information about the lands of Kawailoa Beach Park and proposed Chun's Reef Parking Lot. Through individuals knowledgeable of life in this area to include plantation life, legends, songs, chants, or other information of this area, including traditional and historic information. The objective of this study is to facilitate in the identification and location of possible pre-historic and/or historic cultural resources, or traditional cultural practices in the area mentioned above, in accordance with the applicable historic preservation laws, regulations, and guidelines, including:

Office of Environmental Quality Control (OEQC) Guidelines
And Act 50 HB2895 (AD 2000), HRS Chapter343

II. Explanation of Procedures:

After you have voluntarily agreed to participate and have signed the consent page, the investigator will tape record your interview and transcribe it later. Data from the interview [ethnographic research] will be used as part of the background history summary for this project. The investigator may also need to take notes and/or ask you to spell or clarify terms or names that are unclear.

III. Discomforts and Risk

Foreseeable discomforts and/or risks may include, but are not limited to the following: having to talk loudly for the recorder; being recorded and/or interviewed; providing information that may be used in reports which may be used in the future as a public reference; knowing that the information you give may conflict with information from others; your uncompensated dedication of time; possible miscommunication and/or misunderstanding in the transcribing of information; loss of privacy; and worry that your comment(s) may not be understood in the same way you understand them. It is not

possible to identify all potential risks; however, reasonable safeguards have been taken to minimize risks.

IV. Benefits

This study will give you the opportunity to express your thought (*mana'o*) and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant information about the area mentioned above.

V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected if you so desire. You may request, for example, that your name and /or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain "off-the-record" and not be recorded in any way. In order to ensure protection of your privacy, confidentiality, and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below. We will need to obtain your signature to document your request.

VI. Refusal/Withdrawal

You may, at any time during the interview process, chose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise and/or delete any part of the interview.

VII. Waiver

Part I: Agreement to Participate

I,_____, understand that Jo`Lin P. Kaleonahenaheokalani Colburn, and independent investigator contracted by Jeffrey Pantaleo Consultants, LLC (JPC), will be conducting oral history interviews with individuals knowledgeable about the lands of Kawailoa Beach Park at Kawailoa, Waialua, Oahu, Hawaii. The oral history interviews are being conducted to collect information on possible pre-historic and/or historical cultural resources associated with these lands.

I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. ***I further understand that if I do not return the written transcripts after one week from the date of receipt, my signature below will indicate my release of information for the draft/final report. I also understand that I will still have the opportunity to make revisions during the draft review process.***

____I am willing to participate.
____I am willing to participate under the following conditions:

Interviewee **Date**

Investigator **Date**

MAHALO NUI LOA

Part II: Personal Release of Interview Records

I,_____, have been interviewed by Jo`Lin P. Kaleonahenaheokalani Colburn, an independent investigator contracted by Jeffrey Pantaleo Consultants, LLC (JPC). I have reviewed the written transcript of the tape recordings of the interview, and agree that said documentation is complete and accurate except for those matters specifically set forth below the heading "CLARIFICATION OR CORRECTIONS."

I further agree that Jeffrey Pantaleo Consultants, LLC (JPC) may use and release my identity, address, and all other interview information, both oral and written. This release is for the purpose of using such information in a report to be made public, subject to my specific objections to release as set forth below under the heading "SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS."

CLARIFICATION OR CORRECTIONS:

SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIAL:

Interviewee **Date**

Investigator **Date**

MAHALO NUI LOA

APPENDIX E
Informal Questions
Kawailoa Beach Park Addition & Chun's Reef Support Park
Cultural Impact Assessment

Investigator: Jo`Lin Kaleonahenaheokalani Colburn

Date_____Time_____Location_____

What is your name?

When were you born?

Who are/were your parents?

Where did they grow up?

Additional family background:

Where are you presently residing?

How did you become familiar with the historic sites or events associated with Kawailoa?

Are you familiar with the area of Kawailoa where the existing Kawailoa Beach Park is situated? How familiar are you?

Do you know any families and their names from the area surrounding Kawailoa Beach Park?

Can you tell me about any traditional or cultural practices that were done in this specific area?

Are you familiar with place names such as Pua'ena, or Uko'a? How familiar are you?

Are there place names near the project site that are not mentioned that you can share?

Have you heard stories about the place names or sites of Kawailoa?

Do you know the name of the river that empties into Kawailoa Beach Park?

Traditional land residency, land use, gathering rights, and practices:

Ceremonial sites or practices; House sites; Shoreline Resources; Gathering Practices; Burials; Songs; Chants; Mo`olelo

Are there any thoughts about the proposed improvements on Kawailoa Beach Park and the Chun's Reef Parking Lot?

APPENDIX F

SIGNED CONSENT FORMS
(Copies)

Mrs. Helen Mark Bajo

Mr. Clarence Keli`inamoku Solomon

[Uncle Pa`ipa`i – no consent form]

[Kane – no consent form]

[Unnamed Lifeguard – no consent form]

CONSENT FORMS

Agreement to Participate in this Cultural Impact Assessment

Project Title: Proposed Kawailoa Beach Park and Chun's Reef Parking Lot
Kawailoa, Waialua, Hawaii Oahu Island

Investigator: Jo`Lin P. Kaleonahenaheokalani Colburn

You are being asked to participate in a cultural impact assessment [study] conducted by an independent investigator contracted by Jeffrey Pantaleo Consultants, LLC (JPC) for the **Kawailoa Beach Park** [Proposed improvements] and the proposed **Chun's Reef Parking Lot**. The investigator will explain the purpose of the study, the procedures to be used, the potential benefits and possible risks of participation. You may ask the investigator any question(s) in order to help you to understand the study procedures. A basic explanation of the study is written below. If you then decide to participate in the study, please sign on the second page of the form. You will be given a copy of this form to keep.

I. Nature and Purpose of the Study:

The purpose of this cultural impact assessment is to gather information about the lands of Kawailoa Beach Park and proposed Chun's Reef Parking Lot. Through individuals knowledgeable of life in this area to include plantation life, legends, songs, chants, or other information of this area, including traditional and historic information. The objective of this study is to facilitate in the identification and location of possible pre-historic and/or historic cultural resources, or traditional cultural practices in the area mentioned above, in accordance with the applicable historic preservation laws, regulations, and guidelines, including:

Office of Environmental Quality Control (OEQC) Guidelines
And Act 50 HB2895 (AD 2000), HRS Chapter343

II. Explanation of Procedures:

After you have voluntarily agreed to participate and have signed the consent page, the investigator will tape record your interview and transcribe it later. Data from the interview [ethnographic research] will be used as part of the background history summary for this project. The investigator may also need to take notes and/or ask you to spell or clarify terms or names that are unclear.

III. Discomforts and Risk

Foreseeable discomforts and/or risks may include, but are not limited to the following: having to talk loudly for the recorder; being recorded and/or interviewed; providing information that may be used in reports which may be used in the future as a public reference; knowing that the information you give may conflict with information from others; your uncompensated dedication of time; possible miscommunication and/or misunderstanding in the transcribing of information; loss of privacy; and worry that your comment(s) may not be understood in the same way you understand them. It is not possible to identify all potential risks; however, reasonable safeguards have been taken to minimize risks.

IV. Benefits

This study will give you the opportunity to express your thought (*mana'o*) and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant information about the area mentioned above.

V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected **if you so desire**. You may request, for example, that your name and /or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain "off-the-record" **and not be recorded in any way.** In order to ensure protection of your privacy, confidentiality, and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below. We will need to obtain your signature to document your request.

VI. Refusal/ Withdrawal

You may, at any time during the interview process, chose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise and/or delete any part of the interview.

VII. Waiver

Part I: Agreement to Participate

I, Helen M. Bajo, *understand that Jo'Lin P. Kaleonahenaheokalani Colburn, and independent investigator contracted by Jeffrey Pantaleo Consultants, LLC (JPC), will be conducting oral history interviews with individuals knowledgeable about the lands of Kawailoa Beach Park at Kawailoa, Waialua, Oahu, Hawaii. The oral history interviews are being conducted to collect information on possible pre-historic and/or historical cultural resources associated with these lands.*

I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. ***I further understand that if I do not return the written transcripts after one week from the date of receipt, my signature below will indicate my release of information for the draft/final report. I also understand that I will still have the opportunity to make revisions during the draft review process.***

✓ *I am willing to participate.*
____ *I am willing to participate under the following conditions:*

Helen M Bajo — 1 June 2005
Interviewee **Date**

Jo'Lin Kaleonahenaheokalani Colburn
Investigator **Date**

MAHALO NUI LOA

Part II: Personal Release of Interview Records

I, Helen M. Bajo *, have been interviewed by Jo'Lin P. Kaleonahenaheokalani Colburn, an independent investigator contracted by Jeffrey Pantaleo Consultants, LLC (JPC). I have reviewed the written transcript of the tape recordings of the interview, and agree that said documentation is complete and accurate except for those matters specifically set forth below the heading "CLARIFICATION OR CORRECTIONS."*

I further agree that Jeffrey Pantaleo Consultants, LLC (JPC) may use and release my identity, address, and all other interview information, both oral and written. This release is for the purpose of using such information in a report to be made public, subject to my specific objections to release as set forth below under the heading "SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS."

CLARIFICATION OR CORRECTIONS:

SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIAL:

Helen M. Bajo 7-15-03

Interviewee **Date**

Jo'Lin Kaleonahenahakalani Colburn

Investigator **Date**

MAHALO NUI LOA

IV. Benefits

This study will give you the opportunity to express your thought (*mana'o*) and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant information about the area mentioned above.

V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected **if you so desire**. You may request, for example, that your name and /or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain "off-the-record" **and not be recorded in any way.** In order to ensure protection of your privacy, confidentiality, and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below. We will need to obtain your signature to document your request.

VI. Refusal/ Withdrawal

You may, at any time during the interview process, chose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise and/or delete any part of the interview.

VII. Waiver

Part I: Agreement to Participate

I, Clarence K. Solomon *, understand that Jo'Lin P. Kaleonahenaheokalani Colburn, and independent investigator contracted by Jeffrey Pantaleo Consultants, LLC (JPC), will be conducting oral history interviews with individuals knowledgeable about the lands of Kawailoa Beach Park at Kawailoa, Waialua, Oahu, Hawaii. The oral history interviews are being conducted to collect information on possible pre-historic and/or historical cultural resources associated with these lands.*

I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. ***I further understand that if I do not return the written transcripts after one week from the date of receipt, my signature below will indicate my release of information for the draft/final report. I also understand that I will still have the opportunity to make revisions during the draft review process.***

✓ *I am willing to participate.*
____ *I am willing to participate under the following conditions:*

Clarence Keiranoka Solomon 04-06-05
Interviewee **Date**

Jo'Lin Kaleonahenaheokalani Colburn
Investigator **Date**

MAHALO NUI LOA

Part II: Personal Release of Interview Records

I, CLARENCE K. SOLOMON *, have been interviewed by Jo'Lin P. Kaleonahenaheokalani Colburn, an independent investigator contracted by Jeffrey Pantaleo Consultants, LLC (JPC). I have reviewed the written transcript of the tape recordings of the interview, and agree that said documentation is complete and accurate except for those matters specifically set forth below the heading "CLARIFICATION OR CORRECTIONS."*

I further agree that Jeffrey Pantaleo Consultants, LLC (JPC) may use and release my identity, address, and all other interview information, both oral and written. This release is for the purpose of using such information in a report to be made public, subject to my specific objections to release as set forth below under the heading "SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS."

CLARIFICATION OR CORRECTIONS:

SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIAL:

Clarence Kelhanoke Solomon 01-08-05

Interviewee **Date**

Jo'Lin Kaleonahenaheokalani Colburn

Investigator **Date**

MAHALO NUI LOA

CONSENT FORMS

Agreement to Participate in this Cultural Impact Assessment

Project Title: Proposed Kawailoa Beach Park and Chun's Reef Parking Lot
Kawailoa, Waialua, Hawaii Oahu Island

Investigator: Jo`Lin P. Kaleonahenaheokalani Colburn

You are being asked to participate in a cultural impact assessment [study] conducted by an independent investigator contracted by Jeffrey Pantaleo Consultants, LLC (JPC) for the **Kawailoa Beach Park** [Proposed improvements] and the proposed **Chun's Reef Parking Lot**. The investigator will explain the purpose of the study, the procedures to be used, the potential benefits and possible risks of participation. You may ask the investigator any question(s) in order to help you to understand the study procedures. A basic explanation of the study is written below. If you then decide to participate in the study, please sign on the second page of the form. You will be given a copy of this form to keep.

I. Nature and Purpose of the Study:

The purpose of this cultural impact assessment is to gather information about the lands of Kawailoa Beach Park and proposed Chun's Reef Parking Lot. Through individuals knowledgeable of life in this area to include plantation life, legends, songs, chants, or other information of this area, including traditional and historic information. The objective of this study is to facilitate in the identification and location of possible pre-historic and/or historic cultural resources, or traditional cultural practices in the area mentioned above, in accordance with the applicable historic preservation laws, regulations, and guidelines, including:

Office of Environmental Quality Control (OEQC) Guidelines
And Act 50 HB2895 (AD 2000), HRS Chapter343

II. Explanation of Procedures:

After you have voluntarily agreed to participate and have signed the consent page, the investigator will tape record your interview and transcribe it later. Data from the interview [ethnographic research] will be used as part of the background history summary for this project. The investigator may also need to take notes and/or ask you to spell or clarify terms or names that are unclear.

III. Discomforts and Risk

Foreseeable discomforts and/or risks may include, but are not limited tc the following: having to talk loudly for the recorder; being recorded and/or interviewed; providing information that may be used in reports which may be used in the future as a public reference; knowing that the information you give may conflict with information from others; your uncompensated dedication of time; possible miscommunication and/or misunderstanding in the transcribing of information; loss of privacy; and worry that your comment(s) may not be understood in the same way you understand them. It is not possible to identify all potential risks; however, reasonable safeguards have been taken to minimize risks.

Appendix E
Hazardous Materials Report

HAZARDOUS MATERIALS ASSESSMENT SURVEY

Prepared for:

DEPARTMENT OF PARKS AND RECREATION

Kaneohe, Hawaii

61-479 Kamehameha Highway
Haleiwa, Hawaii

85-05068.00
November 5, 2004

Clayton Group Services, Inc.
970 North Kalaheo Avenue
Suite C-316
Kailua, Hawaii 96734
808.531.6708

CONTENTS

Executive Summary

The City and County of Honolulu, Department of Parks and Recreation retained Clayton Group Services, Inc. (Clayton) to conduct an asbestos assessment survey of the subject property located at 61-479 Kamehameha Highway, Haleiwa, Hawaii. The subject property consists of two abandoned lots adjacent to each other.

The purpose of this project was to conduct an asbestos survey, which included a walk-through survey of accessible areas of the property, and the collection and analyses of bulk samples of suspect asbestos-containing materials (ACM).

Based on our investigation and sample analytical results, Clayton's findings and recommendations are as follows:

Asbestos-Containing Materials (ACM)

Clayton's survey resulted in the collection of 15 suspect ACM samples for asbestos analysis. Based on Polarized Light Microscopy (PLM) analysis, two of the materials collected from the subject property contained asbestos above the regulatory level of one percent (1%).

- Approximately 228 square feet of sheet vinyl flooring located on a concrete foundation
- Approximately 16 square feet of 12- by 12-inch sheet vinyl floor tiles located on a concrete foundation

1.0 INTRODUCTION

The City and County of Honolulu, Department of Parks and Recreation retained Clayton Group Services, Inc. (Clayton) to conduct a hazardous material assessment survey of the subject property located at 61-479 Kamehameha Highway, Haleiwa, Hawaii.

The scope of Clayton's services was described in the August 19, 2004 proposal addressed to Mr. Wilfred Ho, which also included the terms and conditions under which the work was performed (Clayton Proposal No. 05-HI-0209).

On September 14, 2004, Mr. John Willard of Clayton's Honolulu Regional Office conducted a walkthrough assessment of the subject property. During the assessment, Clayton performed a visual inspection of the readily accessible portions of the property. Clayton collected three samples of each type of suspect ACM, following regulatory requirements.

Bulk suspect asbestos samples were shipped to NVL Laboratories, Inc., a National Voluntary Laboratory Accreditation Program (NVLAP)-accredited laboratory located in Seattle Washington. The asbestos samples were analyzed for asbestos content using the Environmental Protection Agency (EPA) recommended standard method of polarized light microscopy (PLM) for determining asbestos fibers in bulk materials.

2.0 DESCRIPTION OF SUBJECT PROPERTY

The subject property consists of two lots sharing the same physical address with a fence line separating the lots. Both lots are located next to Kawailoa Beach Park with the west lot sitting on the east edge of the beach access. The west lot use to support a dwelling but reports show the dwelling was demolished appromentaly 2 years ago. No physical evidence remains of this structure. The east lot still supports a driveway and a house foundation but no structure remains on this lot. Reports show that this structure had caught fire and burned downed. The debris from the fire was report to have been buried in the abandoned swimming pool located at the rear of the foundation (house). The east lot also has a fenced in area between the beach line and the back yard to the property, which supports a nesting area for the Wedge-Tailed Shearwater bird.

3.0 SCOPE OF WORK

Clayton's scope of work for this project was to identify any potentially hazardous materials that may be impacted by the general public.

During Clayton's onsite inspection, suspect ACM was observed throughout the subject property and a minimum of three representative samples of each material were collected for PLM analysis.

According to federal and state regulations, a material is considered asbestos-containing if it contains at least one percent (1%) asbestos fibers.

4.0 SURVEY RESULTS

During Clayton's onsite inspection, five types of suspect ACM were observed throughout the subject property, and representative samples of each material were collected for PLM analysis.

Clayton inspected all accessible areas of subject property for suspect ACM. The following materials were sampled:

- Sheet vinyl flooring
- 12- by 12-inch sheet vinyl floor tile
- Ceramic tile and cementitious grout
- Soil samples (two areas)

Clayton's survey resulted in the collection of 15 suspect ACM samples for asbestos analysis. Based on Polarized Light Microscopy (PLM) analysis, two of materials collected from the subject property contained asbestos above the regulatory level of one percent (1%).

- Approximately 228 square feet of sheet vinyl flooring located on a concrete foundation
- Approximately 16 square feet of 12- by 12-inch sheet vinyl floor tiles located on a concrete foundation

The ACM was found to be deteriorating and in poor condition. The 12- by 12-inch sheet vinyl floor tiles are lose and resting in place. Removal of both these materials is recommended.

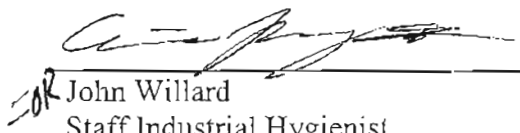
When removal of the ACM is planned, a qualified asbestos abatement contractor should be hired to perform the work. In addition, a qualified industrial hygienist should be employed to conduct air monitoring during removal work to comply with regulatory requirements.

Sample locations are listed in Appendix A. Suspect ACM identified and sampled, including the types of materials, material locations, analytical results, sample identification numbers, and sampling locations, are listed in Appendix B. The results of the asbestos analysis from NVL Laboratories, Inc. are included in Appendix D.

5.0 LIMITATIONS

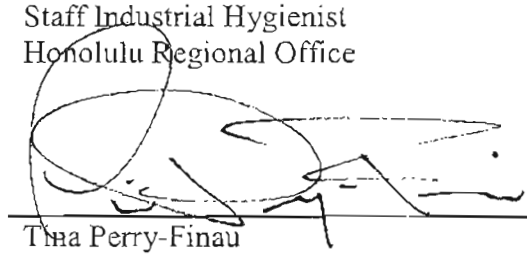
The information and opinions rendered in this report are exclusively for use by Tesoro Hawaii Corporation. Clayton Group services Inc. will not distribute this report without your written consent except as may be required by law or court order. The information and opinions expressed in this report are given in response to our limited assignment and should be evaluated and implemented only in light of that assignment. We accept the responsibility for the competent performance of our duties in executing the assignment and preparing this report in accordance with the normal standards of our profession but disclaim any responsibility for consequential damages.

This report prepared by:



John Willard
Staff Industrial Hygienist
Honolulu Regional Office

This report reviewed by:

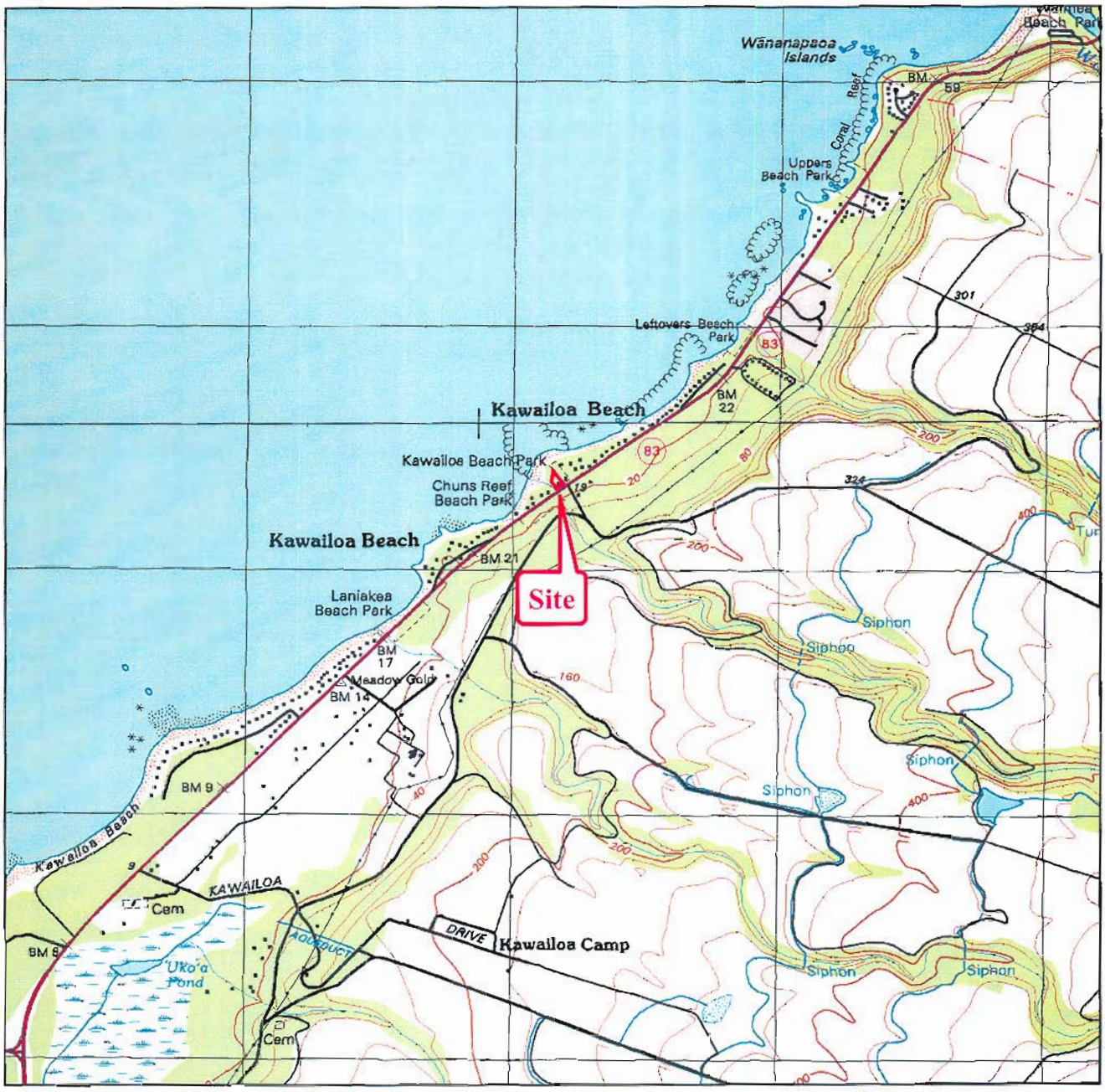


Tina Perry-Finau
Project Manager
Honolulu Regional Office

November 5, 2004

APPENDIX A

SAMPLE LOCATION PLANS



SCALE 1:24,000

1 0.5 0 1 Miles

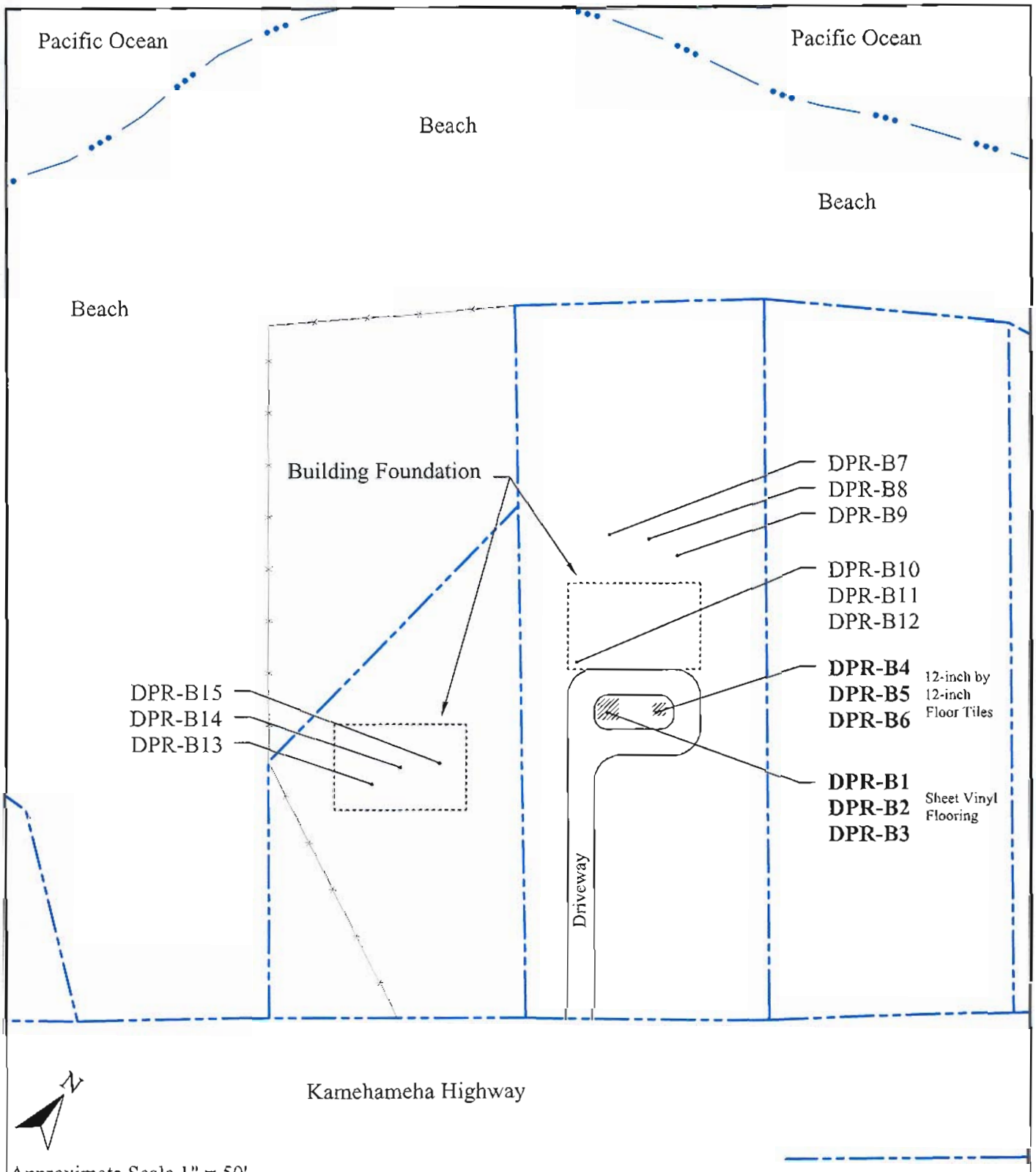
1,000 500 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

1 0.5 0 1 Kilometers

N

Portion of 7.5-Minute Series (Topographic) Maps
United States Department of the Interior
United States Geological Survey
Haleiwa Quadrangle Hawaii - Honolulu County
1999

Clayton GROUP SERVICES	Project No.: 85-05068.00	Title: Site Location Map	FIGURE 1
	Date: 09/22/04	Location: 61-479 Kamehameha Highway Waimea, Oahu, Hawaii	
	Revised By: JT		
	Checked By: JW	Client: State of Hawaii Department of Parks and Recreation	



Approximate Scale 1" = 50'

Clayton GROUP SERVICES	Project No.: 85-05068.00	Title: Site Vicinity and Sample Locations	FIGURE 2
	Date: 09/22/04	Location: 61-479 Kamehameha Highway, Waimea, Oahu, Hawaii	
	Revised by: JT		
	Checked by: JW	Client: State of Hawaii Department of Parks and Recreation	

APPENDIX B

ASBESTOS ASSESSMENT RESULTS

Clayton Group Services – Asbestos Sampling Sheet

Project No. 85-05068.00 **Inspectors' Name:** John Willard **Page** 1 **of** 1

Project Name: Dept. of Parks and Recreation **Bldg. Name / No.** 61-479 Kam Highway **Date:** Sept 14, 2004

Sample Number	Sample Location	Material Description	Quantity	Category	Friability	Condition	Accessibility	Vibration	Air Movement
DPR-B1 DPR-B2 DPR-B3	Concrete slab by old turn about	Sheet vinyl flooring Beige with tan squares	12'x19'	☐ Surfacing ☐ TSI ☐ Misc.	☐ Friable ☐ Non-Friable	☐ Good ☐ Damaged % _____ ☐ Sig. Dam. % _____	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High
DPR-B4 DPR-B5 DPR-B6	Concrete slab by old turn about	12-by 12-inch vinyl floor tile White	4'x4'	☐ Surfacing ☐ TSI ☐ Misc.	☐ Friable ☐ Non-Friable	☐ Good ☐ Damaged % _____ ☐ Sig. Dam. %	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High
DPR-B7 DPR-B8 DPR-B9	Concrete slab, section of the existing house foundation	4- by 4-inch ceramic tile and grout	4'x4'	☐ Surfacing ☐ TSI ☐ Misc.	☐ Friable ☐ Non-Friable	☐ Good ☐ Damaged % _____ ☐ Sig. Dam. %	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High
DPR-B10 DPR-B11 DPR-B12	Soil sample, old pool area	Soil		☐ Surfacing ☐ TSI ☐ Misc.	☐ Friable ☐ Non-Friable	☐ Good ☐ Damaged % _____ ☐ Sig. Dam. %	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High
DPR-B13 DPR-B14 DPR-B15	Soil sample, footprint of demolished house	Soil		☐ Surfacing ☐ TSI ☐ Misc.	☐ Friable ☐ Non-Friable	☐ Good ☐ Damaged % _____ ☐ Sig. Dam. %	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High
				☐ Surfacing ☐ TSI ☐ Misc.	☐ Friable ☐ Non-Friable	☐ Good ☐ Damaged % _____ ☐ Sig. Dam. %	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High
				☐ Surfacing ☐ TSI ☐ Misc.	☐ Friable ☐ Non-Friable	☐ Good ☐ Damaged % _____ ☐ Sig. Dam. %	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High	☐ Low ☐ Moderate ☐ High

APPENDIX C

PHOTOGRAPHS OF ASBESTOS CONTAINING MATERIALS

Clayton Project No.			
85-05068.00	**Description**	View of Sample No. DPR-B1, sheet vinyl flooring	**Photo 1**
	Site Name	61-479 Kamehameha Highway, east lot	**Photo Date**
	Client	State of Hawaii, Department of Parks and Recreation	9-14-04

Clayton Project No.			
85-05068.00	**Description**	View of Sample No. DPR-B4, 12- by 12-inch sheet vinyl floor tile	**Photo 2**
	Site Name	61-479 Kamehameha Highway, east lot	**Photo Date**
	Client	State of Hawaii, Department of Parks and Recreation	9-14-04

APPENDIX D

LABORATORY ANALYTICAL RESULTS
FOR
ASBESTOS SAMPLES

Table 1

Analytical Results of Asbestos Sampling
At
61-479 Kamehameha Highway
Haleiwa, Oahu, Hawaii

Clayton Project No.: 85-05068.00
Sample Collection Date: Sept 14, 2004

Material Description	Material Location	Asbestos % & Type	Sample ID Numbers
Sheet vinyl flooring Beige with tan squares	Concrete slab next to old garage area, east lot	**50% Chrysotile**	DPR- B1
			DPR-B2
			DPR-B3
12- by 12-inch vinyl floor tile White	Concrete slab next to old garage area, opposite side of sheet vinyl flooring, east lot	**2% Chrysotile**	DPR-B4
			DPR-B5
			DPR-B6
Soil	Old swimming pool area, east lot	None detected	DPR-B7
			DPR-B8
			DPR-B9
4- by 4-inch ceramic tile and grout	Main house foundation, possible bathroom area, east lot	None detected	DPR-B10
			DPR-B11
			DPR-B12
Soil	In foot print of demolished house, west lot	None detected	DPR-B13
			DPR-B14
			DPR-B15

Current Federal and State regulatory level of greater than or equal to 1% asbestos fibers defines asbestos-containing materials (ACM)

"**Bold**" Entries are ACM

Appendix F
Draft EA Comments and Response Letters

LINDA LINGLE
GOVERNOR OF HAWAII

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186
E-mail: oeqc@health.state.hi.us

October 11, 2005

Mr. Wayne Hashiro
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Hashiro:

Subject: Draft Environmental Assessment for the Kawailoa Beach Park, Oahu

Thank you for the opportunity to review the subject document. We have the following comment.

1. Please evaluate whether a traffic signal or an overhead pedestrian crossing is feasible for crossing Kamehameha highway from the parking lot to the beach park.

2. Please consult with the affected and adjacent property owners.

2. This project should comply with sections 103D-407 and 408 of Hawaii Revised Statutes concerning the use of indigenous plants and recycled glass.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson
Director

c: Group 70

GROUP 70 INTERNATIONAL

Francis S. Oda, Arch. D., AIA, AICP
Norman G.Y. Hong, AIA
Sheryl B. Seaman, AIA, ASID
Hitoshi Hida, AIA
Roy H. Nihei, AIA, CSI
James I. Nishimoto, AIA
Ralph E. Portmore, AICP
Stephen H. Yuen, AIA
Linda C. Miki, AIA
George I. Atta, AICP
Charles Y. Kaneshiro, AIA, LEED
Jeffrey H. Overton, AICP
Christine Mendes Ruotola, AICP
James L. Stone, AIA, LEED

Paul P. Chorney, AIA
Philip T. Cuccia, CSI, CDT
Kimberly Evans
Pete C. Galvez, AIA
Sutobin Halim
Roy A. Inouye, AIA, CSI, CDT
Stephen H. Kelly, AICP
Cami Kloster
Katherine M. MacNeil, AIA
Frank B. McCue
Käwika McKeague
Kathryn A. Nam
Hiram C. Pajo
Donna D. Pennington
Kimberly Polkinhorn, AIA, LEED
Alvin Sakutori
Scott Tangonan
Tom Young, AIA

December 2, 2005

Ms. Genevieve Salmonson, Director
State of Hawai'i
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

RE: Kawailoa Beach Park
Draft Environmental Assessment and Application for Special Management Area Use Permit, September 2004
TMK: 6-1-05: 14 (por.), and 6-1-08: 17, 18, 25 (por.), 26 (por.)
Kawailoa, O'ahu, Hawai'i

Dear Ms. Salmonson:

Thank you for your letter of October 11, 2005 sent to Mr. Wayne Hashiro regarding your review of the Draft Environmental Assessment for Kawailoa Beach Park.

The following are offered in response to your comments:

1. In addition to the two proposed crosswalks, a traffic signal or a pedestrian overpass are two options that could be considered for crossing Kamehameha Highway from the parking lot to the beach park. New improvements affecting the State highway will be a Department of Transportation concern.

2. As part of the pre-consultation process, the following community planning meetings and presentations were conducted in order to involve the affected and adjacent property owners, and the community in the planning and development of the Kawailoa Beach Park improvements and recreation facilities:

   - March 22, 2005: The preliminary program for the park and very preliminary concept was presented and reviewed by the North Shore Neighborhood Board No. 27 and attending public.
   - June 4, 2005: A community site visit meeting was conducted at the proposed Kawailoa Beach Park. The site visit and meeting was held with interested members of the community to discuss the park planning issues and address the potential alternative concepts for the Kawailoa Beach Park improvements.
   - June 28, 2005: A presentation to the North Shore Neighborhood Board was conducted to provide an informational update on the community site visit, and to discuss the park planning design concepts and issues. Ideas and insight gathered from the community during the pre-consultation activities have been addressed in the alternative park concepts and the analysis contained in this document.

3. This project will comply with sections 103D-407 and 408 of Hawai'i Revised Statutes concerning the use of indigenous plants and recycled glass. Specifically, Section 2.5, Access and Parking Improvements, states:

   > All County-improved roads are required to be in compliance with Section 103D-407 of the Hawai'i Revised Statutes (HRS) D-407 "Construction projects, roadway materials; recycled glass requirements."

   In addition, Section 2.5, Landscaping, will include the following insert in the Final EA:

   > All landscaping improvements are required to be in compliance with Section 103D-408 of the Hawai'i Revised Statutes (HRS) D-408 "Indigenous and Polynesian introduced plants; use in public landscaping requirements."

Your comments and this response letter will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,
GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

CC: Wayne Hashiro, Director, Department of Design and Construction

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR
LAURA H. THIELEN
DIRECTOR
OFFICE OF PLANNING

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax. (808) 587-2824

Ref. No. P-11126

October 3, 2005

Mr. Wayne Hashiro, Director
Department of Design and Construction
City and County of Honolulu
650 S. King Street, 9th Floor
Honolulu, Hawaii 96813

Attention: Mr. Gary Doi, Project Manager

Dear Mr. Hashiro:

Subject: Kawailoa Beach Park Recreation Facilities Draft Environmental Assessment and Application for Special Management Area Use Permit
TMK: 6-1-05:14 (por.), and 6-1-08:17, 18, 25 (por.), 26 (por.)

We do not have any objections to the proposed project. However, we wish to note that the section on conformance with the Coastal Zone Management (CZM) Program, pages 5-2 to 5-8 is incomplete. It addresses only seven objectives, whereas the CZM statute, Chapter 205A, Hawaii Revised Statutes, has ten. Therefore, this section should be expanded in the final report.

If there are any questions, please contact Debra Tom of our CZM Program at 587-2840.

Sincerely,

Laura H. Thielen
Director

✓ c: Mr. Jeffrey H. Overton, AICP, Group 70 International, Inc.

GROUP 70 INTERNATIONAL

Francis S. Oda, Arch. D., AIA, AICP
Norman G.Y. Hong, AIA
Sheryl B. Seaman, AIA, ASID
Hitoshi Hida, AIA
Roy H. Nihei, AIA, CSI
James I. Nishimoto, AIA
Ralph E. Portmore, AICP
Stephen H. Yuen, AIA
Linda C. Miki, AIA
George I. Atta, AICP
Charles Y. Kaneshiro, AIA, LEED
Jeffrey H. Overton, AICP
Christine Mendes Ruotola, AICP
James L. Stone, AIA, LEED

Paul P. Chorney, AIA
Philip T. Cuccia, CSI, CDT
Kimberly Evans
Pete C. Galvez, AIA
Sutobin Halim
Roy A. Inouye, AIA, CSI, CDT
Stephen H. Kelly, AICP
Cami Kloster
Katherine M. MacNeil, AIA
Frank B. McCue
Käwika McKeague
Kathryn A. Nam
Hiram C. Pajo
Donna D. Pennington
Kimberly Polkinhorn, AIA, LEED
Alvin Sakutori
Scott Tangonan
Tom Young, AIA

December 2, 2005

Ms. Laura H. Thielen, Director
State of Hawai'i
Department of Business, Economic Development and Tourism
Office of Planning
P.O. Box 2359
Honolulu, Hawai'i 96804

RE: Kawailoa Beach Park
Draft Environmental Assessment and Application for Special Management Area Use Permit, September 2004
TMK: 6-1-05: 14 (por.), and 6-1-08: 17, 18, 25 (por.), 26 (por.)
Kawailoa, O'ahu, Hawai'i

Dear Ms. Thielen:

Thank you for your letter of October 3, 2005 sent to Mr. Wayne Hashiro regarding your review of the Draft Environmental Assessment for Kawailoa Beach Park.

The following are offered in response to your comments:

1. We acknowledge that you do not have any objections to the proposed project at this time.

2. Your comments regarding the section on conformance with the Coastal Zone Management (CZM) Program, pages 5-2 to 5-8, has been revised and expanded to address all ten objectives of the CZM statute, Chapter 205A, Hawai'i Revised Statutes. Specifically, the following discussion and objectives have been added to Section 5.3 of the Final EA:

   <u>Recreational Resources:</u>
   Provide coastal recreational opportunities accessible to the public.
   (a) Improve coordination and funding of coastal recreational planning and management; and
   (b) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:
      (i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;
      (ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;
      (iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;
(v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;
(vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;
(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and
(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals for permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.

Discussion: The primary function of the proposed beach park improvements is to provide coastal recreational opportunities accessible to the public. The proposed improvements to Kawailoa Beach Park will provide improved public access, consistent with conservation of natural resources, to and along a shoreline with recreational value. The proposed beach park improvements will meet the need to provide an adequate supply of shoreline parks and other recreational facilities suitable for public recreation. In addition, the proposed beach park improvements will ensure public recreational uses of County-owned and controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources.

Public Participation:
(a) Promote public involvement in coastal zone management processes;
(b) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and
(c) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Discussion: There has been an active community dialogue on the proposed beach park. Several agencies, organizations and individuals have been consulted in the planning process. As part of the pre-consultation process, the following community planning meetings and presentations were conducted in order to involve the community in the planning and development of the Kawailoa Beach Park improvements and recreation facilities:

- March 22, 2005: The preliminary program for the park and very preliminary concept was presented and reviewed by the North Shore Neighborhood Board No. 27 and attending public.
- June 4, 2005: A community site visit meeting was conducted at the proposed Kawailoa Beach Park. The site visit and meeting was held with interested members of the community to discuss the park planning issues and address the potential alternative concepts for the Kawailoa Beach Park improvements.
- June 28, 2005: A presentation to the North Shore Neighborhood Board was conducted to provide an informational update on the community site visit, and to discuss the park planning design concepts and issues. Ideas and insight gathered from the community during the pre-consultation activities have been addressed in the alternative park concepts and the analysis contained in this document.

Beach Protection:

(a) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;
(b) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and
(c) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Discussion: The proposed beach park improvements conserve open space and enhance beach protection for the area. Other alternatives proposed in *Section 4.0*, such as the residential development alternative would potentially decrease conservation of open space and interfere with natural shoreline processes by developing the site. The proposed beach park improvements will not interfere with natural shoreline processes or propose any construction of private erosion-protection structures seaward of the shoreline.

Marine Resources:

(a) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;
(b) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;
(c) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;
(d) Promote research, study, understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and
(e) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Discussion: The planned beach park improvements are ecologically and environmentally sound and economically beneficial uses and development of marine and coastal resources. The proposed improvements encourage and promote the conservation of marine and coastal resources.

Your comments and this response letter will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,
GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

CC: Wayne Hashiro, Director, Department of Design and Construction

LINDA LINGLE
GOVERNOR OF HAWAII

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR - LAND

DEAN NAKANO
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Correspondence No.:OA-06-75

OCT 12 2005

Mr. Gary Doi, Project Manager
City and County of Honolulu
Department of Design & Construction
650 South King Street, 9th Floor
Honolulu, Hawaii 96813

Dear Mr. Doi:

Subject: Draft Environmental Assessment and Application for Special Management Area Use Permit for Beach Park Recreation Facilities at Kawailoa, North Shore, Oahu, Hawaii. TMK: 6-1-08: 17,18, 25 (por) & 26 (por) and TMK: 6-1-05: 14 (por).

We are in receipt of your September 28, 2005 transmittal pertaining to the Kawailoa Beach Park. We have reviewed the draft environmental assessment (DEA) and have the following comments.

The Office of Conservation and Coastal Lands (OCCL) is supportive of a beach park with basic amenities as a benefit to the recreational users of the adjacent coastal lands. The Department concurs that limited structures and adequate parking are important features in this beach park development.

The Department believes site plan Alternative B, page 2-5, is the best option in regards to preserving the natural ecosystem within the coastal lands. The location of the proposed comfort station and associated leach field on the mauka side of the highway is in accordance with the Department's policy to minimize structures, especially slab on grade, near the shoreline. The additional distance between the leach field and the ocean will help to mitigate wastewater discharge and runoff into the marine environment.

The Department is concerned with the location of the comfort station and associated leach field in site plan Alternative A, page 2-5, and would recommend that further research be conducted before choosing this alternative. The Department discourages construction of slab on grade structures and leach field septic systems on beachfront properties. Slab on grade construction eliminates the ability to relocate structures as the shoreline changes on seasonal, annual, and decadal time frames. Leach field septic systems on beachfront properties are not complimentary with general best management practices and increases the potential for detrimental impacts to coastal ecosystem.

The DEA suggests that shower stations will be located on the makai property, and will not have attached wastewater disposal systems. Shower stations are important for recreational users, however the Department recommends they be placed on the mauka portion of the park with the comfort station in site plan Alternative B.

Grading for landscaping should not be extended to the coastal dune. This is the topographic high, typically vegetated, at the edge of the beach. The coastal dune is an integral portion of the beach system, providing sand to the beach during times of episodic, event-based erosion and offering a storm buffer during high surf. Removal of sand from the dune reduces its ability to act as a buffer for the beach and can result in narrowing

of the beach and impeded recovery during episodic erosion events. The coastal dune should be preserved by controlling foot traffic through pathways and vegetating with native dune plants such as aki aki grass, morning glory, and beach heliotrope. The Department discourages irrigating the vegetation along the shoreline. Irrigating shoreline vegetation can artificially induce a seaward migration of the vegetation line, in direct conflict with our charter and purpose to maintain public lands, beach access, and recreational use.

The Department suggests adding a section on "coastal erosion" in the Description of the Environmental Setting, Potential Impacts, and Mitigation Measures. Coastal erosion is a chronic problem on the Hawaiian Islands, effecting coastal properties throughout the state. As such, it should be adequately addressed in any DEA for coastal development. The Department recommends a review of *Oahu Shoreline Study, Part 1 Data on Beach Changes (1988)*, prepared by Sea Engineering, Inc. This area is characterized as "generally stable, but is subject to erosion during large winter waves. The homes are subject to inundation and structural damage." Though the region was generally stable up to 1988 (the time of the study) it has expressed highly dynamic behavior on annual and inter-annual time frames and should be addressed as a potential impact. Ideally, the FEA could include a modern and inclusive study of shoreline behavior at this location, including shoreline erosion rates, impacts, and mitigation measures. A beach erosion plan is desirable for new park developments such as this.

Please contact Chris Conger of the Office of Conservation and Coastal Lands at 587-0049 should you have any questions.

Sincerely,

Samuel J. Lemmo, Administrator

CC: Chairperson
Group 70 International, Inc.
Jeffrey Overton, AICP
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813
North Shore Neighborhood Board (via e-mail)

GROUP 70 INTERNATIONAL

Francis S. Oda, Arch. D., AIA, AICP
Norman G.Y. Hong, AIA
Sheryl B. Seaman, AIA, ASID
Hitoshi Hida, AIA
Roy H. Nihei, AIA, CSI
James I. Nishimoto, AIA
Ralph E. Portmore, AICP
Stephen H. Yuen, AIA
Linda C. Miki, AIA
George I. Atta, AICP
Charles Y. Kaneshiro, AIA, LEED
Jeffrey H. Overton, AICP
Christine Mendes Ruotola, AICP
James L. Stone, AIA, LEED

Paul P. Chorney, AIA
Philip T. Cuccia, CSI, CDT
Kimberly Evans
Pete C. Galvez, AIA
Sutobin Halim
Roy A. Inouye, AIA, CSI, CDT
Stephen H. Kelly, AICP
Cami Kloster
Katherine M. MacNeil, AIA
Frank B. McCue
Käwika McKeague
Kathryn A. Nam
Hiram C. Pajo
Donna D. Pennington
Kimberly Polkinhorn, AIA, LEED
Alvin Sakutori
Scott Tangonan
Tom Young, AIA

December 2, 2005

Mr. Samuel Lemmo, Administrator
State of Hawai'i
Department of Land and Natural Resources
Office of Conservation and Coastal Lands
P.O. Box 621
Honolulu, Hawai'i 96809

RE: Kawailoa Beach Park
Draft Environmental Assessment and Application for Special Management Area Use Permit, September 2004
TMK: 6-1-05: 14 (por.), and 6-1-08: 17, 18, 25 (por.), 26 (por.)
Kawailoa, O'ahu, Hawai'i

Dear Mr. Lemmo:

Thank you for your letter of October 12, 2005 sent to Mr. Gary Doi regarding your review of the Draft Environmental Assessment for Kawailoa Beach Park.

The following are offered in response to your comments:

1. We acknowledge your support of the beach park with basic amenities as a benefit to the recreational users of the adjacent coastal lands, and your concurrence that limited structures and adequate parking are important features in this beach park development.

2. We acknowledge your support of Alternative B, Mauka Location for the Comfort Station. The Final EA will include an analysis of the associated advantages and disadvantages for all of the Alternatives. The proposed makai portion of the site already contains an existing concrete slab from a previous residential structure. In Alternative A, Makai Location for the Comfort Station, the comfort station is located mauka of the existing slab. In addition, the proposed location of the comfort station in Alternative A is situated over a 100 feet mauka from the seaward limit of vegetation in effort to minimize placement of structures near the shoreline. The proposed project does not include plans for direct alteration of the shoreline or offshore areas.

3. We acknowledge your concerns with Alternative A. In effort to help mitigate the potential effects of the wastewater disposal to the marine environment, the comfort station and leach field would be located close to the highway. The proposed project will have on-site drainage controls consistent with County Grading Permit and NPDES Permit requirements. The proposed wastewater treatment and disposal will meet or exceed State Department of Health standards for the new facility. The project is not anticipated to cause adverse effects to the near shore waters and marine life during its construction and operation. Further discussion is contained in the Final EA, Sections 2.5, 3.4 and 3.8.

4. We acknowledge the Department's recommendation that the proposed shower stations be placed on the mauka portion of the property with the proposed comfort station in site plan Alternative B. At the community site visit, held on June 4, 2005, community members and lifeguards preferred the proposed location of the shower stations to be on the makai portion of the property, in reference to convenience for recreational users. In order to mitigate runoff from the shower stations, Best Management Practices will be implemented in the project's design, operation and maintenance. Landscaping with porous sub-drains will create a filter medium to prevent runoff of surface water. In addition, landscaped buffer strips along the shower stations will be designed to absorb water runoff and filter pollutants and silt through vegetation, sand and gravel. Vegetated swales will also provide some biological update of nutrients in runoff water and absorption of runoff. Further discussion is contained in the Final EA, Sections 2.5, 3.3, and 3.4.

5. Grading work at the project site will conform to the "Rules Relating to Soil Erosion Standards and Guidelines." In response to your concerns with grading for landscaping on the proposed site, the Final EA, Section 3.3 Soils and Grading on page 3-3 has been modified to include the following discussion:

   > Minor grading to remove local high/low spots and level the project site will be required to construct the parking lot and building pad, and for landscaping. Very little earth movement is anticipated to implement the proposed site improvements. Grading for landscaping will not be extended to the coastal dune.

6. The proposed project does not include plans for direct alteration of the shoreline or offshore areas. In effort to preserve the coastal dune, pedestrian access is proposed to be controlled with the use of designated pathways and landscaping. In addition, for the Final EA, Sections 2.5 and 3.6 have been modified to include the following discussion on landscaping and irrigation:

   > Irrigation will be installed to establish and maintain the plantings. Irrigation will be controlled to prevent artificially induce a seaward migration of the vegetation line. Permanent landscaping will consist of a variety of species including native, non-invasive, and xeriscape in design and placement. Some native dune plants include Naupaka – Morning Glory (*Scaevola taccada*), the 'Aki 'Aki Native Grass (*Sporobolis virginicus*), Pa'u o hi'iaka – Skirt of Pele's Sister (*Jacquemontia ovalifolia*), 'Ilima (*Sida fallax*), Alena (*Boerhavia repens*), Hinahina ku kahakai - Beach Heliotrope (*Heliotropium anomalum*).

7. In response to your recommendations on coastal erosion, the Final EA has been modified to include a new section, Section 3.21 Coastal Erosion and the following discussion:

   > ***Existing Conditions***
   > Coastal erosion is a chronic problem on the Hawaiian Islands, effecting coastal properties throughout the state. As such, it is addressed in this Final

EA for the proposed coastal development project. According to the Oahu Shoreline Study, Part I Data on Beach Changes (Sea Engineering, Inc., 1998) this area is characterized as "generally stable, but is subject to erosion during large winter waves." According to the Office of Coastal and Conservation Lands of Department of Land and Natural Resources, the area has recently expressed highly dynamic behavior on annual and inter-annual time frames. The specific project site parcels have not been substantially modified by erosion forces in recent decades.

Anticipated Impacts and Mitigation Measures

The proposed project does not include plans for direct alteration of the shoreline or offshore areas. The proposed project is located over 100 feet mauka from the shoreline, and will not affect coastal erosion or shoreline behavior. The on-site soils, whose permeability is moderate with slow runoff and slight erosion hazard will absorb normal runoff events. As compared to the vacant site, with exposed soils and limited vegetation, the proposed project is anticipated to reduce the amount of soil erosion and increase protection of the coastal dune with proposed landscaping and controlled foot traffic. In the event of unstable beach loss and increased shoreline erosion rates, mitigation measures would be considered in the future.

Your comments and this response letter will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,
GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

CC: Wayne Hashiro, Director, Department of Design and Construction

UNIVERSITY OF HAWAI'I

Environmental Center

Mr. Gary Doi
City and County of Honolulu
Department of Design & Construction
650 King Street, 9th Floor
Honolulu, HI 96813

OCTOBER 24, 2005
RE:0320

Dear Mr. Doi:

Draft Environmental Assessment
Kawailoa Beach Park
Kawailoa, O'ahu

The City and County of Honolulu proposes improvements at Kawailoa Beach Park located at Chun's Reef on the North Shore, District of Wai'alua. New recreational facilities at Kawailoa Beach Park will provide beach-oriented recreation and support facilities for the North Shore community and visitors.

General elements of the proposed project involve planning for beach park amenities, including access and parking improvements, a comfort station and outdoor shower area, and a lifeguard tower and storage area. The park plan includes a restricted access nesting area for the Wedge-tailed Shearwater. Project components will be in compliance with the Americans with Disabilities Act of 1990.

This review was conducted with the assistance of Sheldon Plentovich, Department of Zoology, Linda Cox, Department of Natural Resources and Environmental Management and Scott Burch of the Environmental Center.

General Comments

The Draft Environmental Assessment (EA) for Kawailoa Beach Park addresses many concerns raised by the improvement project; however, our reviewers observed that some areas require further analysis and discussion.

The City and County of Honolulu is proposing to develop recreational facility improvements and construction activities in order to meet demands on recreational resources in the area. The site currently lacks parking improvements, restrooms, and lifeguard facilities. With increased use, such improvements could better serve beach visitors.

Although our reviewers generally find the draft EA to be well thought out, proposed improvements may affect cultural practices and biological resources in the area enough to raise some concern. Specific issues are addressed below.

Specific Comments

Flora (§ 3.6, page 3-8)

While the draft EA mentions a plan to landscape with non-invasive species, landscaping with native plants apparently is not considered. This beach park offers an excellent location for landscaping with endemic plants. Certain native coastal species are inexpensive, are adapted to growing in the project location, and require minimal care. Particularly suitable species include Naupaka (*Scaevola taccada*), the native grass *Sporobolisvirginicus*, Pa'u-o-hi'iaka - Skirt of Pele's Sister (*Jacquemontia ovalifolia*), 'Ilima (*Sida fallax*), and *Boerhavia repens*. These native coastal plants grow easily, require little water, and provide excellent ground cover and nesting habitat for shearwaters. In addition to improving the quality of nesting habitat, this landscaping plan also would have a greater appeal to the local community.

Fauna (§ 3.7, pages 3-8: 3-10)

Our reviewers commend the stated intent in the draft EA to "fence off" the shearwater nesting area, but they note that the type of fence to be used is critical to the well-being of the birds. Shearwaters and other seabirds need space to get airborne, and a chain-link or similar fence will trap and potentially harm birds. Roping off the area with small segments of rope tied to concrete-anchored poles would be most appropriate in this location. Similar fencing works well on offshore islet nesting sites, especially Mokuauia (Goat Island), but the height of the rope (optimally 30 - 36 inches above ground level to effectively restrict pedestrian access) is the key to successful habitat protection. The fences must allow the birds to easily access the nesting grounds, while being difficult for humans to step over or duck under. Small informational signs around the perimeter of the nesting area clarifying why the area is restricted would add to the effectiveness of the fence. In addition, educating the lifeguards would be helpful, as they could actively enforce the restrictions.

Any landscaping, roping or construction preferably should be completed between December and February, when the birds are not nesting. At a minimum, construction improvements should avoid the egg-laying through fledging period (June-November).

Since juvenile and adult seabirds are prone to become disoriented and fly towards lights, the parking areas, comfort station, and neighboring streets must incorporate a lighting design that minimizes this hazard. Lights directed skyward or broadly sideways could increase shearwater dropout, increasing their chances of being hit by a car or preyed upon by introduced predators like rats, cats and mongoose. Instead, lighting must project principally downward, and reflective illumination of structure walls should be minimized. Optimally, illumination schedules should allow for night lighting to be curtailed during the fledging season in November and the first week of December.

Quite often, the key to successful protection of sensitive wildlife populations in the vicinity of human activity is public education. The Offshore Island Restoration

Committee (OIRC), a multi-agency committee including representatives from state and federal agencies, non-profit organizations and the private sector, is dedicated to restoring and preserving habitat of sensitive species such as the nesting seabirds of Hawai'i, the Wedge-tailed Shearwater in particular. As part of an ongoing education and public outreach program, OIRC is seeking partners in a web cam program to monitor nesting sites, providing resources for researchers, wildlife managers and the general public via the internet. Most Shearwater nesting sites in the state are on small offshore islets and are very rare on Oahu. The site at Kawailoa is unique in its accessibility, but this access also engenders vulnerability to disturbance from human activity. As activity increases, additional mitigation measures to those stated in the draft EA may be necessary. On the other hand, the accessibility of the site makes it very suitable for a web cam installation. A discussion in the EA of the potential for partnership in the OIRC web cam program and other education and outreach efforts, such as signage for this site, would address the need for mitigation of negative impacts of the project on the nesting birds. Chris Swensen, OIRC Chairman, and Ken Foote, Education and Outreach Sub-Committee Chair can be reached at U.S. Fish and Wildlife Service, phone 808-792-9535.

Additional mitigation measures, including rat, cat and mongoose control, would increase fledging success in the nesting area and make the park more attractive and safe for park visitors.

Historic and Cultural Resources (§3.17, pages 3-22, 3-23)

The draft EA notes that cultural practices, mainly the gathering of coastal resources, could be disrupted by proposed improvements at the beach park. It recommends that cultural practitioners participate as advisors and managers of the park. Community members likely would be willing to participate but would find initiating such a program to be difficult. Our reviewers suggest that a community meeting would be beneficial in coordinating the start-up phase of such an organization, and the draft EA should address a facilitated community meeting as additional mitigation.

Thank you for the opportunity to review this draft EA.

Sincerely,

John T. Harrison Ph.D
Environmental Coordinator

cc. Jeffery Overton, Group 70
OEQC
J. Moncur, WRRC
Sheldon Plentovich
Linda Cox
Scott Burch

GROUP 70 INTERNATIONAL

Francis S. Oda, Arch. D., AIA, AICP
Norman G.Y. Hong, AIA
Sheryl B. Seaman, AIA, ASID
Hitoshi Hida, AIA
Roy H. Nihei, AIA, CSI
James I. Nishimoto, AIA
Ralph E. Portmore, AICP
Stephen H. Yuen, AIA
Linda C. Miki, AIA
George I. Atta, AICP
Charles Y. Kaneshiro, AIA, LEED
Jeffrey H. Overton, AICP
Christine Mendes Ruotola, AICP
James L. Stone, AIA, LEED

Paul P. Chorney, AIA
Philip T. Cuccia, CSI, CDT
Kimberly Evans
Pete C. Galvez, AIA
Sutobin Halim
Roy A. Inouye, AIA, CSI, CDT
Stephen H. Kelly, AICP
Cami Kloster
Katherine M. MacNeil, AIA
Frank B. McCue
Käwika McKeague
Kathryn A. Nam
Hiram C. Pajo
Donna D. Pennington
Kimberly Polkinhorn, AIA, LEED
Alvin Sakutori
Scott Tangonan
Tom Young, AIA

December 2, 2005

Dr. John Harrison, Environmental Coordinator
State of Hawai'i
University of Hawai'i, Environmental Center
2500 Dole Street, Krauss Annex 19
Honolulu, Hawai'i 96822

RE: Kawailoa Beach Park
Draft Environmental Assessment and Application for Special Management Area Use Permit, September 2004
TMK: 6-1-05: 14 (por.), and 6-1-08: 17, 18, 25 (por.), 26 (por.)
Kawailoa, O'ahu, Hawai'i

Dear Dr. Harrison:

Thank you for your letter of October 24, 2005 sent to Mr. Gary Doi regarding your review of the Draft Environmental Assessment for Kawailoa Beach Park.

The following are offered in response to your comments:

1. We acknowledge your support for the beach park improvements and facilities, and concur with your statement that with increased use, such improvements could better serve beach visitors.

2. In response to your comment on flora Section 3.6 in the Final EA will be modified to include the following discussion on landscaping:

   > Permanent landscaping will consist of a variety of species including native, non-invasive, and xeriscape in design and placement. Some native dune plants include Naupaka – Morning Glory (*Scaevola taccada*), the 'Aki 'Aki Native Grass (*Sporobolis virginicus*), Pa'u o Hi'iaka – Skirt of Pele's Sister (*Jacquemontia ovalifolia*), 'Ilima (*Sida fallax*), Alena (*Boerhavia repens*), HinaHina Ku-Kahakai - Beach Heliotrope (*Heliotropium anomalum*).

3. We acknowledge your support to "fence off" the shearwater nesting area and in response to your comments the following insert will be included in Section 3.7 of the Final EA:

   > Based on recommendations from the U.S. Fish and Wildlife Service, potential design components are proposed for the planned nesting area to increase preservation of the shearwaters. This would involve roping off the area with small segments of rope tied to concrete-anchored poles, approximately 30-36 inches above ground level to effectively restrict pedestrian access. Interpretive and educational signs would be used to provide further awareness of the importance of the protected area. This

mitigation would serve the dual purpose of minimizing the threat of disturbance to the Wedge-tailed Shearwaters, by providing a protected nesting area, while also providing an educational asset for the public.

4. The following insert will be included in Section 3.7 of the Final EA to mitigate potential impacts of the proposed lighting on the avifauna and marine life:

   To reduce the potential for interactions between nocturnally flying shearwaters with external lights and man-made structures, it is recommended that shields be installed for construction lighting and permanent lighting. This would minimize the threat of disorientation and downing of adult seabirds and shearwaters.

5. We acknowledge your support for the protection of the unique onshore Wedge-tailed Shearwater nesting site at Kawailoa. The following insert will include additional mitigation for Section 3.7 in the Final EA:

   In support of the proposed Wedge-tailed Shearwater nesting preserve area the Offshore Island Restoration Committee (OIRC) and the U.S. Fish and Wildlife Service are dedicated to restoring and preserving habitat of sensitive species such as the nesting seabirds of Hawai'i. The OIRC is initiating a web cam program to monitor nesting sites, providing resources for researchers, wildlife managers and the general public via the internet. The City and County will consider participation in the OIRC web cam program as part of an ongoing education and public outreach program (OIRC, USFWS).

6. As part of the pre-consultation process, the following community planning meetings and presentations were conducted in order to involve the community in the planning and development of the Kawailoa Beach Park improvements and recreation facilities, which included discussions on historic and cultural resources:

   - March 22, 2005: The preliminary program for the park and very preliminary concept was presented and reviewed by the North Shore Neighborhood Board No. 27 and attending public.
   - June 4, 2005: A community site visit meeting was conducted at the proposed Kawailoa Beach Park. The site visit and meeting was held with interested members of the community to discuss the park planning issues and address the potential alternative concepts for the Kawailoa Beach Park improvements.
   - June 28, 2005: A presentation to the North Shore Neighborhood Board was conducted to provide an informational update on the community site visit, and to discuss the park planning design concepts and issues. Ideas and insight gathered from the community during the pre-consultation activities have been addressed in the alternative park concepts and the analysis contained in this document.

Your comments and this response letter will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,
GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

CC: Wayne Hashiro, Director, Department of Design and Construction

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4432 • FAX: (808) 527-6743
DEPT. INTERNET: www.honoluludpp.org • INTERNET: www.honolulu.gov

MUFI HANNEMANN
MAYOR

HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUE
DEPUTY DIRECTOR

2005/ELOG-2237(lk)

October 24, 2005

Mr. Jeffrey H. Overton, AICP
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813

Dear Mr. Overton:

Re: Draft Environmental Assessment (DEA)
Kawailoa Beach Park
61-475, 61-479, 61-485 and 61-676 Kamehameha Highway - Kawailoa
Tax Map Keys 6-1-8: 17, 18, 23 (Por.), 25 (Por.), 6-1-5: 14 (Por.), 19 (Por.)

We have reviewed the Draft Environmental Assessment (DEA) for the Special Management Area Use Permit to construct new recreational facilities at Kawailoa Beach Park, and offer the following comments:

Section 1.0 Introduction

The project boundary as shown in Figure 1-2, includes tax map key (TMK) 6-1-5: 19 (Portion). Also, the lifeguard tower and the shearwater nesting area extend beyond the identified project boundary into TMK 6-1-8: 23. Please clarify and revise the document as necessary.

Section 2.0 Description of Proposed Project

1. Is the City proposing to acquire the parcels that are currently owned by other parties? If not, what arrangements will be made with the private landowners for the public use of the property?

2. The project area on the mauka side of Kamehameha Highway includes portions of four (4) parcels. Is the project area being subdivided from the larger parcels into one (1) lot? What is the status of the subdivision?

3. Parcels 17 and 18 must be consolidated or jointly developed.

4. The State Land Use Commission must be consulted to delineate the Urban/Conservation boundary on the makai side of Kamehameha Highway. Approval from the State will be required for any work within the conservation district.

5. The shoreline (dated), the 40-foot shoreline setback line, and the 55-foot waiver line must be delineated on the site plan. If the proposed project involves any work within 55 feet of the shoreline, a certified shoreline survey is required. A shoreline setback variance may be required if any work is within the 40-foot shoreline setback area.

6. The site plan should identify and locate all proposed work, including the wastewater treatment system.

7. What are the anticipated hours of operation?

8. The DEA discusses three (3) concepts for the proposed beach park recreation facilities. What is the preferred alternative?

9. The section on the project costs should discuss whether funding for the project is already secured. If the projects are not currently funded, when is funding anticipated?

10. The section listing the permits required for construction should indicate that grading, grubbing and stockpiling permits are issued by the Department of Planning and Permitting. Also, the Department of Facility Maintenance does not issue NPDES permits.

Section 3.0 Description of the Environmental Setting

1. The section on the flood hazard district should reference the Flood Insurance Rate Map (FIRM) Community Panel No. 150001 0110 E, effective November 20, 2000. Information on the base flood elevation and the elevation of the site should also be included. In addition, the flood hazard boundary must be delineated on the site plan.

   The DEA incorrectly states that the project is exempt from flood requirements under Section 21-9.10-13 of the Land Use Ordinance (LUO). For your information, Section 21-9.10-13 was repealed in its entirety under Ordinance No. 04-09 (enacted April 7, 2004), and replaced with Certification Standards. Therefore, the DEA must discuss how the project complies with flood hazard district standards.

2. The DEA should disclose the anticipated usage and associated recreational programs that may result from the project. If the proposed project is expected to generate a significant increase in traffic and/or beachgoers, or support future or larger surfing events, the DEA should disclose and address associated impacts.

3. Discuss the impact of the proposed lighting on the avifauna and marine life.

4. The section on land use states that the City purchased the mauka parcels in the mid-1990's. However, according to the TMK Information provided in Table 2-1, the City does not own all the parcels. Please clarify.

5. The section on the State Land Use Designation incorrectly references the Land Study Bureau Detailed Land Classifications as the source of the state land use district information.

   The mauka project area is in the state land use agricultural district. The proposed development is not consistent with uses permitted in the State Agricultural District and is subject to either a State Land Use District Boundary amendment or a State Special Use Permit. The DEA should address the implications of both options or redesign the project to meet the requirements of the State Land Use Agricultural District.

6. The section on Zoning should be expanded to discuss how the project meets the LUO development standards. Also, that the mauka site is in the AG-1 Restricted (not Restrictive) Agricultural District.

7. The DEA should discuss the consistency of the mauka project area with the North Shore Sustainable Communities Plan (SCP). This portion of the project area appears to be located beyond the Rural Community Boundary and in an area planned for agriculture and open space.

   There appears to be a trend to locate support facilities (e.g. Laniakea Beach Park) on the mauka side of the highway, outside the Rural Community Boundary of the SCP. The DEA should disclose what other future park improvements will be similarly situated and their impact on the objectives and policies of the North Shore SCP. Also, what is the status of the proposal to relocate Kamehameha Highway and what implications it may have on future beach park improvements.

8. The DEA should discuss past City approvals relating to amendments of the Development Plan Public Facilities Map and the current Public Infrastructure Map (PIM) for the proposed improvements.

Section 5.0 Plans and Policies

The DEA references the 1977 General Plan. Please note that the 1992 edition of the General Plan superseded all previous editions.

Special Management Area Use Permit

1. Provide a floor plan and elevation plan for the comfort station, the lifeguard storage and the lifeguard tower.

2. Provide a landscape plan and irrigation plan.

If you have any questions, please contact Lynne Kauer of our staff at 527-6278.

Very truly yours,

Barbara A Moon

Henry Eng, FAICP, Director
for Department of Planning and Permitting

HE:cs
g:\landuse\posseworkingdirectory\lkauer\05lg2237.doc

GROUP 70
INTERNATIONAL

Francis S. Oda, Arch. D., AIA, AICP
Norman G.Y. Hong, AIA
Sheryl B. Seaman, AIA, ASID
Hitoshi Hida, AIA
Roy H. Nihei, AIA, CSI
James I. Nishimoto, AIA
Ralph E. Portmore, AICP
Stephen H. Yuen, AIA
Linda C. Miki, AIA
George I. Atta, AICP
Charles Y. Kaneshiro, AIA, LEED
Jeffrey H. Overton, AICP
Christine Mendes Ruotola, AICP
James L. Stone, AIA, LEED

Paul P. Chorney, AIA
Philip T. Cuccia, CSI, CDT
Kimberly Evans
Pete C. Galvez, AIA
Sutobin Halim
Roy A. Inouye, AIA, CSI, CDT
Stephen H. Kelly, AICP
Cami Kloster
Katherine M. MacNeil, AIA
Frank B. McCue
Käwika McKeague
Kathryn A. Nam
Hiram C. Pajo
Donna D. Pennington
Kimberly Polkinhorn, AIA, LEED
Alvin Sakutori
Scott Tangonan
Tom Young, AIA

December 2, 2005

Mr. Henry Eng, FAICP, Director of Planning and Permitting
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

RE: Kawailoa Beach Park
Draft Environmental Assessment and Application for Special Management Area Use Permit, September 2004
TMK: 6-1-05: 14 (por.), 19 (por.) and 6-1-08: 17, 18, 25 (por.), 26 (por.)
Kawailoa, O'ahu, Hawai'i

Dear Mr. Eng:

Thank you for your letter of October 24, 2005 regarding your review of the Draft Environmental Assessment (DEA) for Kawailoa Beach Park.

The following are offered in response to your comments:

Section 1.0 Introduction:

The Final EA has been modified to include Tax Map Key (TMK) 6-1-05: 19 (Portion).

The exact location of the lifeguard tower is yet to be determined. The location of the lifeguard tower will need to be determined by a specified site analysis conducted by the City and County Ocean Safety and Lifeguard Services Division. Factors of the analysis include erosion rate factors, a radius analysis of where rescues and fatalities have occurred, ingress and egress patterns, and where hazardous conditions are likely to occur. At the community site visit, the lifeguards expressed a need to be located on the point of the site and close to the hazard area. The City will need to coordinate this use with Kamehameha Schools and the State of Hawai'i.

The site plan roughly identifies the existing shearwater nesting area, which extends off site. With the implementation of the proposed plan, additional consultation with the U.S. Fish and Wildlife Service would be beneficial to the protection of the shearwater.

Section 2.0 Description of Proposed Project:

1. The City is planning to acquire portions of the parcels mauka of Kamehameha Highway for the parking area. The parcels which are makai of the highway are now owned by the City. Tentative plans are to complete the project in two phases. The first phase would involve the makai area (comfort station,

lifeguard storage, parking/drop-off). The second phase would be for the 80-100 parking space lot on the mauka side of the highway.

2. The parcels would be subdivided into one lot.

3. Parcels 17 and 18 would be consolidated.

4. The boundary on the makai side of the Kamehameha Highway is based on the TMK parcel information. Approval from the State will be obtained for any work within the Conservation District.

5. The proposed project does not involve any work within 55 feet of the shoreline or within the 40-ft shoreline setback area.

6. The proposed wastewater treatment system is identified on the site plan in Appendix A of the Final EA.

7. According to the Department of Parks and Recreation (DPR), there will be no "hours of operation." The DPR is unable to enforce such hours, especially since this is a surfing/swimming beach. However, there will be lifeguard services during the day. Parking lot closure at night may be possible with the assistance of the North Shore community.

8. Alternative A is the Department of Design and Construction's preferred alternative among the three (3) concepts for the proposed beach park recreation facilities.

9. There is no current funding beyond the planning phase. Funds will be programmed for the Fiscal Year 2008 budget for design work. Construction funds will be programmed in the Fiscal Year 2009 budget.

10. For the Final EA, Section 2.8 has been modified to indicate that grading, grubbing and stockpiling permits are issued by the Department of Planning and Permitting. In addition, under the NPDES permit the City and County Department of Facility Maintenance has been deleted.

<u>Section 3.0 Description of the Environmental Setting</u>

1. For the Final EA, Section 3.5 has been modified to include the following insert:

   According to Flood Insurance Rate Map (FIRM Community Panel No. 150001 0110 E and 150001 0020 E, effective November 20, 2000, portions of the project site are located in "Zone VE" and "Other Areas – Zone X," see *Figure 3-3*. The makai project site is located within flood Zone VE, which refers to lands in which base flood elevations are determined and the land is subject to 100-year coastal floods with velocity hazards (wave action). The base flood elevations determined for the makai parcels are 18 and 20 feet. Whereas, the majority of the mauka project site is located within the flood

> Zone X designation, which indicates that the area is determined to be outside the 500-year floodplain. Elevations at the site range from approximately 15 feet to 20 feet above sea level, with maximum slopes approximately 4 percent (*Figure 3-1*).

In addition, the Final EA has been modified to correctly identify the Revised Ordinances of Honolulu 1990, as amended:

> The proposed project will comply with the amended Section 21-9.10, Revised Ordinances of Honolulu 1990, including development standards identified in Sections 21-9.10-4 and 21-9.10-7 applicable to the coastal high hazard district.

2. The proposed project is not expected to generate a significant increase in traffic and/or beachgoers, and no future surfing events are planned at this time. According to the traffic assessment report, included in Appendix B of the Final EA, "during the site visit traffic typically flowed in platoons, which were created by vehicles turning on and off Kamehameha Highway or traffic stopping for pedestrians crossing the highway." The proposed project is anticipated to improve current conditions at the proposed site by consolidating the beach parking off the highway shoulders, and improving pedestrian safety.

3. The following insert will be included in Section 3.7 of the Final EA to mitigate potential impacts of the proposed lighting on the avifauna and marine life:

> To reduce the potential for interactions between nocturnally flying shearwaters with external lights and man-made structures, it is recommended that shields be installed for construction lighting and permanent lighting. This would minimize the threat of disorientation and downing of adult seabirds and shearwaters.

4. For the Final EA, Section 3.11 has been modified to state the following:

> The City is planning to acquire the portions of parcels mauka of Kamehameha Highway. The two parcels which are makai of the highway are now owned by the City.

5. For the Final EA, Section 3.11 has been modified to correctly state the following:

> The project site is State Urban District Lands on the makai side of Kamehameha Highway, and does not involve the use of State Conservation District Lands.

Regarding the mauka parcels, on August 30, 2004, Kathy Sokugawa at DPP was consulted directly regarding the proposed uses on State Agricultural Lands. The proposed parking lot and possible park support facilities were determined to not require a State Special Use Permit.

6. For the Final EA, Sections 3.11 and 5.7 have been modified to include the following insert on Land Use Ordinance standards:

   The purpose of the LUO is to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, including the County General Plan and development plans. The LUO is also intended to provide reasonable development and design standards. These standards are applicable to the location, height, bulk and size of structures, yard areas, off-street parking facilities, and open spaces, and the use of structures and land for agriculture, industry, business, residences or other purposes (Revised Ordinance for the City and County of Honolulu, Chapter 21).

   Discussion: The subject property is designated as "AG-1: Restricted Agricultural" and "R-5: Residential" by the City and County of Honolulu's Land Use Ordinance *(Figure 3-5)*. Public facilities such as beach park facilities are allowed in R-5 and AG-1 districts. The proposed comfort station will comply with LUO, Section 21-3.50-4, Agricultural uses and development standards, for the proposed mauka site located in the AG-1 district, and Section 21-3.70-1 Residential uses and development standards, for the proposed makai site located in the R-5 district.

   For the mauka parcels, a Minor Conditional Use Permit will potentially be required for the proposed parking lot in the AG-1 district. The proposed parking lot landscaping, outdoor lighting, irrigation system, pathways and possible park support facilities will comply with Article 4, General Development Standards, of the LUO. In addition, the proposed parking lot and drop/off area will also comply with requirements in Article 6, Off-street Parking and Loading.

   For the Final EA, Section 3.11 has been modified to correctly state that the mauka site is in the AG-1 Restricted Agricultural District.

7. The proposed project area is designated as Park Land Use, which is an open space land use beneficial to the community. The North Shore Sustainable Communities Plan (1999) includes a Public Facilities Map symbol for the designated beach park on the makai side of the road. The project now includes the mauka support area.

   The proposal to relocate Kamehameha Highway is being recognized as a potential future improvement that is currently a conceptual proposal by the community.

8. The park is on the Development Plan Public Facilities Map for the North Shore and the Public Infrastructure Map (PIM) is in the inventory.

Section 5.0 Plans and Policies:

For the Final EA, Section 5.4 has been modified to reference the 1992 edition of the General Plan and include the following insert:

> Adopted by resolution in 1977, the 1992 revised edition of the General Plan for the City and County of Honolulu sets forth the long-range objectives for the general welfare and prosperity of the people of O'ahu and broad policies to attain those objectives. The General Plan provides objectives and policies intended to guide and coordinate City land use planning and regulation, and budgeting for operations and capital improvements.

Special Management Are Use Permit:

1. For the Final EA, the City's standard comfort station floor plan and elevation plan has been provided.

   The project floor plan and elevation plan for the lifeguard tower will need to be determined specifically for Kawailoa Beach Park based on the site analysis conducted by the Ocean Safety and Lifeguard Services Division.

2. The project landscape and irrigation plan will be provided with the DPP Master Application Form to initiate SMA permit processing.

Your comments and this response letter will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,
GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

CC: Wayne Hashiro, Director, Department of Design and Construction

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

1000 ULUOHIA STREET, KAPOLEI HALE, SUITE 215, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 692-5054 FAX: (808) 692-5857

MUFI HANNEMANN
MAYOR

LAVERNE HIGA, P.E.
DIRECTOR AND CHIEF ENGINEER

GEORGE K. MIYAMOTO
DEPUTY DIRECTOR

DRM 05-963

October 10, 2005

Mr. Jeffrey Overton, AICP
Group 70 International
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Overton:

Subject: **Draft Environmental Assessment – Kawailoa Beach Park**

Thank you for giving us the opportunity to comment on the subject Draft Environmental Assessment. The project does not impact our maintenance responsibilities and as such, we have no comments.

Should there be any questions, please call Larry Leopardi, Chief of the Division of Road Maintenance, at 484-7600.

Very truly yours,

Laverne Higa

LAVERNE HIGA, P.E.
Director and Chief Engineer

GROUP 70
INTERNATIONAL

Francis S. Oda, Arch. D., AIA, AICP
Norman G.Y. Hong, AIA
Sheryl B. Seaman, AIA, ASID
Hitoshi Hida, AIA
Roy H. Nihei, AIA, CSI
James I. Nishimoto, AIA
Ralph E. Portmore, AICP
Stephen H. Yuen, AIA
Linda C. Miki, AIA
George I. Atta, AICP
Charles Y. Kaneshiro, AIA, LEED
Jeffrey H. Overton, AICP
Christine Mendes Ruotola, AICP
James L. Stone, AIA, LEED

Paul P. Chorney, AIA
Philip T. Cuccia, CSI, CDT
Kimberly Evans
Pete C. Galvez, AIA
Sutobin Halim
Roy A. Inouye, AIA, CSI, CDT
Stephen H. Kelly, AICP
Cami Kloster
Katherine M. MacNeil, AIA
Frank B. McCue
Käwika McKeague
Kathryn A. Nam
Hiram C. Pajo
Donna D. Pennington
Kimberly Polkinhorn, AIA, LEED
Alvin Sakutori
Scott Tangonan
Tom Young, AIA

December 2, 2005

Ms. Laverne Higa, P.E., Director and Chief Engineer
City and County of Honolulu
Department of Facility Maintenance
1000 Uluohia Street, Suite 215
Kapolei, Hawai'i 96707

RE: Kawailoa Beach Park
Draft Environmental Assessment and Application for Special Management Area Use Permit, September 2004
TMK: 6-1-05: 14 (por.), and 6-1-08: 17, 18, 25 (por.), 26 (por.)
Kawailoa, O'ahu, Hawai'i

Dear Ms. Higa:

Thank you for your letter of October 10, 2005 regarding your review of the Draft Environmental Assessment for Kawailoa Beach Park.

We appreciate your comment that the improvements proposed in the DEA will not impact any of the Department of Facility Maintenance's facilities or operations.

Your comments and this response letter will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,
GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

CC: Wayne Hashiro, Director, Department of Design and Construction

12X989

NORTH SHORE NEIGHBORHOOD BOARD NO. 27

P.O. BOX 577 • HALEIWA, HAWAII, 96712
PHONE (808) 527-5749 • FAX (808) 527-5760 • INTERNET: http://www.honolulu.gov

October 17, 2005

Mr. Henry Eng
Director, Department of Planning and Permitting
650 S. King St.
Honolulu, HI 96813

Dear Mr. Eng:

The North Shore Neighborhood Board No. 27 requests that the plans that have been produced for parks at Chun's Reef and Laniakea not be implemented until the major traffic issues in this area have been resolved with the State Department of Transportation.

As you are probably aware, traffic in this area comes to a crawl or standstill during the day due to tourists wanting to see the turtles or, during surf season, surfers and tourists watching the waves. This situation has become intolerable for the residents and we are currently working toward coming up with short and long-term solutions to this problem.

While money has not been appropriated to build either park at this time, we are still very concerned that if the City does decide to go ahead and build either park at Chun's Reef or Laniakea, this will significantly add to the traffic woes and cause gridlock. By waiting to build these parks until we have resolved the traffic problems would be in the best interest of the community.

Thank you for your time and consideration,

Kathleen M. Pahinui

Kathleen M. Pahinui
Chair

cc: Mayor Mufi Hannemann
Council Chair Donovan Dela Cruz
Wayne Hashiro, Director, Department of Design and Construction
Senator Robert Bunda
Representative Michael Magaoay
Rodney Haraga, Director, State Department of Transportation

05 OCT 18 PM 4:10

RECEIVED
DEPT OF PLANNING & CONSTR
C & C OF HONOLULU

10/27/05 TH
10/27/05 GO

GROUP 70
INTERNATIONAL

Francis S. Oda, Arch. D., AIA, AICP
Norman G.Y. Hong, AIA
Sheryl B. Seaman, AIA, ASID
Hitoshi Hida, AIA
Roy H. Nihei, AIA, CSI
James I. Nishimoto, AIA
Ralph E. Portmore, AICP
Stephen H. Yuen, AIA
Linda C. Miki, AIA
George I. Atta, AICP
Charles Y. Kaneshiro, AIA, LEED
Jeffrey H. Overton, AICP
Christine Mendes Ruotola, AICP
James L. Stone, AIA, LEED

Paul P. Chorney, AIA
Philip T. Cuccia, CSI, CDT
Kimberly Evans
Pete C. Galvez, AIA
Sutobin Halim
Roy A. Inouye, AIA, CSI, CDT
Stephen H. Kelly, AICP
Cami Kloster
Katherine M. MacNeil, AIA
Frank B. McCue
Käwika McKeague
Kathryn A. Nam
Hiram C. Pajo
Donna D. Pennington
Kimberly Polkinhorn, AIA, LEED
Alvin Sakutori
Scott Tangonan
Tom Young, AIA

December 2, 2005

Ms. Kathleen M. Pahinui, Chair
North Shore Neighborhood Board No. 27
P.O. Box 577
Haleʻiwa, Hawaiʻi 96712

RE: Kawailoa Beach Park
Draft Environmental Assessment and Application for Special Management Area Use Permit, September 2004
TMK: 6-1-05: 14 (por.), and 6-1-08: 17, 18, 25 (por.), 26 (por.)
Kawailoa, Oʻahu, Hawaiʻi

Dear Ms. Pahinui:

Thank you for your letter of October 17, 2005 regarding your review of the Draft Environmental Assessment for Kawailoa Beach Park.

We recognize your concerns about traffic conditions along the North Shore, and sincerely appreciate the challenges you face as a Board in dealing with the growing congestion of Kamehameha Highway in your area. The City and County is seeking to solve some of the existing beach-related traffic problems with its proposed support facilities at Chun's Reef. The new beach park support facilities are intended to help manage the existing level of use of the Chun's Reef area, rather than expand its capacity and future use. We have discussed the intent of this project at several Neighborhood Board meetings and site visits with area residents, however, the project appears to be mired in a larger long-term traffic management issue facing the North Shore.

To better understand your concerns on this the issue, we conducted a site visit on Saturday, November 19, 2005 (3:00 pm) to witness typical peak use conditions. This sunny "beach day" featured light tradewinds and a beautiful 3-4 ft northwest swell -- the perfect conditions for surfers and beachgoers to enjoy a delightful afternoon at Chun's Reef. We noted a mix of people enjoying Chun's Reef on this fine day, including a combination of North Shore residents, O'ahu residents and visitors. Along Kamehameha Highway, we found over 125 cars and trucks parked haphazardly along both shoulders of the highway. Pedestrians were being forced to squeeze between the tightly-parked vehicles, waiting for fleeting opportunities to quickly scramble across the busy highway. The traffic was crawling toward Waimea Bay, yet it flowed slowly in stop-and-go platoons toward Haleiwa. Surprisingly, this heavy traffic was not being caused by turtle-watching or wave-watching drivers. Rather, the traffic slowed or stopped at Chun's Reef due to: (1) many vehicles parked tight to the edge of the highway, (2) the randomly slowing or stopping of cars to park or to allow another car to leave, and (3) the very dangerous but frequent pedestrian crossings in both directions. Further, there continues to be no restroom or lifeguard facilities to serve this area of the coast, which poses on-going public health and public safety concerns.

In short, the Chun's Reef area is in dire need of better management and essential public facilities, and we feel these will actually serve to improve traffic flow along this stretch of Kamehameha Highway. Restrooms and lifeguards are essential for this area. Traffic improvements can also be realized by:

- prohibiting and enforcing shoulder parking along the highway,
- creating a 100-space parking area in the mauka area,
- installing turning and storage lanes at the parking area driveway, and
- establishing two, striped and signed, pedestrian crossings.

The North Shore community may prefer to defer these park improvements, in anticipation of the State someday building a highway by-pass around this area. However, the by-pass idea is only a concept at this time. Since this Laniakea/Chun's Reef traffic congestion is not an emergency condition, as with the March 2000 rockslide closure of the highway at Waimea Bay, its priority is very low in comparison to other needed highway improvement projects on O'ahu. To advance the concept, it will require many stages of new legislative approvals to fund and complete the project planning, design, budgeting, land acquisition and eventual construction of such a by-pass roadway. It is important for the Board to understand that the City and County does not have a position either for or against such a proposal. Improvements will be needed in the future to allow for better traffic flow along Kamehameha Highway at many North Shore locations, and this is a regional transportation planning issue. It is clear, however, that the current problems and needs associated with the Chun's Reef area will only worsen without implementing the proposed plans for this support park. We look forward to working closely with the North Shore Neighborhood Board through this challenging community issue.

The following responses address the other concerns raised in your letter:

1. The proposed project is not expected to generate a significant increase in traffic and/or beachgoers. The proposed project is anticipated to improve current conditions at the proposed site by consolidating the beach parking off the highway shoulders, and improving pedestrian safety. In addition to the two proposed crosswalks, a traffic signal or a pedestrian overpass are two options that could be considered for crossing Kamehameha Highway from the parking lot to the beach park to additionally aid the situation.

2. New improvements affecting the State highway will be a Department of Transportation concern. The proposal to relocate Kamehameha Highway is being recognized as a potential future improvement.

3. The pre-consultation process has been committed to involving the community in the planning and development of the proposed Kawailoa Beach Park improvements and recreation facilities. The following community planning meetings and presentations were conducted:

- March 22, 2005: A preliminary program for the park and very preliminary concept was presented and reviewed by the North Shore Neighborhood Board No. 27 and attending public.
- June 4, 2005: A community site visit meeting was conducted at the proposed Kawailoa Beach Park. The site visit and meeting was held with interested members of the community to discuss the park planning issues and address the potential alternative concepts for the Kawailoa Beach Park improvements.
- June 28, 2005: A presentation to the North Shore Neighborhood Board was conducted to provide an informational update on the community site visit, and to discuss the park planning design concepts and issues. Ideas and insight gathered from the community during the pre-consultation activities have been addressed in the alternative park concepts and the analysis contained in this document.

4. There is no current funding beyond the planning phase. Funds will be programmed for the Fiscal Year 2008 budget for design work. Construction funds will be programmed in the Fiscal Year 2009 budget.

Your comments and this response letter will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,
GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

CC: Mayor Mufi Hannemann
Council Chair Donovan Dela Cruz
Wayne Hashiro, Director, Department of Design and Construction
Senator Robert Bunda
Representative Michael Magaoay
Rodney Haraga, Director, State Department of Transportation

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3375 KOAPAKA STREET, SUITE H425 • HONOLULU, HAWAII 96819-1869
TELEPHONE: (808) 831-7761 • FAX: (808) 831-7750 • INTERNET: www.honolulufire.org

MUFI HANNEMANN
MAYOR

ATTILIO K. LEONARDI
FIRE CHIEF

JOHN CLARK
DEPUTY FIRE CHIEF

October 12, 2005

Mr. Jeffrey H. Overton, AICP, Principal
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Overton:

Subject: Draft Environmental Assessment
Kawailoa Beach Park
Kawailoa, Oahu, Hawaii
Tax Map Keys: 6-1-005: 014 (portion)
6-1-008: 017, 018, 025 (portion), and 026 (portion)

We received a letter dated September 19, 2005, from Mica Hashimoto, Executive Assistant, regarding the above-mentioned subject.

The Honolulu Fire Department has no objections to the above-mentioned project.

Should you have any questions, please call Battalion Chief Lloyd Rogers of our Fire Prevention Bureau at 831-7778.

Sincerely,

ATTILIO K. LEONARDI
Fire Chief

AKL/DL:bh

GROUP 70
INTERNATIONAL

Francis S. Oda, Arch. D., AIA, AICP
Norman G.Y. Hong, AIA
Sheryl B. Seaman, AIA, ASID
Hitoshi Hida, AIA
Roy H. Nihei, AIA, CSI
James I. Nishimoto, AIA
Ralph E. Portmore, AICP
Stephen H. Yuen, AIA
Linda C. Miki, AIA
George I. Atta, AICP
Charles Y. Kaneshiro, AIA, LEED
Jeffrey H. Overton, AICP
Christine Mendes Ruotola, AICP
James L. Stone, AIA, LEED

Paul P. Chorney, AIA
Philip T. Cuccia, CSI, CDT
Kimberly Evans
Pete C. Galvez, AIA
Sutobin Halim
Roy A. Inouye, AIA, CSI, CDT
Stephen H. Kelly, AICP
Cami Kloster
Katherine M. MacNeil, AIA
Frank B. McCue
Käwika McKeague
Kathryn A. Nam
Hiram C. Pajo
Donna D. Pennington
Kimberly Polkinhorn, AIA, LEED
Alvin Sakutori
Scott Tangonan
Tom Young, AIA

December 2, 2005

Mr. Attilio K. Leonardi, Fire Chief
City and County of Honolulu
Fire Department
3375 Koapaka Street, Suite H425
Honolulu, Hawai'i 96819-1869

RE: Kawailoa Beach Park
Draft Environmental Assessment and Application for Special Management Area Use Permit, September 2004
TMK: 6-1-05: 14 (por.), and 6-1-08: 17, 18, 25 (por.), 26 (por.)
Kawailoa, O'ahu, Hawai'i

Dear Mr. Leonardi:

Thank you for your letter of October 12, 2005 regarding your review of the Draft Environmental Assessment for Kawailoa Beach Park.

We appreciate your comment that this project will not impact any of the Fire Department's project or existing facilities.

Your comments and this response letter will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,
GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

CC: Wayne Hashiro, Director, Department of Design and Construction