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October 14, 2002

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

Dear Ms. Salmonson:

Subject: Final Environmental Assessment (EA)
Kawai Nui Gateway Park, Kailua, Oahu, Hawaii
Tax Map Keys 4-4-34: 25; 4-2-17: 20; and 4-2-16: 01

We have reviewed the comments received during the 30-day public comment period that began on June 22, 2002.

The Department of Design and Construction has determined that this project will not have significant environmental effects and has issued a Finding of No Significant Impact. Please publish this notice in the October 23, 2002 Environmental Notice.

Enclosed are a completed OEQC Publication Form and four copies of the final EA.

Please call Mr. Gary Doi at 527-6699 if there are any questions.

Very truly yours,

RAE M. LOUI, P. E.
Director

RML:ei

Enclosures

cc: Helber Hastert & Fee

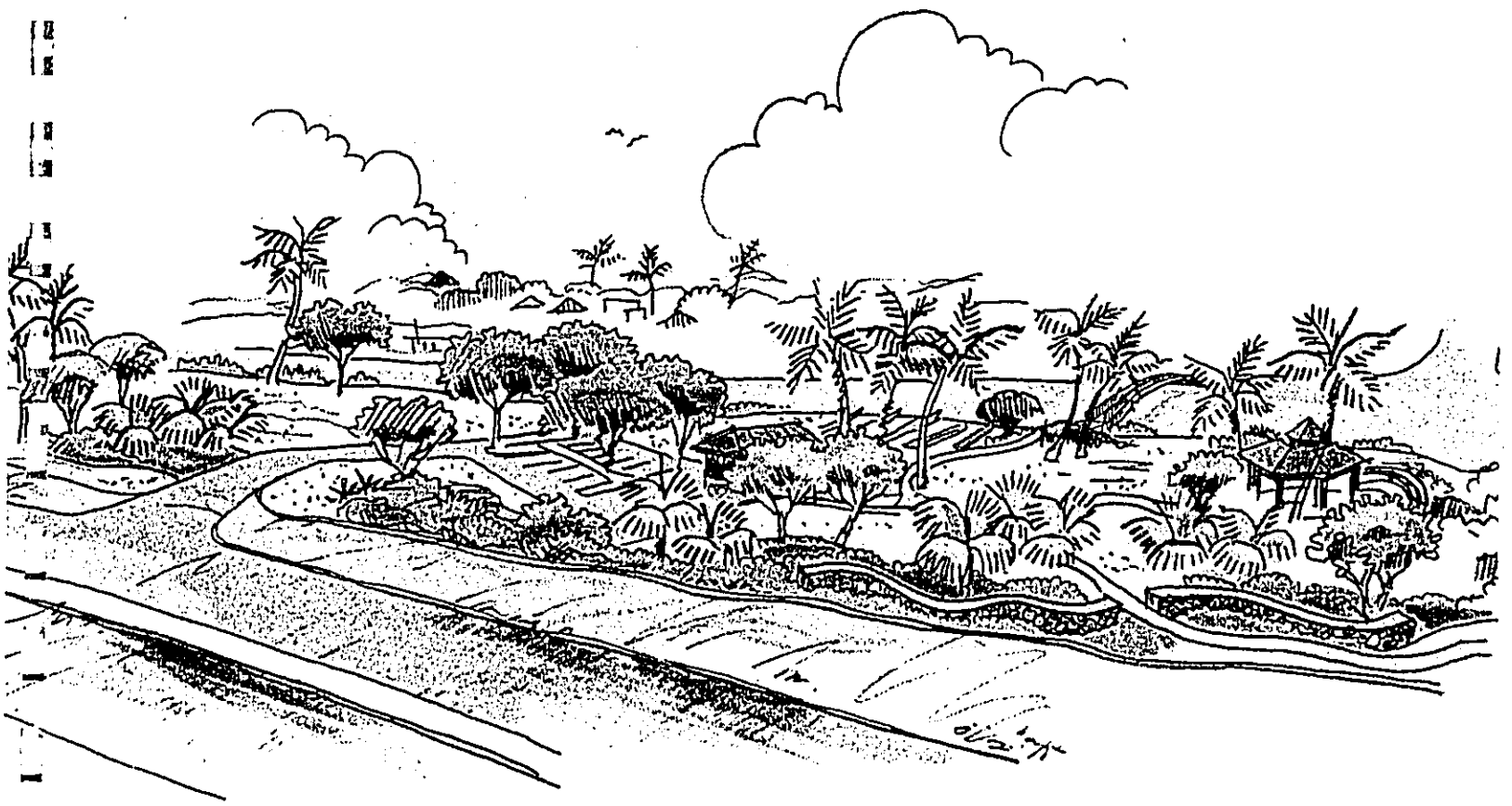
107

2002-10-23-OA-FEA-

Final Environmental Assessment

KAWAI NUI GATEWAY PARK

October 2002



Final Environmental Assessment

KAWAI NUI GATEWAY PARK

October 2002

Prepared for:
City and County of Honolulu,
Department of Design & Construction

Prepared by:
Helber Hastert & Fee, Planners, Inc.

Table of Contents

1.0 Project Summary

1.0 PROJECT SUMMARY

1.1 PROJECT CHARACTERISTICS

Project Name: Kawai Nui Gateway Park

Project Location: Kailua, Ko'olaupoko, O'ahu, Hawai'i

Description: Develop a community park and nature trail on vacant land located in the northeast corner of Kawai Nui Marsh.

Anticipated Determination: Finding of No Significant Impact (FONSI)

Proposing/Approving Agency:
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813
Tel: 523-4564 Fax: 523-4567
Attn: Mr. Gary Doi

Consulted Parties: See Chapter 8.0

Special Designations: Special Management Area

Special Districts: Flood Hazard District: General Floodplain

Planning Consultant:
Helber Hastert & Fee, Planners
Pacific Guardian Center, Makai Tower, #2590
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813
Attn: Mr. David Curry, AICP

Land Use Designations:

	TMK	Owner	Area (acres)	State Land Use District	Ko'olaupoko Sustainable Communities Plan	County Zoning[1]	FEMA Zone[2]
Mokapu Site	4-4-34:25	State	1.9	Urban	Open-Space/ Preservation	P-2	X
	4-2-17:20 portion	State	1.7	Conservation		P-1	X, A
	4-2-16:01 portion	County	1.5	Conservation		P-1	X
Mokapu Subtotal			5.1				
Coconut Grove Site	4-2-16:01 portion	County	8.2	Conservation	Open-Space/ Preservation	P-1	AH
Total			12.7				

1 P = Preservation

2 X = Outside the 500-year floodplain; A, AH = within the 100-year floodplain

On the recommendation of the Kailua Vision Team (KVT) the City and County of Honolulu (County), Department of Design and Construction (DDC) proposes to develop Kawai Nui Gateway Park (Park) on vacant government-owned lands that are located along the northeastern boundaries of Kawai Nui Marsh (Marsh), Kailua. The park is designed for passive recreational use and will include a comfort station, a parking lot, an education pavilion, outrigger canoe access to Oneawa Canal, a pedestrian bridge across Oneawa Canal, a nature walk, and waterbird habitat enhancement.

1.2 ENVIRONMENTAL REVIEW

Pursuant to Chapter 343 of the Hawaii Revised Statutes (HRS), and Title 11, Chapter 200, Hawaii Administrative Rules (HAR) of the Department of Health (DOH), the Kawai Nui Gateway Park is subject to environmental review because it involves use of the following:

- County funds;
- State and County lands; and
- State Conservation land (permit required).

Additionally, the project is subject to environmental review in support of a Special Management Area Permit (HRS Chapter 205A) application.

This Environmental Assessment (EA), prepared in accordance with HRS Chapter 343 and HAR Title 11, Chapter 200, describes:

- the purpose and need for the project;
- technical aspects of the project;
- alternatives considered;
- potential environmental impacts and proposed mitigation;
- environmental impacts and proposed mitigation, and
- documents the public review process.

1.3 SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION

During construction, there will be short-term minimal environmental impacts. These impacts will include noise associated with the use of heavy machinery, increased dust, and the exposure of soil surfaces that increases the potential for stormwater runoff into adjacent waterways. All of these impacts are addressed by adherence to municipal noise regulations and project-specific permit

conditions and Best Management Practices (BMPs). Permit conditions may include dampening the soil to control dust, minimizing the surface area of exposed soil, and installing soil retention fencing.

The Park will have numerous beneficial impacts on the Kailua Community including increased access to Kawai Nui Marsh, improved scenic views, additional open space and passive recreational areas. No long-term adverse impacts on the general community are anticipated during Kawai Nui Gateway Park operation; however, there are potential adverse impacts to the less than 20 residences adjacent to the Park. The vegetation clearing may result in decreased privacy, increased ambient light from traffic along Mokapu Boulevard, and an increased risk of trespassing for these neighboring residents. The project was designed to minimize these potential impacts through physical landscaping and security features. State laws and County park rules will restrict the hours of operation for park use to daylight hours.

The Table 1-1 summarizes the potential impacts and proposed mitigation measures, all of which are addressed in greater detail in subsequent chapters of this EA.

Table 1-1 Potential Impacts and Mitigation

RESOURCE CATEGORY	POTENTIAL IMPACTS (POSITIVE (+)/NEGATIVE (-)/ MINIMAL (0)	MITIGATION PROPOSED
Hydrology	0	NA
Potable Water	0	NA
Surface Water	- Soil discharge to water during construction	Implement engineering controls described in Grading and Grubbing permit, and Water Quality Certification (WQC) BMP.
Waterbirds	+ Habitat enhancement	NA
	- Short-term disturbance during construction	Implement Grading and Grubbing permit BMP to protect water.
	- Potential for increased pedestrian traffic to wildlife areas	• Restrict access to pathways • Prohibit animals without a leash • Retain shoreline vegetation.
Botanical Resources	+ Use native plants in landscaping and reduce non-native species.	NA
Aquatic Resources	- Short-term disturbance during construction activities	Implement Grading and Grubbing Permit and WQC BMP.
Historical, Cultural, and Archaeological	- Inadvertent discovery of human remains during construction	Construction will cease and authorities notified.
	- Potential for disturbance of paleoenvironmental deposits at wetland enhancement area of Coconut Grove Site.	Paleoenvironmental surveys will be conducted prior to construction.
	+ Facilitate access to cultural resource	NA
Ambient Noise	- Short-duration noise associated with construction equipment may disturb nearby residents.	Noise levels will be within DOH regulatory limits at the property line.
	- Noise generated by park users may disturb nearby residents.	• Limit hours of park use • Post park use rules; • Locate park structures away from residences; • Install boundary berms and vegetation to buffer noise on boundaries.
Light Emissions	- Nearby residents are concerned about lights from traffic on Mokapu Boulevard.	Install/retain boundary berms and vegetation to diminish headlight beams.
	- DOFAW concern about impact of lighting on young shearwaters	Use low sodium shielded lighting directed to the ground

RESOURCE CATEGORY	POTENTIAL IMPACTS (POSITIVE (+)/NEGATIVE (-)/ MINIMAL (0)		MITIGATION PROPOSED
Health & Safety	-	Nearby residents are concerned about unauthorized use of the park in evenings and by high school truants during the day.	• Restrict vehicle access to daytime hours with locked chained entrance; • Prohibit parking outside of gate along Mokapu Blvd. • Unlock gate after school day begins. • Police patrols will have unobstructed view of parking lot and comfort station from Mokapu Blvd.
	-	Nearby residents are concerned about accessibility to their property.	Install boundary fencing and signage, and retain vegetation screening to discourage trespassing
	+	Developed land will discourage unauthorized dumping.	NA
Traffic & Parking	+	Provide handicapped access to Kawai Nui Marsh	NA
	+	Complete segment of Marsh peripheral pathway	NA
	-	Inconvenient access from westbound lane of Mokapu Boulevard	Recommend altered traffic control at nearest intersection.
	-	Canoe transport will interfere with parking lot use	Prohibit parking of trailers except for loading and unloading
Scenic & Aesthetic Resources	+	Enhance appearance of overgrown property	NA
	+	Provide views of the Marsh from Mokapu Boulevard	NA
	+	Provide access to views across the Marsh from northern corner	NA
	+	Create wildlife observation areas	NA
Socio-economics	+	New recreational amenity	NA
	+	Possible increase in property values in the neighborhood	NA
	0	No adverse impact on jobs, commerce, or populations.	NA
Utilities	0	No adverse impact on water supply, power, or sewer.	NA
Air Quality	-	Minimal construction-related fugitive dust	Implement Grading and Grubbing Permit BMP.

NA Not applicable. No mitigation required or proposed.

1.4 UNRESOLVED ISSUES

There are unresolved issues that will be resolved before the construction of the project and these are summarized as follows:

Access

Currently, there is no convenient vehicular access to the Kawai Nui Gateway Park from the westbound lane of Mokapu Boulevard, nor is there convenient access to the westbound lane from the proposed park. The State Department of Transportation (DOT) will review the project and evaluate the proposal to change traffic control (e.g. allow a U-turn and install a dedicated left turn signal) at the Mokapu Boulevard-Kapaa Quarry intersection. A traffic study of the existing traffic volume at the intersection will be submitted to DOT to assist their decision-making. The issue is not critical to the development of the project, but the applicant will work with DOT to resolve the issue.

Mokapu Site Ownership

County land at the Mokapu Site is in the process of being transferred to the State. The project will not be developed until the transfer is complete.

Park Management

Kawai Nui Gateway Park will be developed with County funds and managed as a County park. An Executive Order (EO) between the State and County will dictate the transfer of management responsibility to the County. The project will not be developed until the EO is executed.

2.0 Purpose and Need

2.0 PURPOSE AND NEED

This chapter presents the story behind the project and justifies the proposal. It answers the questions: How did the idea for the project develop? What are the project goals? and for Whom?

2.1 PURPOSE OF THE PROJECT

As the largest remaining wetland (approximately 830 acres) in Hawaii, the Kawai Nui Marsh (Marsh) provides important habitat for endangered species of water birds, is a critical flood control basin for neighboring residential communities, and is eligible for listing on the National Register of Historic Places. Kawai Nui Gateway Park will be the visual and physical gateway to the Marsh and Kailua from Mokapu Boulevard. It will provide access to underutilized areas along the periphery of the Marsh for a variety of "low-impact" (passive) activities complementary to preserving, enhancing, studying and appreciating the Marsh resources. The objectives of the project are as follows:

- Improve the visual character at the entry to Kailua and scenic view planes to the Marsh;
- improve the quality of experience for visitors to the Marsh;
- enhance public awareness of the value of the Marsh as a significant natural and cultural resource;
- facilitate wetland ecosystem education and research;
- improve endangered species habitats;
- provide low-impact access for wildlife observation;
- facilitate recreational use of Oneawa Canal by canoe paddlers;
- complete a segment of the Kawai Nui Pathway designed to encircle the Marsh; and
- provide additional parking for visitors to the Marsh to relieve parking pressure at Kawai Nui Community Park.

2.2 NEED FOR THE PROJECT

Since the 1950's, government agencies, non-profit organizations, and other interested parties have been resolute in their efforts to manage and preserve the natural and cultural resources of the Marsh. Decades of landowner negotiations and legislation for the appropriation of funds were required to avoid inappropriate development, consolidate the parcels under government ownership (in progress),

designate select areas for public access, conduct resource surveys, implement restoration projects and prepare management plans. Long-range plans for the Marsh can be implemented as funding becomes available.

The 1983 Kawai Nui Marsh Resource Management Plan (Plan), prepared by the former State Department of Planning and Economic Development, outlined objectives, policies and generated a comprehensive list of recommended actions to: (1) manage the Marsh as a flood control facility; and (2) utilize its recreational, cultural, archeological, religious, educational and wildlife values.

Recommendations in the Plan included: (1) the development of nature walks; (2) vegetation-clearing to enhance scenic views; and (3) exploration of the means to enhance recreational opportunities in the estuarine area (Oneawa Canal area) (DLNR, 1983). The proposed Kawai Nui Gateway Park accomplishes several Resource Management Plan objectives.

The 1994 Kawai Nui Marsh Master Plan (Master Plan), prepared by the State Department of Land and Natural Resources (DLNR), describes project-specific recommendations for implementation of the Resource Management Plan. The Coconut Grove Site is not addressed in the Master Plan, but a portion of the proposed Kawai Nui Gateway Park is included and is referred to as "Kalaheo Park". Passive recreational activities were envisioned for Kalaheo Park, and design elements included paved parking for cars and buses, secured park entry from Mokapu Boulevard, walking paths, picnic areas, a pavilion, a footbridge across Oneawa Canal, and a dock for canoe launching. The Kalaheo Park was proposed to create a buffer zone on the Marsh boundary to protect the Marsh from encroaching development (DLNR, 1994). A Finding of No Significant Impact (FONSI) was issued for the key elements of Kawai Nui Master Plan that were described in a Final Environmental Assessment prepared in 2000: however, Kalaheo Park was referred to only as a "scenic park" and was not a key element in the Environmental Assessment.

Most recently, the Community's support for the Kawai Nui Gateway Park was expressed through the "21st Century O`ahu – A Shared Vision for the Future" planning process. This County initiative encouraged residents of each community to create a vision of their community's future through participation at public meetings. Each community was allowed to identify and prioritize planning,

design and/or construction projects that are consistent with the community's vision. In 1998, the KVT proposed the development of the Kawai Nui Gateway Park as a capital improvement project that would meet Kailua's vision objectives to: (1) preserve and protect the natural environment; (2) retain Kawai Nui Marsh as a natural habitat center; and (3) protect view planes from encroachment.

3.0 Project Description

3.0 PROJECT DESCRIPTION

This chapter describes the project location and land ownership, and provides a technical description of the proposed Kawai Nui Gateway Park.

3.1 PROJECT LOCATION

The proposed Kawai Nui Marsh Gateway Park will be located in Kailua, Ko'olaupoko, O`ahu within the northeastern boundary of Kawai Nui Marsh (Figure 1). The project area will be comprised of two non-contiguous development areas: the Mokapu Site, located north of Oneawa Canal, and the Coconut Grove site, located south of the Kawai Nui Community Park, which is also known as Kaha Park (Figure 1).

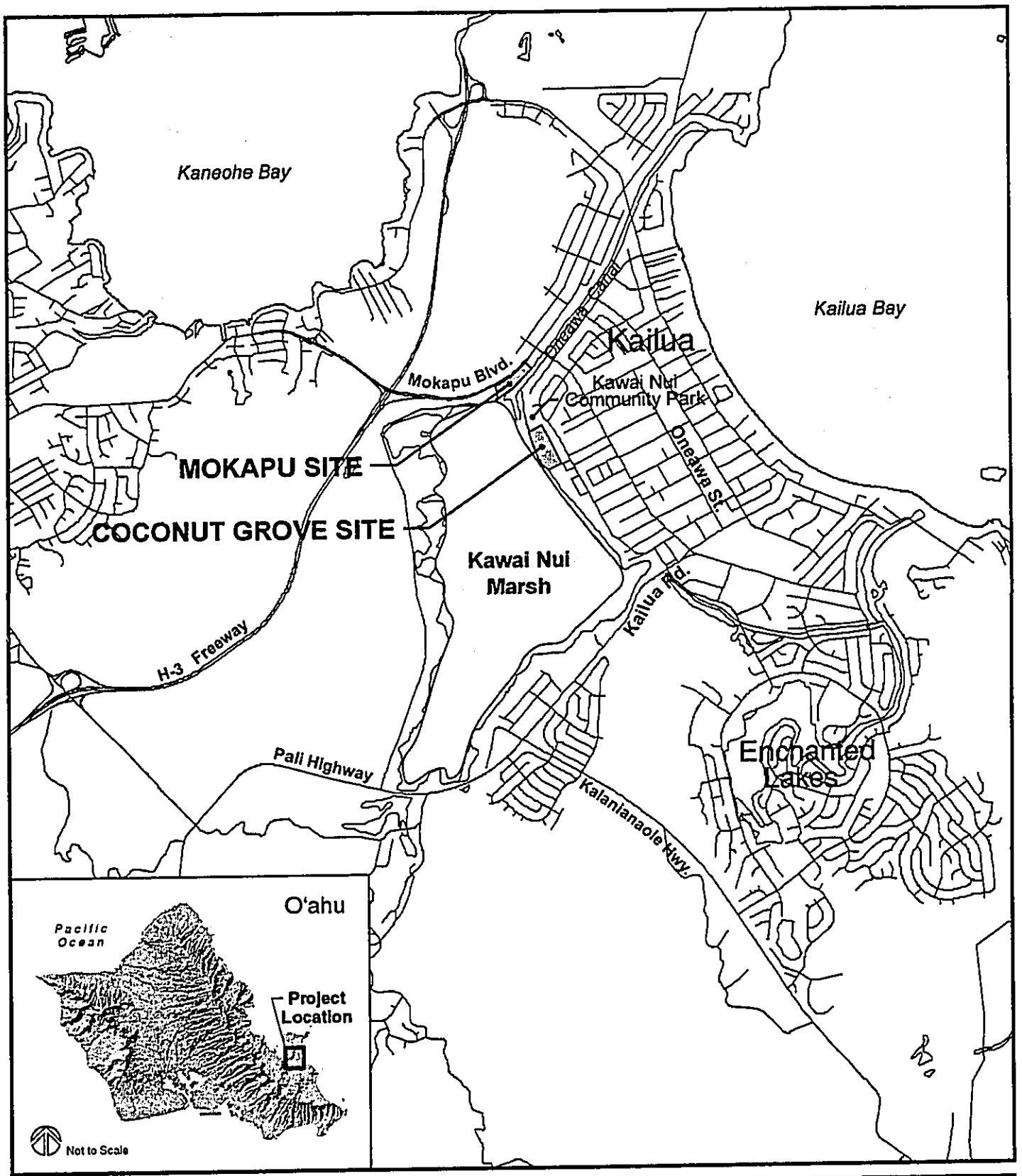
3.1.1 Mokapu Site

The 5.1-acre Mokapu Site (Figure 2) is bounded by Mokapu Boulevard to the north, drainage ditches to the east and west, and Oneawa Canal to the south. Currently, the project area is overgrown with vegetation and littered with discarded construction and household materials, and abandoned vehicles. There is a chain-link fence on the Mokapu Boulevard boundary.

North of Mokapu Boulevard is Kalaheo High School. East of the eastern drainage ditch are undeveloped overgrown single-family residential lots. West of the western drainage ditch is vacant land and Kapaa Quarry Road. South of Oneawa Canal is the northern end of the US Army Corps of Engineers' (USACE) flood control levee, the recently improved Kawai Nui Community Park, and single family homes.

3.1.2 Coconut Grove Site

The majority of the Coconut Grove Site (Figure 2) is rectangular-shaped unimproved fastland (8.2 acres) that is bounded on the north by the Kawai Nui Community Park, to the east by single family homes, to the south by vacant County property, and to the west by Kaelepulu Channel and the levee. Three unlined manmade drainage channels are aligned through the property in an east-west direction. These channels direct storm water flow from the Coconut Grove Subdivision to Kaelepulu Channel.

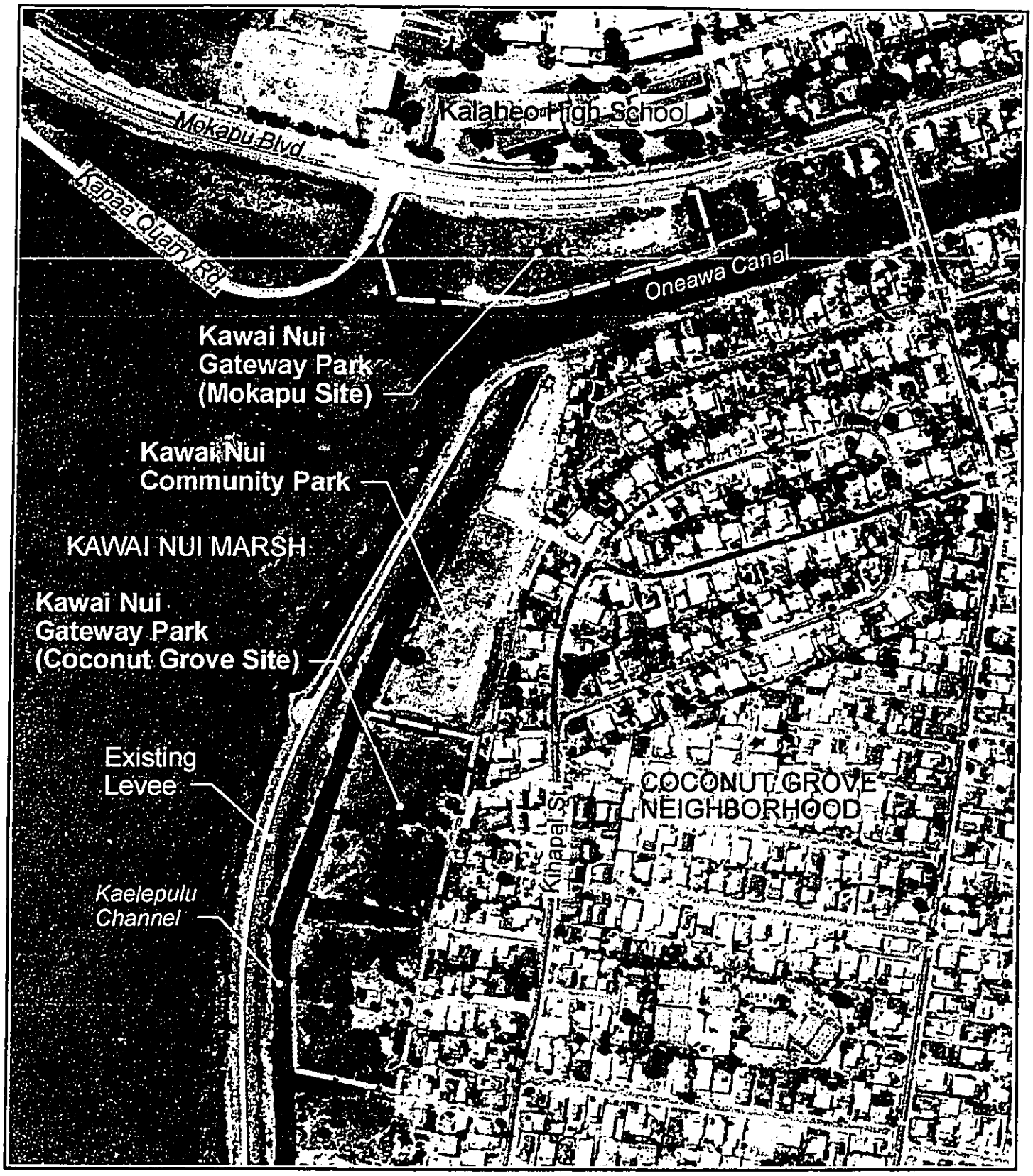


LOCATION MAP

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

Helber Hastert & Fee
PLANNERS

Figure
1



STUDY AREA

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

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0 Feet 400
0 Meters 120

Figure
2

3.2 LAND OWNERSHIP

The Kawai Nui Gateway Park Mokapu Site boundaries encompass Tax Map Key (TMK) parcel 4-4-34:25, and portions of TMK parcels 4-2-17:20 and 4-2-16:01, as shown on Figure 3. The Coconut Grove Site is a portion of TMK 4-2-16:01.

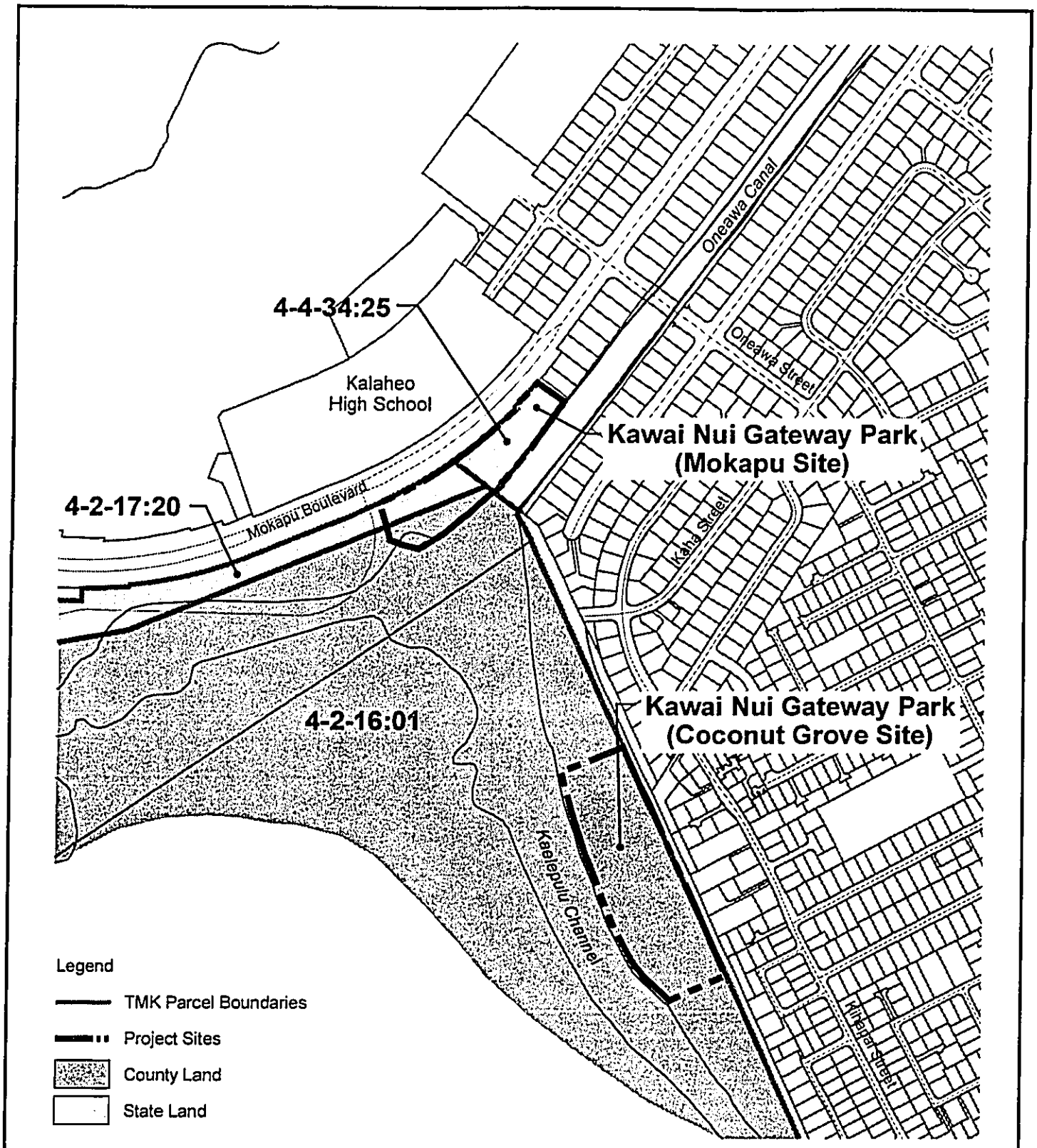
Parcel 4-2-16:01 is owned by the County, and the remaining two are owned by the State (Figure 3). The County parcel was purchased, in part, with Federal Bureau of Outdoor Recreation funding to maintain a buffer for the Marsh. The two State parcels were acquired by condemnation for the Kawai Nui Marsh Resource Management Plan. In the interest of consolidating Kawai Nui Marsh property under State ownership, a majority of the County parcel is in the process of being transferred to the State. Once the ownership transfer is complete, the State must issue an Executive Order (EO) transferring stewardship of the Mokapu Site parcel to the County Department of Parks and Recreation. A County request for the EO has been initiated. The EO is subject to Land Board approval. The Coconut Grove Site will remain under County ownership and control.

3.3 TECHNICAL DESCRIPTION

The proposed improvements are the culmination of historical planning and design efforts described in Chapter 2, as well as the project-specific community outreach efforts documented in Chapter 8. Although reaching a consensus on all design elements is an impractical expectation, the project described in this chapter was favored by the majority of those who participated in the process. The project satisfactorily addresses the purpose and need described in Chapter 2.

3.3.1 Mokapu Site

The design guidelines and design elements described in the 1994 Kawai Nui Marsh Master Plan for Mokapu Site were largely retained (Note: The location and boundary of the Mokapu Site and the Kalaheo Park Site described in the 1994 Master Plan are the same). The guiding principal for the Mokapu Site is that it be an aesthetically pleasing northern gateway to Kailua and the Marsh that provides parking, a comfort station, passive recreational space, an education shelter, and small boat (non-motorized) access to Oneawa Canal. The Mokapu Site Plan (Figure 4), and perspective rendering of the view from Mokapu Boulevard (Figure 5) are presented in this chapter.



LAND OWNERSHIP

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

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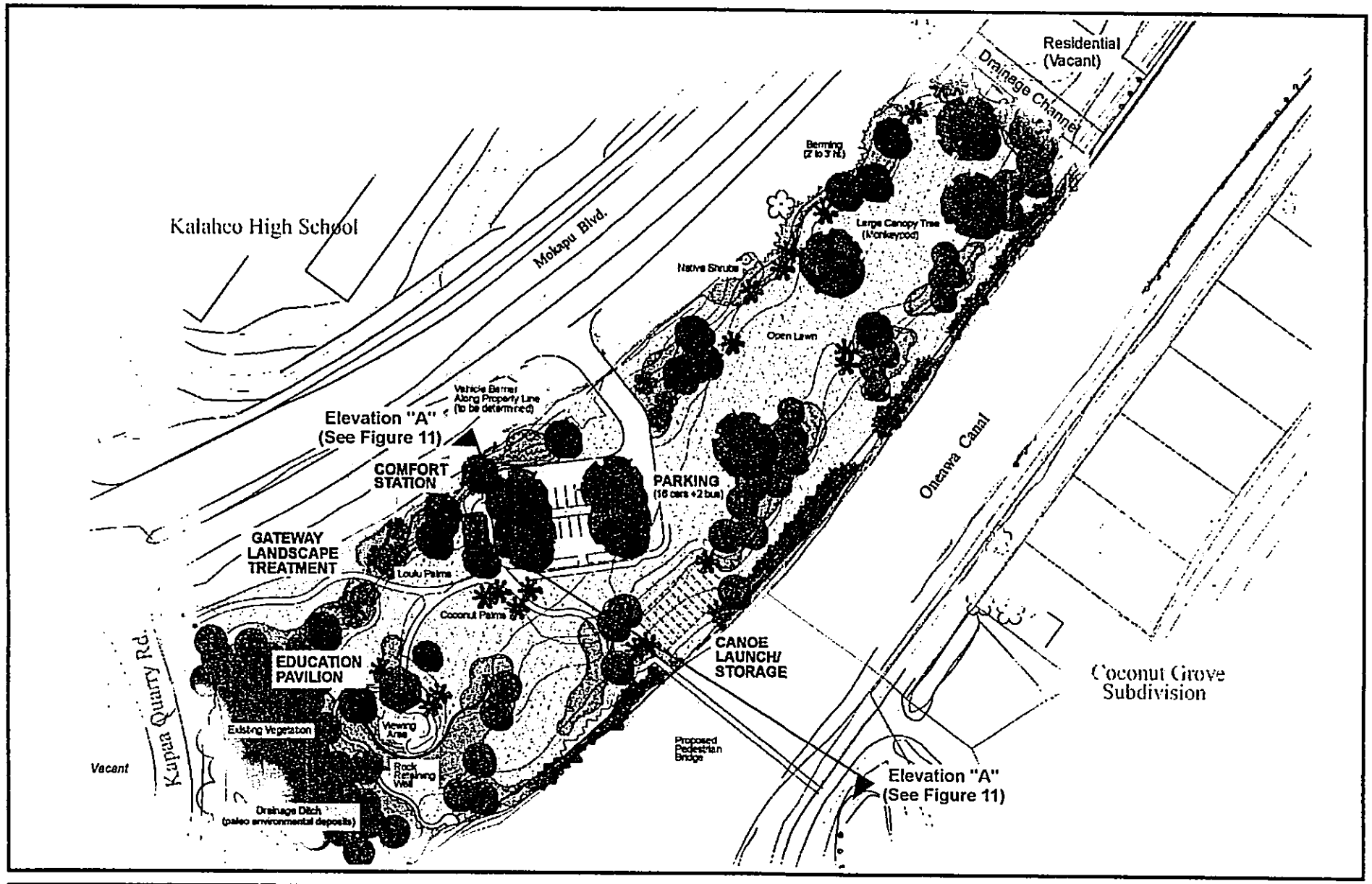
0 Feet 600
0 Meters 180

Figure
3



MOKAPU SITE PLAN

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

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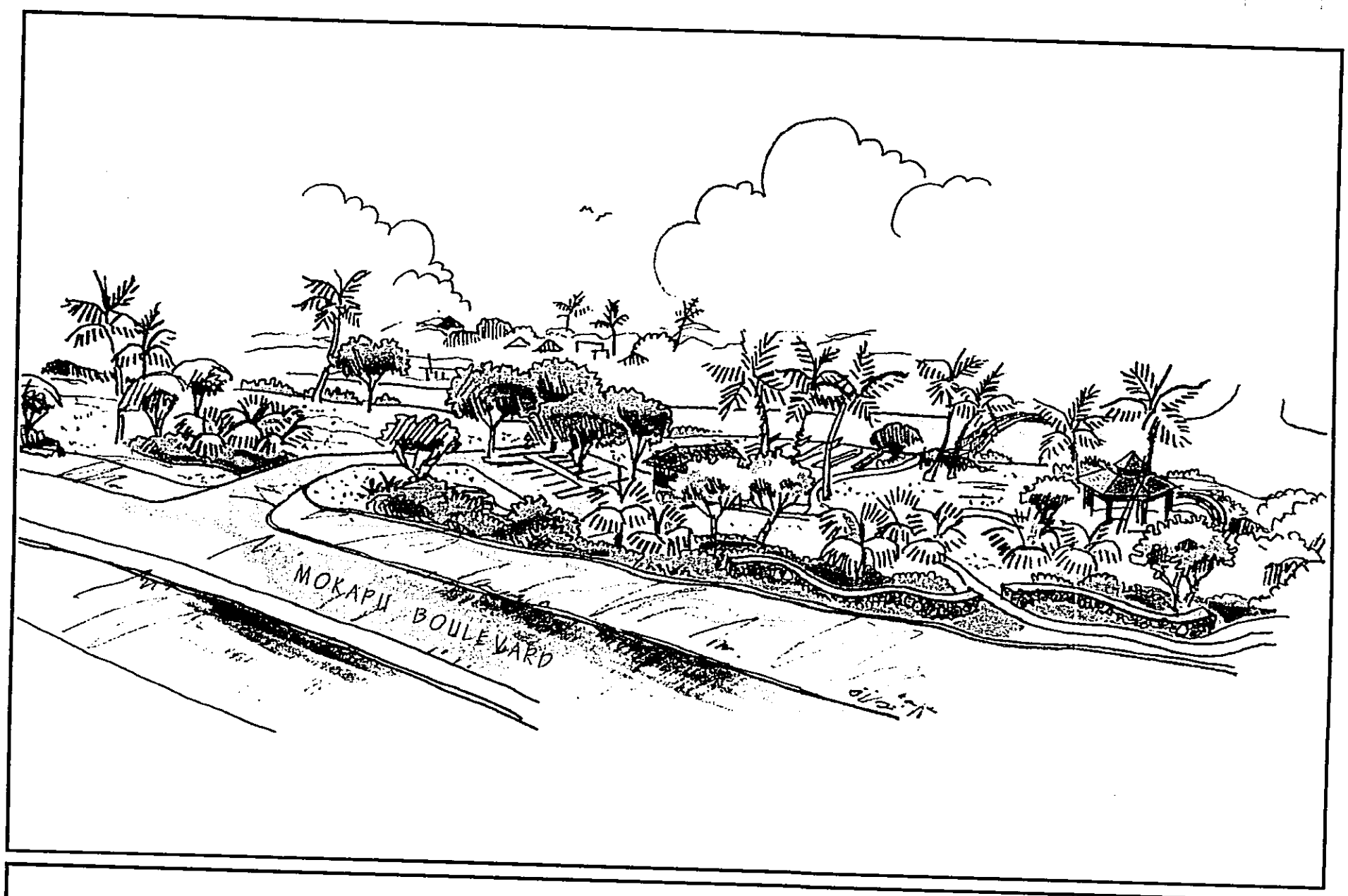
0 Feet 200
0 Meters 60

Figure
4



MOKAPU SITE PERSPECTIVE

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

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PLANNERS

Figure
5

3.3.1.1 Site Preparation

The Mokapu Site (Site) is generally overgrown with scrub vegetation (e.g., *hale koa*, California Grass), and there are earthen berms (5 to 6 feet in height) indicative of historical grading at the site. In addition, there is visible evidence (e.g. construction materials, plumbing fixtures, car chassis) that the area has been used as an unauthorized solid waste disposal site.

With the exception of valued vegetation such as the existing *milo* trees, the interior of the Site will be cleared, grubbed, and fine graded with topsoil brought to the Site. Grading and grubbing will be in accordance with the County's Department of Planning and Permitting (DPP) standards (as described Chapter 5.2). The proposed structures are located outside of the 500- and 100-year flood hazard area. No significant changes to ground elevations are proposed.

3.3.1.2 Access

Vehicular access to the park will be from the east-bound decelerator lane of Mokapu Boulevard. This entrance will be located approximately 450 feet east of the Kapaa Quarry Road - Mokapu Boulevard intersection.

The planned Kawai Nui Marsh Pathway Project, also developed during the County visioning process, proposes a perimeter trail around Kawai Nui Marsh. A portion of this pathway is aligned through the Mokapu Site of the Kawai Nui Marsh Gateway Park. The 6-foot wide concrete pathway (4-inch deep concrete surface over a 6-inch deep compacted gravel base) will be aligned through the western portion of the Mokapu Site from the western Site boundary near Kapaa Quarry Road to Oneawa Canal. The pathway will extend via a bridge over Oneawa Canal to the Kawai Nui Community Park and the levee.

3.3.1.3 Vehicle Parking

The paved access road will terminate in a paved parking lot that accommodates 16 cars (2 handicapped-designated stalls) and 2 buses. The road and parking lot will be paved with a recycled glass/asphalt (3-inches deep) composite over a 6-inch deep compacted gravel base. The parking lot area and access road will be approximately 18,000 square feet.

3.3.1.4 Structures

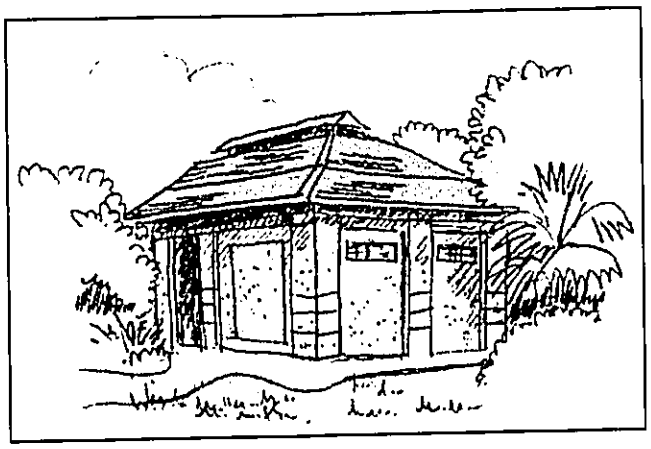
The proposed comfort station, education pavilion, and pedestrian bridge were designed in accordance with County Land Use Ordnance (LUO) for Flood

Hazard Districts. Design characteristics of these structural elements are presented on Figure 6.

The comfort station will be adjacent and west of the parking lot. It will be a standard County-designed facility constructed of 8-inch concrete masonry units, concrete flooring, and metal roofing. The structure will be approximately 600 square feet and conform to Americans With Disabilities Act (ADA) restroom standards. An outdoor shower, constructed during the first phase of development, will be located south of the comfort station site (Figure 8). The shower will have a recycled plastic lumber roof over a concrete pad. The wastewater will drain to the sanitary sewer system. The roof will prevent rainwater from entering the shower drain. The number of shower heads installed will be dictated by County building code.

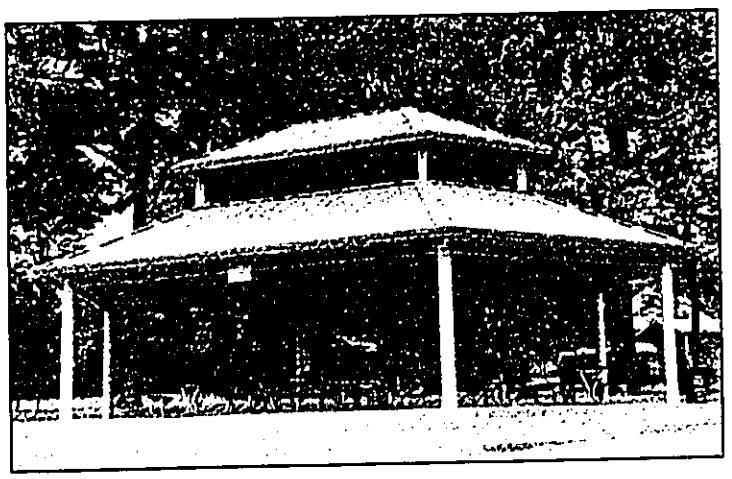
A 30-foot diameter pavilion will be located in the western end of the Mokapu Site (Figure 4). It will provide a shady area for educational/research groups to congregate. The structure will be open-sided and constructed of pre-fabricated recycled plastic lumber. A concrete walkway will provide access to the pavilion from the comfort station and parking lot. There will be an additional concrete pathway (approximately 30 linear feet) south of the pavilion that terminates in a concrete pad (approximately 150 square feet) that will be used as a scenic-viewing platform.

A pedestrian bridge (Figure 4) (approximately 140 linear feet in length) is proposed to connect the pedestrian pathway, aligned through the Mokapu Site, to the southern bank of Oneawa Canal. The bridge will provide access between the Kawai Nui Gateway Park, the USACE flood control levee, and the Kawai Nui Community Park The recommendation is for a 6-foot wide structure of steel beams and recycled plastic lumber. During pre-assessment consultation, the USACE commented that the bridge must be freestanding and the span of the bridge must be elevated above the top of the levee wall (approximately 20 feet Mean Sea Level).



Comfort Station

Pedestrian Bridge



Pavilion

MOKAPU SITE DESIGN CHARACTERISTICS

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

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PLANNERS

Figure
6

Construction of the footbridge is not included in existing project funding by the KVT; however it is retained as a project component in the Kawai Nui Gateway Park environmental review process.

Picnic tables and park benches will be located throughout the area, as appropriate, in keeping with the passive recreational uses in the Park.

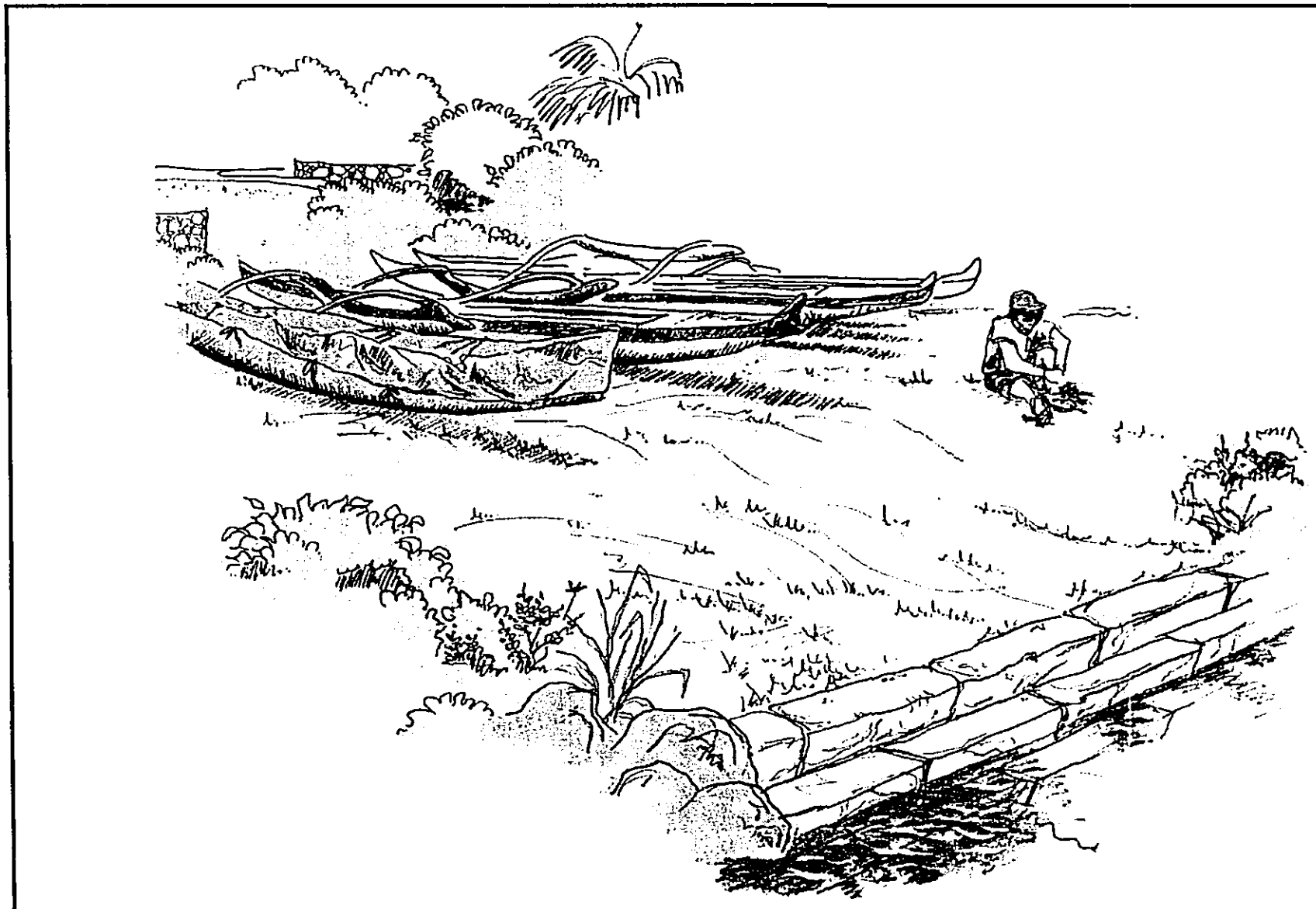
3.3.1.5 Canoe Paddling Facilities

A canoe launch and open lawn storage area for approximately eight canoes (approximately 3,200 square feet) will be located south of the parking lot and east of the Oneawa Canal footbridge. No physical structure is proposed for storing outrigger canoes, but a lawn area is designated for canoe storage. No structures are allowed in Oneawa Canal, for flood hazard control reasons; therefore, no boat docks or ramps are proposed. Instead, to facilitate launching the canoes into the canal, a hard edge (15 linear feet) will be constructed along the water's edge. It will be comprised of recycled plastic "timbers", forming steps to extend from average high tide level to average low tide level (Figure 7). In addition, to minimize the impact of heavy foot traffic on vegetation grass paving is proposed in the area of the canoe storage and the canoe launch. Grass paving refers to a rigid plastic net with cells that are filled with soil and seeded. The walls of the cells are rigid enough to disperse the weight of pedestrians and canoes and prevent compaction of grass.

3.3.1.6 Landscaping

Existing native plants will be retained. The *milo* (Thespesia populnea) forest, located at the western end of the Site, and shoreline vegetation will serve as a noise and visual buffer from Kapaa Quarry Road traffic. Existing trees and planted vegetation will be retained along the northeastern boundary to buffer the residences from park activity noise and to provide some level of privacy.

The open space areas will be planted with native drought-resistant paspalum grass (Paspalum vegetatum). The entrance will have a "native palm theme" of *loulu* (Pritchardia) and *hala* (Pleomele) as consistent with objectives of the KVT Community Vision Statement.



CANAL ACCESS DESIGN

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

Helber Hastert & Fee
PLANNERS

Figure
7

Landscaping plants may include:

- large canopy trees e.g., Monkey pod (Samanea saman);
- native shrubs e.g., *naupaka* (Scaevola sericea), Hibiscus (Hibiscus arnotianus) and *lau nui* or Gardenia (Gardenia brighamii);
- native trees e.g., *kamani* (Calophyllum inophyllum), and *kou* (Cordia subcordata);
- accent plantings e.g., Spider Lily (Crinum asiaticum) and beefsteak (Acalypha wilkesiana), and
- screening vegetation and trees e.g. *milo*, *hau* (Hibiscus tiliaceus), *naupaka* (Scaevola sericea).

Low lava rock walls (maximum 30-inches height) may be used on either side of the pedestrian entry into the park for aesthetic reasons. An additional lava rock wall (maximum 30 inches in height and approximately 200 feet in length) is proposed in the vicinity of the viewing platform to serve as a retaining wall and define the scenic viewing area.

3.3.1.7 Access-Limiting Features

A standard 6-inch tall concrete curb will delineate the park boundary along the northwest edge of the park on either side of the vehicular entrance. Wooden poles or other types of inexpensive features will be installed parallel to Mokapu Boulevard to prevent cars from entering the park in the landscaped area.

A security gate (locked chain), similar to the gate at Kawai Nui Community Park, will prohibit vehicular entry into the park after hours. There is no physical control proposed for pedestrian access. Vehicular parking along Mokapu Boulevard and fronting the park will be prohibited, subject to DOT concurrence. This will discourage people parking outside the gate and walking onto the site after hours.

Low earthen berms (maximum 3-foot height) along the Mokapu Boulevard edge of the Park will define the park border, further control vehicular access to the park, diminish Mokapu Boulevard traffic noise within the park, and augment the aesthetics of the site.

A chain-link security fence will be located on the eastern boundary of the park, separating the Park from undeveloped private property. The fence will extend to the edge of Oneawa Canal to discourage trespassing onto private property from

the Park. There will be a secured access gate to the County easement along the bank of the Canal for authorized personnel. The overgrown vegetation adjacent and east of the Mokapu Site will continue to provide a buffer for neighbors from the Park.

3.3.1.8 Signage

The Park will have signage describing the hours of park operation and permitted activities. As funding becomes available, there are plans for interpretative signage with respect to cultural and biological resources. The signage has not been designed, but will be consistent with other signage proposed at Kawai Nui Marsh.

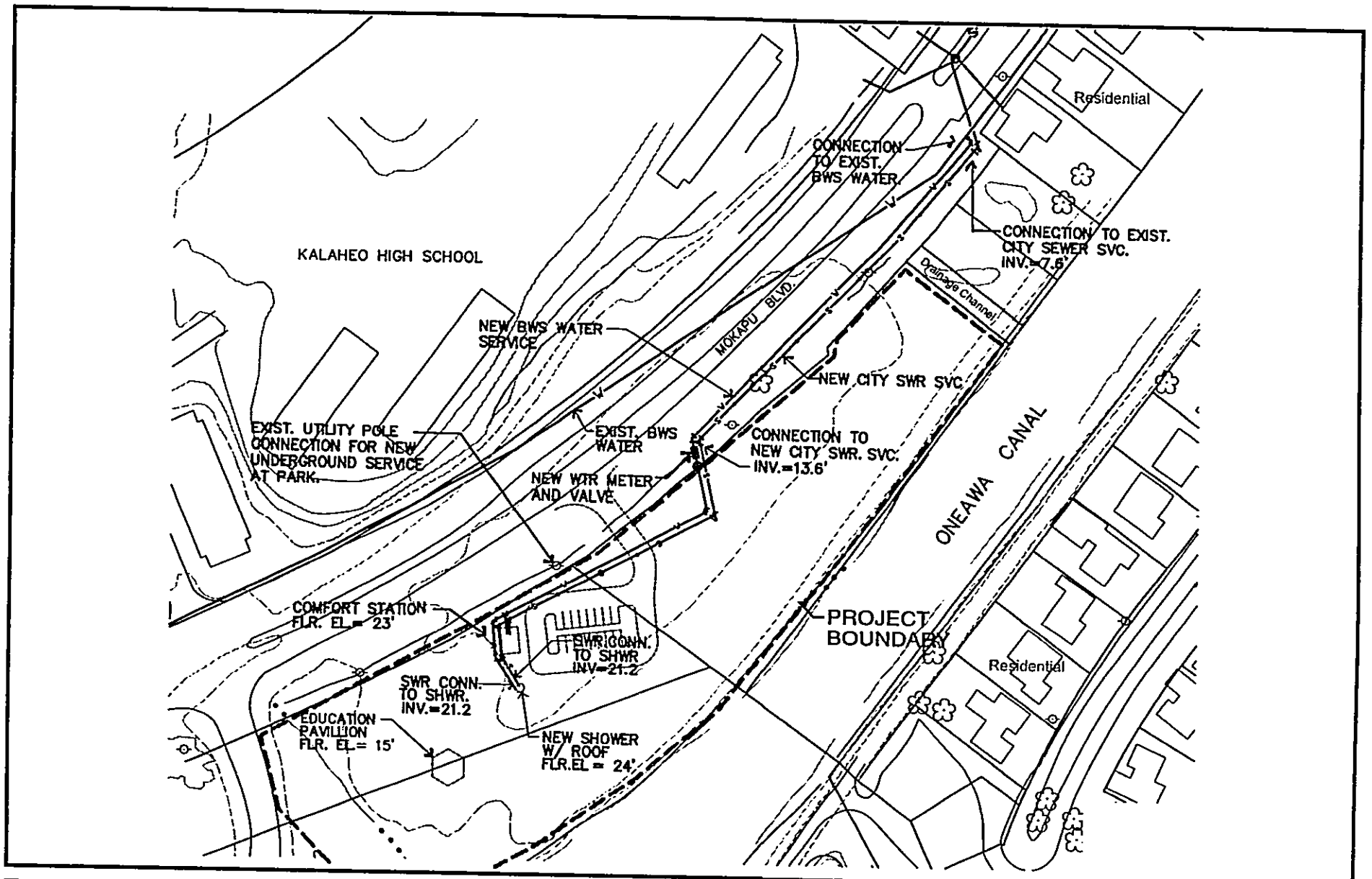
3.3.1.9 Utilities

Wastewater disposal, potable water, and electricity will be provided at the Site, as shown on Figure 8, at fees determined by the providers.

Potable water will be provided by the City and County of Honolulu Board of Water Supply (BWS). The existing water system is presently adequate to accommodate the proposed project, according to the BWS DEA comment letter (Appendix E). Potable water will be distributed to the comfort station, drinking fountain, and irrigation system via approximately 900 linear feet of underground pipe. The connection to the existing BWS service line will be near the residential property north of the site adjacent to Mokapu Boulevard. The proposed project will comply with BWS Cross-Connection Control and Backflow Prevention requirements and the building permit is subject to BWS review.

Wastewater will be removed from the comfort station and shower via a six-inch sewer line that connects to the municipal sewer infrastructure at the Mokapu Boulevard property boundary. The wastewater will be treated at the Kailua Wastewater Treatment Plant.

Hawaiian Electric Company will provide electric power to the Site's comfort station from an existing distribution line that is parallel to Mokapu Boulevard. The number of fixtures installed will be determined by the County. As required by County Land Use Ordnance (LUO), the low sodium exterior lights will be shielded with full cut-off fixtures to eliminate direct illumination to any adjacent residential units (LUO Article 4, Sec. 21-4.100), and to minimize the impact to young shearwaters that are fatally attracted to lights. Although the park will be closed in



MOKAPU SITE - UTILITIES

Kawal Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

Helber Hastert & Fee
PLANNERS

0 Feet 200
0 Meters 60

Figure
8

the evenings, exterior lighting is included at the comfort station for security purposes. No pathway lighting or aesthetic lighting for the landscape or other features is planned.

Stormwater flow from impervious areas of the road and parking lot will flow to adjacent landscaped areas, and French drains are recommended to retain flow onsite.

Solid waste receptacles will be placed at the Site, and solid waste will be removed by the County's park maintenance staff for proper disposal in the municipal landfill.

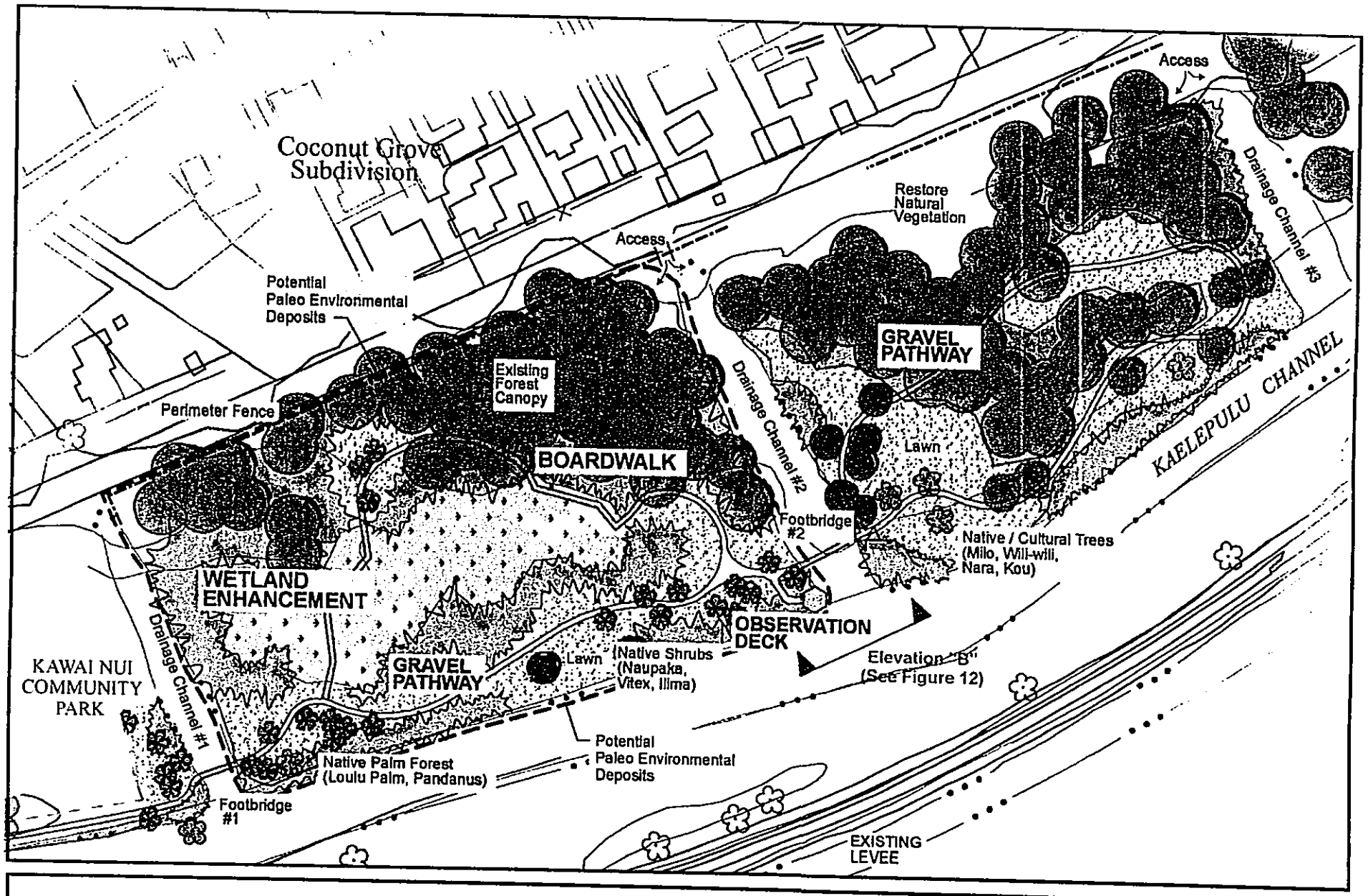
3.3.2 Coconut Grove Site

Development of the Coconut Grove Site of the Kawai Nui Gateway Park is not specifically addressed in the 1994 Master Plan; however, the area is included within the general boundaries of the Kawai Nui Marsh and general guiding principles and objectives for the Marsh are applicable. The objective for development of this area is to provide controlled access into unused County property to facilitate education/research, and appreciation and enjoyment of wetland and tropical ecosystems.

The Site encompasses two areas of land, separated by drainage channels. Because of the channels, the land is generally inaccessible to the public, except for residents of adjacent homes. The guiding principle for this Site is to create a "nature walk" experience. Specific elements include: gravel pathways, an observation deck, wetland enhancement, and vegetation thinning and landscaping. No utilities are proposed, and no vehicular access is proposed (Figure 9).

3.3.2.1 Site Preparation

The Site is overgrown with California grass (Brachiaria mutica), mangrove (Rhizophora mangle), and *koa haole* (Leucaena leucocephala). This overgrowth will be retained as a privacy buffer for residents along the eastern boundary. Interior of the Site, these plants will be removed. Valued mature trees will be retained. No mass grading or fill activities are proposed.



COCONUT GROVE SITE PLAN

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

Helber Hastert & Fee PLANNERS

0 Feet 100
0 Meters 30

Figure 9

3.3.2.2 Pathways

The pedestrian nature trail will be comprised of gravel paths, boardwalks and footbridges.

The gravel pathway segments represent approximately 2,000 linear feet of the total nature trail and are 4 feet wide. They will be constructed of compacted crushed "blue rock" gravel on a sub-grade landscape fabric.

There will be two segments of boardwalk, totaling approximately 300 linear feet, for traversing the wetlands in the northern area of the Site. They will be 6-feet wide and constructed of treated recycled lumber or concrete support posts, and recycled plastic lumber planking and handrails. A conceptual drawing of the boardwalk is illustrated in Figure 10.

Footbridges # 1 and # 2 traverse Drainage Canal #1 and Drainage Canal #2, respectively. They will be constructed of recycled lumber support members, handrails, and planking. They are 6 feet wide and represent approximately 90 linear feet of the nature trail.

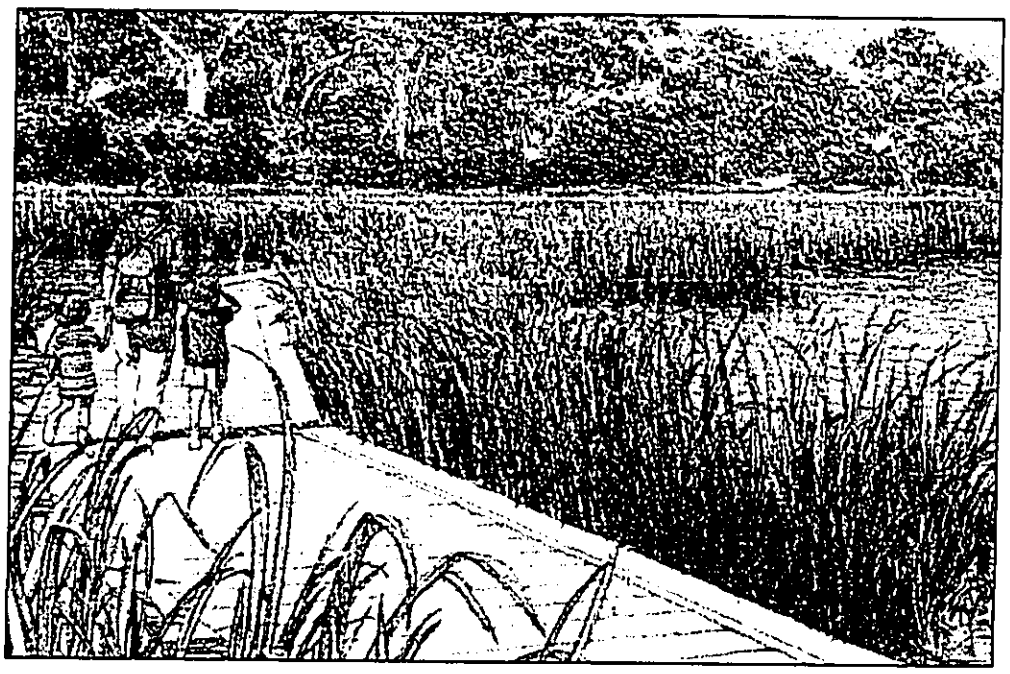
3.3.2.3 Landscaping

Landscaping will be focused on the borders of the gravel pathways; although limited landscaping is planned for the interior portions. Plantings may include the following:

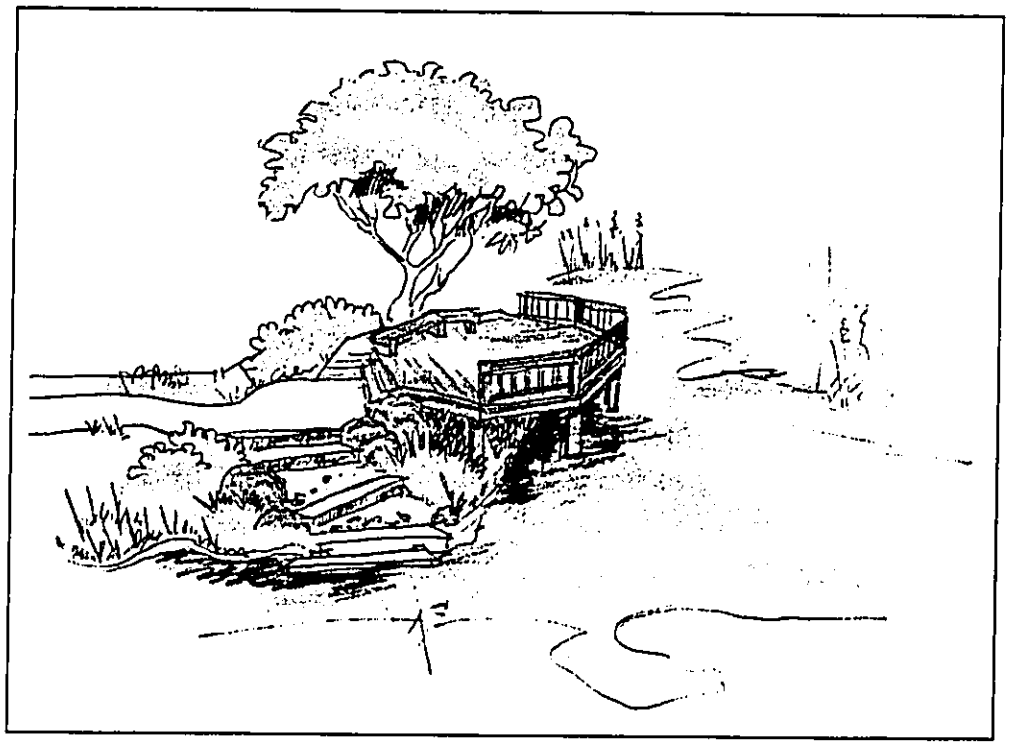
- *naupaka* (Scaevola sericea);
- vitex (Vitex angus-castus);
- *`ilima* (Sida fallax);
- *milo* (Thespesia populnea);
- *wili-wili* (Erythrina sandwicensis);
- *loulu* (Pritchardia);
- pandanus (Freycinetia reineckel); and
- nara (Pterocarpus indicus).

The open lawn areas will be planted with native, drought-resistant paspalum grass.

Temporary irrigation will be installed to establish the new plantings and will be removed after the plantings have become established.



Boardwalk



Observation Deck

COCONUT GROVE DESIGN ELEMENTS

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

Helber Hastert & Fee
PLANNERS

Figure
10

3.3.2.4 Wetland Enhancement

The northern area wetlands (approximately 2 acres) will be retained and enhanced. Small areas will be cleared to restore open water areas for waterbirds. Except for mangrove removal, nesting habitat areas along the Channel and drainageways will be undisturbed. Invasive California grass will be removed.

3.3.2.5 Observation Deck

A nature observation deck will be located at the mouth of Drainage Channel #2 on the northern bank. The structure will be approximately 19 feet in diameter and constructed of recycled plastic lumber. A conceptual drawing of the structure is illustrated in Figure 10.

3.4 AMERICANS WITH DISABILITIES ACT REQUIREMENTS

The Americans with Disabilities Act (ADA) (28 Code of Federal Regulations Part 36) requires new trails constructed with public funds for pedestrian use to be made accessible to the disabled. (The number of ADA accessible trails on the Island of O`ahu is limited). The proposed project represents an important opportunity to provide recreational and educational opportunities in a natural setting for the physically disabled.

The ADA accessibility guidelines state that a trail is "a route that was designated, or constructed for recreational pedestrian use or provided as an pedestrian alternative to vehicular routes within a transportation system." The paving of trails is not a requirement as long as the surface is "firm and stable." Handrails and edge protection along the trails are not required for ADA accessibility, but if they are provided they should meet the appropriate standards.

ADA accessibility will be provided at both project locations.

3.5 MAINTENANCE

The State will issue an Executive Order (EO) for the City and County Department of Parks and Recreation to assume typical park maintenance responsibility for the State-owned land. Typical park maintenance includes trash disposal, comfort station cleaning, lawn mowing, and irrigation system repairs. Wetland

enhancement and maintenance activities will be dependent upon volunteer community efforts.

3.6 PHASING

The Kawai Nui Gateway Park will be implemented in phases as funds are available. The historical chronology of the project is as follows:

- FY2000 City Council approved an amendment to the Ko`olaupoko Development Plan Public Facilities Map (DPFM) that identifies the Mokapu Site as a public park.
- FY2001 City Council approved funds for park planning, community outreach, and Environmental Assessment.
- FY2002 City Council approved $360,000 for design and construction of a portion of the Mokapu Site.
- FY2003 KVT earmarked $610,000 for continued design and construction on both project sites. Allocation of these funds provides $420,000 for use on the Mokapu Site and $190,000 for the Coconut Grove Site.
- Future $450,000 designated for Oneawa Canal pedestrian bridge.

3.7 COSTS

The Kawai Nui Gateway Park will be developed and maintained with County funds. The anticipated cost to complete the entire project is estimated at $1,907,000, exclusive of the Oneawa Canal Pedestrian Bridge ($450,000). There are insufficient funds available to construct the Oneawa Canal Bridge, but it is an integral component of the Kawai Nui Gateway Park and will be funded in the future. Inclusive of the bridge the project will cost $2,357,000.

4.0 Alternatives to the Proposed Project

4.0 ALTERNATIVES TO THE PROPOSED PROJECT

4.1 INTRODUCTION

One of the key attributes of the Visioning Planning process is that the technical aspects of a project evolve from extensive community and agency dialogue. By the time a proposed vision project is presented in an Environmental Assessment or a permit application, the potential negative environmental impacts have largely been identified and the project description has been modified to include appropriate mitigation of these impacts.

The alternatives to the development of the Kawai Nui Gateway Park are presented in this chapter as follows:

- No Action
- Project Alternatives
- Design Alternatives

4.2 NO ACTION

The no action alternative would preserve the *status quo*. The lands involved in the proposed park would remain vacant and overgrown. Negative impacts of *status quo* include the following:

- The discarded rubbish at the Mokapu Site would remain, unless a separate initiative by the State provides cleanup;
- Scenic views from Mokapu Boulevard to the Marsh would continue to be obstructed;
- Handicapped access to the Marsh would remain limited;
- Education opportunities at the Marsh would be constrained by lack of meeting place;
- The proposed Kawai Nui Marsh Pathway to circumnavigate the Marsh would have a gap at the Mokapu Site and not traverse Oneawa Canal;
- Vacant County land would remain inaccessible to the general public; and
- Canoe access would remain limited to Kailua Beach.

Positive impacts of the no action alternative include the following:

- No short-term construction impacts (e.g. noise, dust, traffic) on nearby residents;

- The residents in proximity to the park will not be concerned about a potential loss of privacy or security since the existing vegetative overgrowth would continue to provide a barrier;
- The residents in proximity to the park will not be concerned about noise pollution from the increased numbers of park users, or the Mokapu Boulevard traffic headlight beams into their homes; and
- Funding for park maintenance will not be required.

The no action alternative would not satisfy the desired objectives for the Kailua Community.

4.3 PROJECT ALTERNATIVES

The Kailua Vision Team (KVT) appropriated funds for the proposed project over a number of potential capital improvement projects in Kailua. Although many projects met the goals and objectives of the community vision, projects at Kawai Nui were a priority, along with several community beautification and bikeway projects.

4.4 DESIGN ALTERNATIVES

Alternatives to the design elements at the Mokapu and Coconut Grove Sites were identified, discussed and dismissed during project-specific community meetings. The reasons for dismissal were related to potential environmental impacts. Some of the more substantive design alternatives proposed and dismissed are summarized in Table 4-1.

Table 4-1 Design Alternatives

SITE	DESIGN ALTERNATIVE	REASON FOR DISMISSAL
Mokapu	Create active instead of passive park.	Insufficient space for playing field.
		Defeats purpose of passive buffer around Marsh.
		Incompatible with 1994 DLNR plan.
	Locate pavilion and parking lot in the northeastern corner, closer to existing County infrastructure.	Increased noise and visual impact on adjacent residences.
		Obstructed views from pavilion to Marsh.
		Parking too far from canoe launch
	Locate pier at northwestern corner.	Structures are not permitted in the flood control waters.
	Eliminate comfort station.	There are no toilet facilities in the vicinity. Educational tours (particularly for young school ages) require restroom facilities.
	No lights installed.	Improved security with lighting at comfort station; therefore lights retained.
	Access from Kapaa Quarry Road	There is valued waterbird habitat at the western end of the site that an access road would disturb.
	Wetland enhancement at west end	Too expensive to develop at this time.
Coconut Grove	Education pavilion at this site rather than Mokapu Site	Easier access at Mokapu.
	Original Site was approximately 15 acres, almost double the current Site area. The area eliminated from consideration is south of the current Site.	The area was inaccessible and some lands have been cleared and landscaped by adjacent landowners.

5.0 Affected Environment, Potential Impacts, and Proposed Mitigation

5.0 AFFECTED ENVIRONMENT, POTENTIAL IMPACTS, AND PROPOSED MITIGATION

This chapter describes the existing conditions for various resource categories, and describes anticipated impacts on these resources if the project were developed. Mitigation is proposed for potential negative impacts where practical.

5.1 PHYSICAL CHARACTERISTICS

The discussion of physical characteristics includes soil and topography at the Kawai Nui Gateway Park.

5.1.1 Existing Conditions

The majority of Kawai Nui Marsh and the Mokapu Site soils are characterized as Marsh clay (MZ), which describes small low-lying, wet areas along coastal plains. The Coconut Grove Site soils are described as Mokuleia Clay Loam (Mt), which is also typical of coastal plains. In general, these soils have a slow runoff potential and the erosion hazard is slight (Foot et al. 1972). Vegetation minimizes erosion potential, and both Sites are densely vegetated.

The elevation at the Marsh ranges from 60 feet above mean sea level (MSL) in the southwest corner to 11 feet MSL at the intersection of Mokapu Boulevard and Kapaa Quarry Road (Mokapu Site) (DLNR, 1994) and between 4 and 6 feet MSL at the Coconut Grove Site (Pacific Geotechnical Engineers, 2000).

5.1.2 Potential Impacts

There will be grading and grubbing at the Mokapu Site to clear vegetation, level the berms of fill material and prepare the foundations for the access road, parking lot, comfort station, pavilion, and Oneawa Bridge. No appreciable elevation change is anticipated. The grading will be restricted to the uppermost 2-3 feet of fill material. There will be changes in vegetation as a result of the project, but this should not impact the soil's slow runoff potential in the long term. During construction, soils will be exposed as vegetation is cleared and the potential for soil erosion will increase.

No grading is proposed at the Coconut Grove Site; however soils will be exposed during vegetation clearing.

5.1.3 Mitigation

To mitigate the potential for soil erosion during construction, the Best Management Practices Plan (BMP), incorporated in the project's requisite Grading and Grubbing permit will be implemented. The BMP has not been prepared, but they typically include requirements for keeping the soil wet, installing silt barriers, and minimizing the surface area exposed soil to the extent practical. The contractor will evaluate the use of non-plastic silt retention fencing, such as BioFence. Replacement landscaping will be planted as soon as possible after the ground surface has been exposed.

5.2 WATER RESOURCES

5.2.1 Hydrology

5.2.1.1 Existing Conditions

Annual rainfall in the area is estimated at 40 inches (DLNR, 1994). Hydrologically, the primary function of the Kawai Nui Marsh is flood hazard protection for the Coconut Grove residential area. Kawai Nui Marsh receives stormwater flow from tributaries located from northwest to southwest of the Marsh. The flow is directed to Oneawa Canal at the northern corner of the Marsh and discharges to Kailua Bay. The levee, constructed in 1966, was designed for a flood storage capacity of 3,000 acre-feet. Flood storage capacity was greatly reduced after the levee was constructed due to sedimentation from land development upgradient of the Marsh, and increased vegetation resulting from sewage outfall nutrient loading. In 1988, several hundred homes were flooded and plans to improve the Marsh's storage capacity included vegetation clearing within the Marsh and raising the levee height. Floodwaters are directed to Oneawa Canal and Kaelepulu Channel for discharge to Kailua Bay.

5.2.1.2 Potential Impacts

The comfort station proposed at the Mokapu Site will not interfere with flood control. The Coconut Grove Site is theoretically protected from the high floodwaters by the levee; however the water levels of Kaelepulu Channel will rise significantly in a storm event. The pathways and observation deck proposed at the Site are unlikely to hamper flood control efficiency or capacity, since they will be higher than the surrounding land. No mitigation is proposed.

5.2.2 Potable Water

There are no potable water wells at the project Sites and the existing water system is adequate to accommodate the proposed project. Final determination of adequate supply will be made during the building permit review process.

5.2.3 Surface Water

5.2.3.1 Existing Conditions

The project is adjacent to the Oneawa Canal, Kaelepulu Channel, and three stormwater drainage channels that discharge into Kaelepulu Channel. Oneawa Canal terminates at Kailua Bay (approximately 5,800 linear feet from the Mokapu Site). Kaelepulu Channel waters also discharge to Kailua Bay, but the water is directed south to another tributary prior to discharge. The Oneawa Canal and Kaelepulu Channel are classified as the Kawainui/Maunawili Stream and the Kaelepulu Canal, respectively (CWRM, 1990). The Stream was identified as a Candidate Stream for Protection (CWRM, 1990). Kawai Nui Marsh is classified as a Class I inland water in accordance with HRS Title 11, Chapter 54, Water Quality Standards." The objective of this classification is that "...these waters remain in their natural state as nearly as possible with minimum pollution from any human-caused source."

5.2.3.2 Potential Impacts

Soil will be disturbed at the Sites during construction and herbicides may be applied. These activities could potentially impact surface water quality, especially during a rain event. In the long-term operation of the Park, stormwater runoff from the parking lot at the Mokapu Site will be directed to landscaped areas and be retained onsite. This will minimize the potential for typical parking lot oil and grease spills from washing into the Canal. The minimal improvements at Coconut Grove Site will not affect stormwater runoff quality in the long term. No hazardous materials will be stored at either site.

Herbicides such as Rodeo™ may be applied at the Site during construction and maintenance of the park. Rodeo is not anticipated to have a long-term impact on water quality because it is adsorbed onto soil particles and subsequently degraded by microorganisms. The active ingredient is glyphosphate, which is non-volatile and does not bioaccumulate. It was applied to 90 acres of Kawai Nui Marsh in 1988 and was not detected in water samples with a laboratory test having a minimum detection limit of 0.1 parts per million (DLNR, 2000). The

amount of pesticide and the schedule of application is not available at this time. All chemicals will be applied in accordance with manufacturer's instructions and Stae regulations.

5.2.3.3 Mitigation

The contractor will be responsible for complying with provisions of the water quality and water pollution control standards (HAR, Chapter 11-54, Water Quality standards"; HAR Chapter 11-55, "Water Pollution Control" and ROH Chapter 14. A Section 401 Water Quality certification from DOH will be required in conjunction with Army Corps nationwide permits. As described in Section 4.1, a County Grading and Grubbing permit will be obtained for the construction, which will incorporate the BMPs for soil erosion control.

5.3 BIOLOGICAL RESOURCES

5.3.1 Waterbirds

Dr. Phil Bruner conducted an avifaunal field survey of the project area on June 14 and 18, 2001 (included as Appendix A).

5.3.1.1 Existing Conditions-Mokapu Site

Nesting is unlikely along Oneawa Canal due to recent vegetation clearing and accessibility to predators (e.g., feral cats, rats, mongoose). Three pairs of the endemic and endangered Hawaiian Duck (*Anas wyvillana)* were observed during the two survey days at the Mokapu Site along the waters' edge. Subsequent to the survey, vegetation was removed along the canal. The western portion of the Site is a potential waterbird habitat, but the vegetation would have to be thinned to enhance the waterbird habitat.

5.3.1.2 Existing Conditions-Coconut Grove Site

There is a large patch of emergent (wetland) vegetation at the northern portion of the Coconut Grove Site and wetland vegetation lines the waterways. Interior portions are overgrown with dense brush and trees. Thirteen Black-crowned Night Herons (*Nycticorax nyscticorax*) were observed roosting in trees or foraging at waters edge during the two days of survey. The herons are native waterbirds, but not endangered. Fifty-seven Hawaiian Duck were observed foraging, resting or swimming. Seven Hawaiian Coots (*Fulica alai*) were observed along the Kaelepulu Channel. The Coots are endemic to Hawaii and

listed as endangered. Fourteen Common Moorhens (*Gallinula chloropus*), which are also endemic and endangered, were observed.

5.3.1.3 Impacts and Mitigation-Mokapu Site

At the Mokapu Site, the *milo* forest and overgrown vegetation near Kapaa Quarry Road will be retained to encourage foraging, buffer the waterbirds from human interference, and afford them a place to hide from predators. No development is proposed at the western end of the Site. To minimize human impact on wildlife, park users will be encouraged to remain on the pathway through the following mitigation measures: 1) well defined pathways, 2) vegetation, and 3) signage. Access to the shoreline will be at the canoe launch area and wildlife in the vicinity may be temporarily impacted by human activity and noise. The waterbirds generally adapt to human voices and movement as long as it is not aggressive and long-term (Dr. Bruner, personal communication, 2002). The "leash law", Revised Ordnances of Honolulu, Chapter 7, will apply in the Park; therefore, pets should not be a concern.

Young Newell Shearwaters learn to fly at night and are naturally attracted to light (DLNR, undated). They become temporarily blinded by bright lights and often collide with trees, utility poles and wires, and buildings. The proposed project includes exterior lighting at the comfort station. To mitigate the attractive nuisance low sodium shielded fixtures will be used to direct the illumination toward the ground.

5.3.1.4 Impacts and Mitigation-Coconut Grove Site

The waterways at the Coconut Grove Site are attractive to a large number of waterbirds, but the forested interior sections are not. Per Dr. Bruner's recommendations, the project will enhance the wetland at the northern portion of the Site through the creation of small ponds. The dense interior vegetation will be thinned to create open water areas.

The nature trail and boardwalks should have minimal impact on existing wildlife and the wetland enhancement will encourage the foraging and nesting of more waterbirds. To minimize human impact on the nesting areas, park users will be encouraged to remain on the pathway through the following mitigation measures: 1) well defined pathways, 2) signage, and 3) raised walkways in the wetland enhancement area.

5.3.2 Botanical Resources

Char & Associates performed a botanical resources assessment of the Kawai Nui Gateway Park parcels that included a literature and map review, and a field survey was conducted on July 10, 2001. The survey report is included as Appendix B.

5.3.2.1 Existing Conditions

Vegetation at both Sites of the proposed Park are dominated by plants that were introduced to Hawaii after 1778. There is evidence that both Sites have historically been graded, and both Sites are overgrown with vegetation. The native species that were identified include: *milo*, *kou*, beach *naupaka*, bulrush, and *'uhaloa*, none of which are threatened or endangered.

5.3.2.2 Potential Impacts and Mitigation

Per Dr. Char's recommendations, native plants will be used in the landscaping of the Mokapu Site, and the existing scrub and mangrove along the banks of the canal will be replaced by seashore paspalum grass to prevent soil erosion. The botanical survey concurred with the recommendations of the avifaunal survey that the wetland area of the Coconut Grove Site be enhanced to provide open water areas that are favored by waterbirds. The mangrove along the waterways will be removed and replaced with seashore paspalum, *'ae'ae*, water hyssop and bulrush. Other vegetation along the shoreline will be retained to protect existing nesting habitats. Herbicides, such as Rodeo™ may be used to control vegetation. It is recommended that the mangrove be cut back close to the water line and painted with Rodeo to prevent regrowth (Winona Char, personal communication, 2002).

The Kawai Nui Heritage Foundation and 'Aha Hui Malama I Ka Lohaki will continue to be consulted for planting recommendations. The project will not have detrimental impact on the valued botanical resources at the Site, and the proposed plants will increase the populations of native plants, minimize soil erosion at waters' edge, and encourage waterbird habitats. No further mitigation is proposed.

5.4 AQUATIC RESOURCES

5.4.1 Existing Conditions

A Hawaii Stream Assessment was published in 1990 that included the Oneawa Canal. Oopu nakea (*Awaous stamineus*), a goby, has been observed in Oneawa

Canal. This native freshwater species is classified as an indicator species and representative of potentially high quality stream ecosystems (CWRM, 1990). Five introduced species have been observed in the Canal (CWRM, 1990). Oneawa Canal was identified as an outstanding and substantial riparian resource, based on the presence of endangered waterbird habitat, and wetland ecosystem. No native aquatic species were reported in the Kaelepulu Channel, according to a stream assessment prepared in 1990.

The Oneawa Canal is an "impaired" stream, as are approximately 111 other streams in the State of Hawaii for not meeting State established water quality criteria. The US Environmental Protection Agency, through the Total Maximum Daily Loads (TMDLs) program, requires all states to identify the streams that are impaired, create a list of priority streams, and study the priority streams for ways to improve the water quality. To date, the list of priority streams has not been finalized.

5.4.2 Potential Impacts

The anticipated impacts of construction on the aquatic species will be minimal (e.g. noise, disturbance of sediments) and of short duration during the installation of boardwalk supports. No long-term impacts are anticipated and there will be no loss of aquatic species habitat. The boardwalks and viewing platform will provide up-close, but non-invasive, opportunities to view aquatic species in their natural habitat. The pavilion, on the Mokapu Site, will provide a gathering place to facilitate educational opportunities regarding aquatic species, water hydrology, and water quality.

No mitigation is proposed.

5.5 HISTORICAL, CULTURAL, AND ARCHAEOLOGICAL RESOURCES

Cultural Surveys Hawaii (CSH) prepared an assessment of the project Site to address: 1) the cultural context and land-use history, 2) the archaeological context based on historical investigations, 3) the interpretive potential form a historic preservation point of view, and 4) the potential for discovering significant archaeological properties and recommendations for appropriate response to such discoveries. The State Historic Preservation Division (SHPD) was consulted during the course of the assessment.

5.5.1 Existing Conditions

5.5.1.1 Legends and History

Kawai Nui Marsh and environs is a significant pre-European and historic area of Hawaiian residence, which is documented in numerous written sources. Within the 1000 to 1500 years since the original Polynesian settlement, the Marsh was valued as an agricultural and fishery resource. Reportedly, fish, birds, and taro were plentiful. The lands between the Marsh and Kailua Bay were popular residential areas and Kailua was the center of a large royal complex during the 15 and 16th centuries. Before Kamehameha I conquered the island, the Kailua area was a "place of refuge."

There are numerous references to the productivity of Kailua as a food source and legend implies even the mud was edible. Other notable legends are as follows:

- The *menehune*, credited with building fish ponds and religious structures, lived in Kailua;
- Kawai Nui was inhabited by a dragon-like creature named Hauwahine (female ruler). Her role was to ensure that the wealth of the pond was shared, and to punish those who were greedy; and
- Based on oral histories, Kailua means "two seas", which likely refers to the Kawai Nui and Kaelepulu (Enchanted Lake) ponds. The Marsh was considered male and the Kaelepulu Pond, female. They mated at Kawailoa giving the area great *mana*. The ponds joined beneath the lookout point of *Pu'u o 'Ehu*.

Many ruling chiefs resided in Kailua: Olopana, Kakuhihewa, Kuali'i, who became the high Chief of O`ahu, Kahekili and Kamehameha I.

Populations fell dramatically from 300,000 in 1778 to 82,593 in 1850 due to disease and the formerly productive land appeared abandoned.

At the time of the *Mahele,* Kailua, Kaneohe and Waimanalo were considered prime lands and were awarded to royalty in the mid-1800's. The land claimant testimony provides history of the time. A total of 123 house lots were mentioned in the awards and a few of these are in the vicinity of the proposed project. Agriculture crops included taro, rice, sweet potato, bananas, sugarcane, coconut, and other fruit trees. Rice was the major crop for the 100 years following the

Mahele. Fisheries and fishponds are mentioned as land uses in the land claim testimony.

In the 1900's, cattle ranching became the predominant land use. A system of pumps and pipes diverted water from the Marsh to Waimanalo beginning in 1923. In 1909, a copra enterprise was established in the area between Oneawa and Kalaheo Streets, hence the name Coconut Grove.

5.5.1.2 Archaeology

No recorded historic properties were identified from the literature review at the project Sites. Archaeological subsurface investigations in the vicinity of the Kawai Nui Community Park documented thick layers of fill that artificially raised the land elevation. It is suggested that the dredged material from the adjacent channels were deposited at the Coconut Grove Site.

5.5.1.3 Site Survey

No surface historic properties were observed and given the historic grading and filling activities none are anticipated. A modern drainage channel west of the Mokapu Site permitted a view of the sediment layers and exposes an underlying layer of original Marsh sediments. These sediments could yield valuable information regarding the human-induced landscape changes, but no development is proposed in the vicinity.

The northern area of the Coconut Grove Site may contain paleoenvironmental deposits, but the remainder of the site is characterized by sandy deposits that have been extensively disturbed by modern fill and grading activities.

5.5.2 CSH Conclusions and Recommendations

The specific project area has not been the subject of traditional accounts or legends; however, the Marsh has significant traditional significance. During the *Mahele*, the project area was not among the lands awarded. Although no surface historic properties were identified at either Site, there are two areas of potential paleoenvironmental deposits. Prior to ground disturbance in these areas an archeological survey including sediment coring is recommended. No ground disturbance is proposed in the vicinity of the Mokapu Site that was identified as archaeologically valuable.

5.5.3 Potential Impacts and Mitigation

Although no legends or oral histories specifically refer to the two Sites, they are located on the periphery of the Kawai Nui Marsh, which is eligible for listing on the National Register of Historic Places. The Mokapu Site will provide an attractive entrance and increased access to the cultural resource, by offering scenic serene vantage points from which to appreciate the historical significance of the Marsh. Construction funds will include interpretive signage at the Mokapu Site that identifies points of historical significance throughout the area.

5.5.3.1 Mokapu Site

The development of Kawai Nui Gateway Park will not have negative impacts on the potential archaeological resources at the project Site. The most extensive grading will occur within the upper 3 feet of fill at the Mokapu Site, where the fill is as deep as 5 to 8 feet. The underlying original Marsh sediments that may be rich in historical value will not be disturbed. Although CSH recommended sediment sampling in the vicinity of the drainage channel near Kapaa Quarry Road (Figure 4), no construction activities are proposed for this western portion of the Site. The CSH recommendation was made prior to development of a site plan. The existing conditions (*milo* forest) will be retained. No further archaeological survey is proposed at the Mokapu Site.

5.5.3.2 Coconut Grove Site

The construction activities proposed at the Coconut Grove Site involve ground surface disturbance during creation of the pathways and subsurface disturbance in the placement of supports for the pedestrian bridges and removal of vegetation. Prior to construction activities in the wetland enhancement area, which coincides with the area likely to contain paleoenvironmental deposits, an archaeological survey will be conducted. Per SHPD, the following conditions to the SMA permit are proposed:

- Prior to carrying out any ground disturbance, the applicant shall ensure that a qualified archaeologist conducts an archaeological inventory survey with subsurface testing within the Coconut Grove Site. A report of findings should be provided to the SHPD for review and approval. If significant sites are found, and if they will be adversely affected by the proposed park development, then an acceptable mitigation plan will need to be prepared and executed prior to ground disturbance.
- If the site plans involve development in the area of potential paleoenvironmental deposits, then the applicant shall ensure that these areas

are appropriately investigated during any archaeological inventory survey work, and that the findings are included in a report of findings.

As required for all construction projects, the inadvertent discovery of human remains at either Site will result in cessation of construction activity and police notification.

5.6 AMBIENT NOISE

5.6.1 Existing Conditions

The project areas are currently undeveloped and do not generate appreciable levels of noise. The vegetative overgrowth at the Mokapu Site provides residents on the southern bank of Oneawa Canal a buffer from Mokapu Boulevard traffic noise. Approximately, eight residential lots are located directly south of the Canal from the Mokapu Site.

Approximately, 15 residential parcels are located adjacent and east of the Coconut Grove Site.

5.6.2 Potential Impacts and Mitigation

The construction of Kawai Nui Gateway Park will raise ambient noise levels temporarily. A construction permit will be obtained and conditions of the permit, as described in the Department of Health, HAR Title 11 Chapter 43 Section 6 will apply.

When the park is operational, sources of noise will include canoe launch activities and other activities typical of passive recreational park use. The allowable noise levels for residential zoning areas, as described in HAR Title 11 Chapter 43 will not be exceeded. Park use will be limited to daytime hours. The vehicular entrance will be secured during nighttime hours and signage will serve to notify the public of park hours.

Residents adjacent to the project expressed concern over increased noise relative to existing conditions. Residents adjacent and east of the Mokapu Site will be buffered from potential noise by two undeveloped lots. The potential areas of concentrated noise (e.g. parking lot, comfort station, pavilion and pedestrian bridge) were all purposefully located in the western half of the Mokapu Site to minimize impacts on residential parcels southeast of the site. The dense

vegetation along the eastern boundary of the Coconut Grove Site will be retained and serve as a noise barrier.

5.7 LIGHT EMMISIONS

5.7.1 Existing Conditions

The proposed project Sites are undeveloped and unlit. Standard streetlights (Figure 8) are located along Mokapu Boulevard adjacent to the Mokapu Site. The overgrown vegetation at the Mokapu Site buffers the eight residential parcels south of Oneawa Canal from the light pollution of eastbound Mokapu Boulevard vehicular headlights.

5.7.2 Potential Impacts and Mitigation

Minimal exterior night lighting is proposed at the Mokapu Site comfort station for security reasons. The fixtures will direct the illumination to the ground to mitigate any impact on nearby residents and young Newell Shearwaters. As the park will be officially closed after dark, no other lighting is proposed. The comfort station is located at the western end of the park and away from the residences.

There is the possibility that vehicle headlights on Mokapu Boulevard westbound could direct sporadic and brief beams of light to the few residences south of Oneawa Canal. Landscaped berms and vegetation planted parallel to the canal will mitigate most of these impacts.

5.8 COMMUNITY HEALTH AND SAFETY

5.8.1 Existing Conditions

The project area and community are served by the County Police and Fire Departments. The nearest Kailua Police Station is located on Kuulei Road in Kailua Town and serves an area from Waimanalo to Kaneohe Marine Corps Air Station. Aikahi Fire Station is approximately 1 mile from the Mokapu Site.

5.8.2 Potential Impacts and Mitigation

Residents in proximity to the proposed park expressed concerns about potential inappropriate use of the park facilities (e.g. vagrancy, loitering by high school students during the day and after-hours use). In addition, they are concerned that the increased accessibility may encourage trespassing on private property along the Canal.

The project should have minimal impact on the delivery of fire services to the community. Police will respond to public complaints regarding illegal activities at the park. The following mitigation is proposed to address community concerns about safety and illegal activity:

- access to the Mokapu Site parking lot will be restricted by a locked chain in the evenings (as is the case at Kawai Nui Community Park),
- vehicles will be prohibited from parking on Mokapu Boulevard adjacent to the park;
- during the school year, the gate will not be opened until after 8:00 a.m. to discourage students from loitering before school;
- students will be involved in educational activities at the park and hopefully learn to appreciate the potential impact of loud behavior on the wildlife;
- the community may choose to organize a volunteer watch group to discourage evening loitering. There is precedent for this at the Kailua Boat ramp area;
- County park guidelines (in accordance with ROH Chapter 10) for appropriate park use will be posted,
- the comfort station will have adequate exterior lighting to provide routine police patrols greater visibility into the Site from Mokapu Boulevard, and
- boundary fencing and vegetative screening will discourage trespassing from the Park onto private property.

5.9 TRAFFIC AND PARKING

5.9.1 Existing Conditions

Currently, there is no vehicular or pedestrian traffic at the proposed Park Sites. The Park will attract pedestrian and vehicular traffic to the Mokapu Site, as well as pedestrian traffic to the Coconut Grove Site. Entrance to the Mokapu Site will be from the eastbound lane of Mokapu Boulevard, which is under jurisdiction of the State Department of Transportation (DOT). A median strip prohibits a turn into the Mokapu Site from the westbound lane of Mokapu Boulevard. No U-turn is currently permitted at the nearest intersection (Kapaa Quarry – Mokapu Boulevard intersection). Vehicles approaching the Park in the westbound lanes of Mokapu Boulevard will continue along Mokapu Boulevard until a U-turn is permitted.

The main access to Kalaheo high School is at the Kapaa Quarry Road - Mokapu Boulevard intersection.

Mokapu Site parking is limited to approximately 16 cars and two buses. Parking for visitors to the Coconut Grove Site is provided at the recently expanded Kawai Nui Community Park parking lot. The Park will be accessible to handicapped persons from the two parking areas.

Pedestrian traffic will enter the Mokapu Site from Mokapu Boulevard. There are crosswalks at the Mokapu Boulevard - Kapaa Quarry Road intersection and at Oneawa Street. Pedestrians will access the Coconut Grove Site from the adjacent community park. On completion of the footbridge across Oneawa Canal, pedestrians will be able to walk between the two Park sites.

Traffic coming from Kaneohe on Mokapu Boulevard (eastbound) toward the intersection is often traveling at speeds greater than the speed limit (Kailua Police Station, 2002).

5.9.2 Potential Impacts

Increased pedestrian and wheelchair access to Kawai Nui Marsh is a beneficial impact to the community.

On completion of the Oneawa Bridge, the Mokapu Site parking lot may relieve some of the vehicular traffic at the Kawai Nui Community Park. In the absence of a permitted U-turn at Kapaa Quarry Road from the left turn lane of Mokapu Boulevard, park users may be tempted to make illegal U-turns. Legal access to and from the westbound lane on Mokapu will be inconvenient as vehicles will travel a greater distance to the next intersection that allows a U-turn.

The project should have no impact on vehicular and pedestrian access to and from Kalaheo High School.

Traffic and parking at the Mokapu Site may be congested briefly during loading and off-loading of outrigger canoes to and from trailers. Because of the awkward length of outrigger canoes, they are transported as infrequently as possible. Vehicles with canoe trailers are too long to make a U-turn at Kapaa Quarry Road, even if a dedicated turn signal is installed at the intersection. These vehicles will approach the Park from Kapaa Quarry Road via Kailua Road (Pali Highway), or

Mokapu Boulevard from the Kaneohe direction (west). The parking lot will be designed so that vehicles with trailers can enter and circle the lot in one direction.

The Mokapu Site is intended to be a secondary site for canoe paddling activities, with the primary launch site at Kailua Beach. During canoe season, it is anticipated that canoes will be stored on-site in a designated area. The canoes will be stored at the canoe club's risk. Canoes will be off-loaded along the edge of the parking lot closest to the canal, placed on a dolly and walked to the canoe storage area or the canal. A trailer ramp is not included as part of the site design. Trailers will remain on-site only during loading and unloading, because of limited storage space. The trailers will be parked at the primary canoe launch site at Kailua Beach. Daily transport of canoes on and off the site is not anticipated. There will be infrequent and short-duration impacts on parking lot traffic during the transport of canoes. No adverse impacts are anticipated from the storage of canoes.

The Park may encourage pedestrian use by students from Kalaheo High School. As members of the community, the students are welcome to enjoy the Park in accordance with school and County park regulations. Pedestrian access to and from the school will be at the lighted Kapaa Quarry Road intersection.

5.9.3 Potential Mitigation

To mitigate the potential for traffic accidents due to illegal U- turns on Mokapu Boulevard, DOT will assess the feasibility of permitting a U-turn at the intersection. Given the high speed of traffic westbound on Mokapu Boulevard into Kailua, a dedicated left turn signal is recommended (Kailua Police Department, 2002). Prior to making a decision to change the signal, DOT requires a traffic study at the intersection to determine the impact of the modified signal and traffic pattern on existing traffic. The project applicant will work obtain the requisite information for DOT, but the issue is not resolved to date.

Overnight storage and/or temporary parking of canoe trailers at the Park will be prohibited. Signs will be posted to indicate that trailers are allowed only for loading and off-loading of canoes.

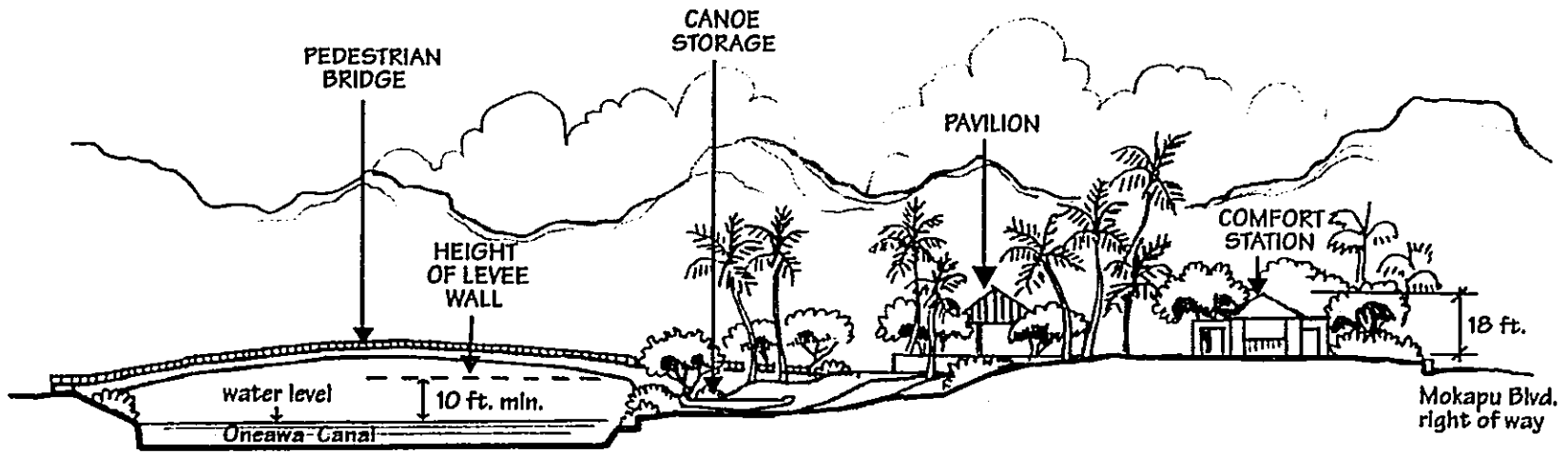
No adverse impact on vehicular traffic is anticipated from the increased pedestrian traffic at the intersection; therefore no mitigation is proposed.

5.10 SCENIC AND AESTHETIC RESOURCES

The project Sites are overgrown with vegetation. The Mokapu Site is littered with abandoned household and construction materials. Development of the Sites will be an aesthetic improvement.

Regionally, Kawai Nui Marsh is valued as an aesthetic resource characterized by open vistas against a backdrop of vegetated slopes in the west. Visitors to the Marsh will have a broad spectrum of subjective responses to the aesthetic quality of the Marsh. To native Hawaiians and others interested in the culture the aesthetic value will lie in the memory of historical use and current landmarks, the wildlife biologist and naturalist will value the presence of endangered species in their natural habitat, and the community–at–large can appreciate the beauty and serenity of open space. An analysis of the Aesthetic Significance and Potential of Kawai Nui Marsh states the aesthetic character of the Marsh from within the Marsh would be improved if wildlife were encouraged, access and trails along the periphery developed, viewpoints established, and wildlife observation areas created (Huddleston, 1981). The Kawai Nui Gateway Park incorporates all of these recommendations. The Park will provide close-up views of wetland ecosystems, and will greatly enhance the vistas across the Marsh.

The architectural design of the structures will be comparable to the representations on Figures 6 and 10. Elevations for the Mokapu Site and the Coconut Grove Site structures are represented on Figure 11 and 12, respectively. The height of the Oneawa Canal bridge span will be comparable to the existing levee wall height. The base of the other structures will be comparable to existing topographic elevations.



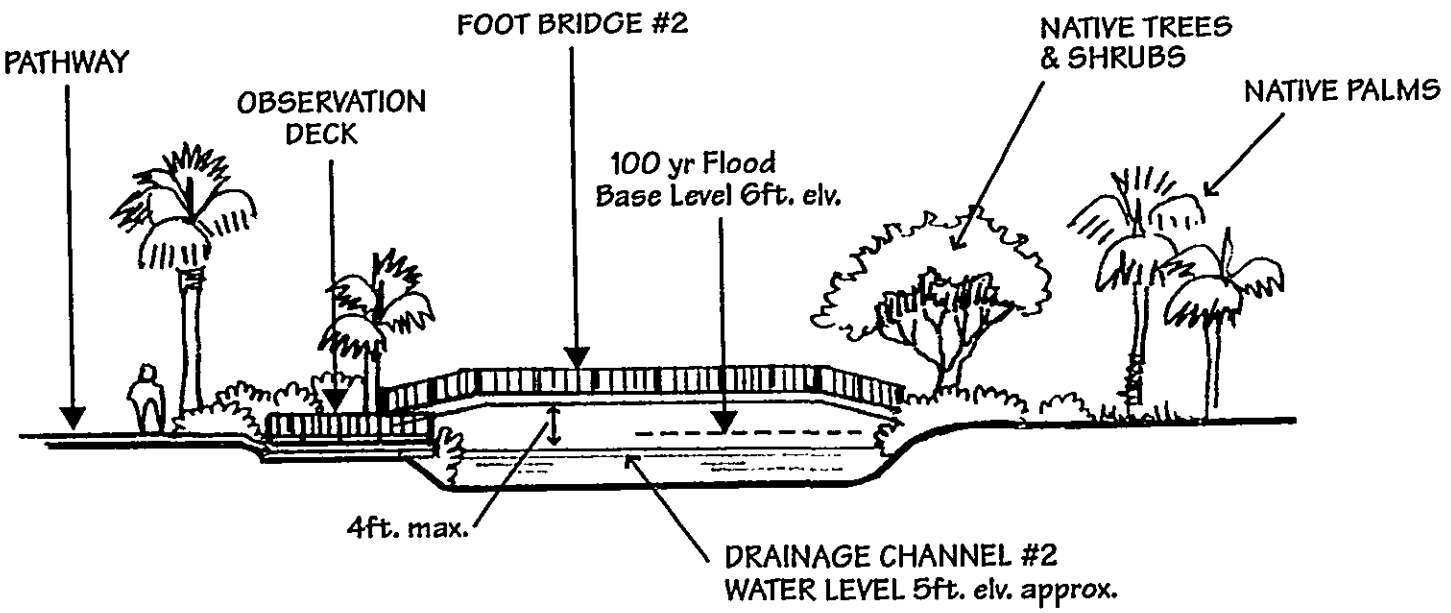
ELEVATION "A" - MOKAPU SITE WEST VIEW

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

Helber Hastert & Fee PLANNERS

0 Feet 50
0 Meters 15

Figure 11



ELEVATION "B"
COCONUT GROVE FOOT BRIDGE 2 - EAST VIEW

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

Helber Hastert & Fee
PLANNERS

0 Feet 20
0 Meters 6

Figure
12

5.11 SOCIO-ECONOMIC CHARACTERISTICS

The project will add a recreational amenity to the community and will not have a disproportionate impact on minority or low-income populations during operation or construction. It is unlikely to have an impact on O`ahu's population or housing demand.

The potential negative impacts of high school students on noise levels and security has been addressed in other chapters. The students will benefit from educational opportunities to study wetland ecosystems during organized school field trips. The canoe team will benefit from having a launch area in proximity to their school. Commercial activities are prohibited at the Park by County ordnance; therefore, the Park development will not have a direct impact on Kailua commerce and is unlikely to impact long-term employment. The Kawai Nui Gateway Park may attract more visitors to the Marsh and Kailua businesses may benefit from the increase in potential consumers in the vicinity.

Enhancement of the aesthetics of the affected neighborhood may have the economic benefit of increasing property values in the vicinity.

5.12 UTILITIES

Energy consumption at the Park will be limited to security lighting at the comfort station, which does not represent a substantial use of a non-renewable resource. The comfort station will require insignificant demands on municipal water supply and have insignificant load on the municipal wastewater treatment systems.

5.13 AIR QUALITY

Other than the incidental exhaust from vehicles in the parking lot there will be no impacts to air quality during Park operations. Minor impacts to air quality due to earth moving activities during construction will be of short duration.

5.14 CUMULATIVE IMPACTS

The Kawai Nui Gateway Park is one of the many projects identified in the Kawai Nui Marsh Master Plan and Environmental Impact Statement. As funding becomes available from various sources, additional components of the Master Plan will be implemented. Recent projects include the Kawai Nui Community Park, and the Kawai Nui Pathway, the EA for which is currently being reviewed

by the public. The cumulative impact of these projects is beneficial to the Kailua Community from an aesthetic, educational, cultural, wildlife biology and recreational perspective. No long-term adverse environmental impacts are anticipated from the individual projects or from the implementation of the entire Master Plan.

Cumulative impacts to an environment result from the incremental impacts of any previously existing government or private development in conjunction with present and planned projects deemed "reasonably foreseeable future actions." Guidance provided by HAR 11-200-2 and 11-200-5 was employed to assess the cumulative impacts of recently completed and proposed projects in the vicinity of Kawai Nui Marsh.

The Kawai Nui Gateway Park is one of the many proposed projects identified in the 1994 Kawai Nui Marsh Master Plan and Environmental Impact Statement. Four other projects in the Kawai Nui Marsh area may contribute to cumulative impacts:

1) The Kawai Nui Community Park Parking Lot and Landscape Improvements were constructed in 2001. The park is located between the two proposed Kawai Nui Gateway Park areas. The project provided a 40-stall paved asphalt parking lot, a small passive park, and landscape improvements to the existing soccerfield.
2) The Kawai Nui Pathway is a proposal to construct a trail system around Kawai Nui Marsh. This pedestrian/bicycle pathway will provide the community a recreational asset from which they can appreciate wetland features, and historic sites along the Marsh periphery. As required by the US Army Corps of Engineers, pathway segments will not involve construction in the water or result in the obstruction of waterways. A parking lot is proposed at the southern end of the levee. No restroom facilities are proposed. The Final EA for the Kawai Nui Pathway project is pending.
3) The Kawai Nui Education Center is proposed at the southern edge of the Marsh. It will provide an assembly area for environmental and cultural education programs, a combination restroom/office/storage facility, parking area (20 stalls), and a demonstration taro lo'i. The Final EA was withdrawn pending selection of a final site.
4) The State of Hawaii Department of Land and Natural Resources (DLNR). Developed a management plan for Kawai Nui Marsh. The Final EA was finalized in 2000. The purpose of the plan is to describe DLNR's management actions to "ensure the continued preservation of the Marsh's resources, while pursuing its enhancement for public use and appreciation." (DLNR, 2000). The Master Plan outlines projects that are intended to

complement DLNR's goals for managing the Marsh. The Kawai Nui Education Center, the perimeter trail system, and scenic passive parks (such as the Kawai Nui Gateway Park) were included in the Master Plan under assumption that each project would require an Environmental Assessment as funding was appropriated.

The cumulative impacts of these projects are beneficial to the Kailua Community. As funding becomes available from various sources, additional components of the Master Plan will be implemented. This section addresses the cumulative impacts of the four projects by key environmental issue:

Air Quality
None of the project proposals for Kawai Nui Marsh anticipate significant air emissions resulting in the degradation of air quality. There is no expectation of a significant release of greenhouse gases resulting in climate modification upon implementation of any or all of the proposed plans.

Drainage
Kawai Nui Marsh is important to sediment filtration and nutrient recycling and acts as a flood control basin. Vegetation maintenance and retention of open water areas are essential in maintaining the flood storage capacity of the Marsh basin. The Kawai Nui Community Park and Landscaping project did not adversely impact the groundwater recharge cycle or the ability for the area to receive stream and ocean waters. Plans for the Kawai Nui Education Center cite that the overall impact on the wetland and stream resources over time will be positive due to the removal of cattle from proposed lease parcel and the re-vegetation of barren ground. The middle, relatively flat third portion of the proposed 450 square foot lease parcel is usable for structures and parking. The Kawai Nui Pathway EA does not identify negative impacts on drainage within the Marsh. No significant impacts are anticipated to Kawai Nui Marsh's hydrology as the result of the construction of all proposed projects.

Noise
With an increase in the number of people frequenting the Marsh, in response to overall improvement to Marsh amenities and greater accessibility, the potential for noise impacts on adjacent neighborhoods is increased. The residential neighborhoods are located along the eastern and southern boundaries of the Marsh. The recently completed Kawai Nui Community Park generates noise during soccer activities. Based on the planned uses, the remaining proposed projects will not generate noise levels that exceed normal conversation. The use of the Mokapu site by canoe clubs will generate short-duration increases in

conversational noise levels when the canoes are launched and removed from the canal. The canoe club noise may coincide occasionally with the soccer park noise, but the noise impacts will occur during daylight hours and be will be short –lived. The cumulative noise levels are unlikely to exceed the allowable noise levels at the parks' boundaries.

Socio-economic

Individually and cumulatively, the proposed projects provide environmental, and cultural learning opportunities. They complement each other in their social impact on the community. The pathway will connect the various components of the Marsh master plan. There is the potential for the Marsh and amenities to attract consumers to Kailua to the economic benefit of Kailua businesses.

Traffic and Parking

Each of the proposed projects, as well as the recently completed Kawai Nui Community Park, include parking spaces. The soccer activities result in overflow parking and traffic in the Coconut Grove residential community. Until the Oneawa Canal bridge is constructed, visitors to the Coconut Grove Site of the proposed Kawai Nui Gateway Park are likely to park in the soccer field parking lot. No significant cumulative impact is anticipated, because the visitors to the passive nature walk of the Coconut Grove Site will be less attracted to the serenity of a nature walk during a nearby soccer activity. The soccer and canoe activity schedules at the two parks may coincide, but the traffic routes to each do not. The proposed education center traffic will be limited to hours of operation and is unlikely to coincide with the canoe or soccer activities since the preferred site is at the opposite side of the Marsh. The proposed pathway parking lot is not accessed via residential neighborhoods and its use should not impact traffic *en route* to the soccer field or canoe activity parks. No significant cumulative impacts on traffic or parking are anticipated.

Water Resources

Anticipated negative impacts regarding water quality will be short-term and minimal during the construction phases for the proposed projects. The County and State permit processes regulate disturbance of soil at a construction site. Appropriate permits will be obtained for each of the proposed projects and the approving agencies will attach protective measures (Best Management Practices) to be implemented to avoid erosion into waterways. Groundwater will not be impacted by the proposed projects individually or cumulatively.

Wildlife Biology

During construction, the proposed projects may generate noise that impacts the wildlife for a short period of time. During operation, the boardwalks, pathways and viewing platforms will provide up-close, but non-invasive, opportunities to view wetland vegetation, birds, and aquatic species in their natural habitat. Access to the Marsh will be limited to peripheral areas and interior wildlife areas will not be affected by pedestrian traffic. The gateway project and the education center incorporate wetland enhancement to encourage wildlife. Additional positive impacts will likely ensue as community members become educated on the biological resources within Kawai Nui Marsh through informative signage, and cultural and educational programs.

In summary, no long-term adverse environmental impacts are anticipated from the individual projects or from the implementation of all proposed projects discussed. Cumulative impacts from existing and proposed projects in the Kawai Nui Marsh vicinity are expected to enhance the Kailua community by attracting residents and visitors to discover the natural beauty of this resource, while preserving and benefiting the flora and fauna inhabiting Hawaii's largest remaining freshwater wetland.

6.0 Conformance with Land Use Regulation and Control

6.0 CONFORMANCE WITH LAND USE REGULATION AND CONTROL

6.1 FEDERAL

Activities proposed in wetlands, US navigable waterways, and flood control areas are regulated by the USACE and the US Coast Guard. No structures are allowed and none are proposed within Oneawa Canal or Kaelepulu Channel, per USACE regulations. The US Coast Guard issued advanced approval for the proposed pedestrian bridge over Oneawa Canal, per Title 33, Code of Federal Regulations, Section 115.70 (Appendix D). Per Section 10 of the Rivers and Harbors Act of 1899, a USACE permit is required for structures over waters subject to the ebb and flow of tide. USACE will review the final structural plans to ensure the park structures meet flood control requirements. USACE will likely require nationwide permit coverage for the earth disturbance associated with bank stabilization and disturbance of soils in fastlands when installing the footbridge support.

The project will have a positive impact on wetlands, and will not negatively impact the navigable waters of the US or the flood management area. The County is charged with reviewing construction projects located within flood hazard areas to ensure the project meets design standards. This review occurs during the County grading and grubbing permit approval process. In project areas where base flood elevations are unknown, a flood study will be required to ensure that the structures are built at sufficient elevation. Comfort stations and footbridges are permitted uses within the project area.

6.2 STATE

6.2.1 Land Use District

The State Land Use Commission, Chapter 205, HRS classifies all land into four major land use districts, Urban, Rural, Agricultural, and Conservation. The Coconut Grove Site and most of the Mokapu Site are designated Conservation (Figure 13). Approximately 1.9 acres of the Mokapu Site is Urban. There are few development restrictions on Urban land. Parks are permitted uses within Conservation land subject to Conservation District Use Permit (CDUP) approval by the State Department of Land and Natural Resources (DLNR).

6.2.2 Coastal Zone Management

The project lies within the State's Coastal Zone Management (CZM) Area. Therefore, the CZM objectives and policies, as stated in Section 205A-2 HRS, are applicable to the proposed project. The Coastal Zone Management objectives and policies (Section 205A-2) applicable to the proposed project are

cited and ***addressed*** below:

OBJECTIVES

Recreational Resources

Provide coastal recreational resources opportunities accessible to the public. ***The project will develop a passive recreational park on undeveloped land that will increase access to Oneawa Canal for canoe paddling teams.***

Historic Resources

Protect, preserve, and, where desirable, restore the natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture. ***No historic resources were identified at the Park. There is potential for paleoenvironmental deposits to be present in the western area of the Mokapu Site, but no construction is planned in that area. The wetland enhancement area of Coconut Grove Site, is also an area potentially rich in paleoenvironmental deposits. An archaeological survey will be constructed to ensure the structures proposed do not disturb these resources.***

Scenic and Open Space Resources

Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources. ***The undesirable overgrown vegetation will be cleared from the Mokapu Site to enhance scenic views of Kawai Nui Marsh and associated waterways.***

Coastal Ecosystems

Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems. ***The estuary of the Marsh is considered a valuable coastal ecosystem. The project will not impact the estuarine waters, except at the Coconut Grove site where the wetland will be enhanced resulting in a positive impact on the estuary. No reefs will be impacted.***

Economic Uses
Provide public or private facilities and improvements important to the State's economy in suitable locations. ***The project will*** **have no *direct impact on the State's economy.***

Coastal Hazards
Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution. ***Although the project is on the periphery of the flood control basin, it will not reduce or increase the hazards to life or property due to natural disasters.***

Managing Development
Improve the development review process, communication, and public participation in the management of coastal resources and hazards. ***The County Visioning process, of which this project is an outcome, has greatly facilitated public participation in coastal development proposals.***

Pubic Participation
Stimulate public awareness, education, and participation in coastal management. ***The Park will provide access to estuarine ecosystems; thereby, encouraging public awareness and education. An educationa pavilion will provide classes a shaded place to assemble.***

POLICIES
Recreational Resources
(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;

- Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
- Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;
- Ensuring public recreational use of county, state and federal owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources; and

- Adopting water quality standards and regulating point and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters.

The project is an initiative of the City and County of Honolulu, Vision Team 2000 program. It will increase public access, including handicapped persons, to otherwise inaccessible areas in the Marsh. Natural resources will be enhanced by the project. There are no activities proposed at the Park that would increase non-point source pollution. During the construction phase of the project, soil control measures will be implemented as required by the County for grading and grubbing activities.

Historic Resources

- Identify and analyze significant archeological resources.
- Maximize information retention through preservation of remains and artifacts or salvage operations; and
- Support state goals for protection, restoration, interpretation, and display of historic resources.

Cultural Surveys Hawaii conducted an archeological survey of the project area. Their findings are discussed in Section 4.4. In summary, both sites have been subjected to grading and fill activities; however there is potential for paleoenvironmental information to be obtained from the sediments beneath the fill. In addition, the sand deposits at the Coconut Grove site may contain valuable artifacts. The project is not expected to impact the sediments beneath the fill at the Mokapu Site. At the Coconut Grove Site there will be minimal disturbance of sand deposits, as most of the work will be limited to vegetation removal and planting. An archaeological survey inclusive of sediment coring will be conducted at the Coconut Grove Site prior to construction.

Scenic and Open Space Resources

- Identify valued scenic resources in the coastal zone management area;
- Ensure 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;

- Preserve, maintain, and where desirable, improve and restore shoreline open space and scenic resources;

A key objective of the Kawai Nui Gateway Park is to enhance scenic and open space resources. Undeveloped overgrown land will be cleared and landscaped in a manner complementary to the surrounding property. The Park will provide scenic views from adjacent roadways into the Marsh, and will provide unobstructed views across the Marsh from the periphery of the Marsh. The few structures proposed are designed to have minimal impact on the scenic views to and from the Marsh.

Coastal Ecosystems

- Improve the technical basis for natural resource management;
- Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;
- Minimize disruption or degradation of coastal water ecosystems by effective regulations of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and
- 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 that violate state water quality standards.

The project will improve access to the estuarine waters of the Marsh to encourage scientific study of the ecosystem. The enhancement of the wetland will preserve an area of biological significance. The project will not disrupt or degrade the existing flood control channels and water quality standards will not be compromised by the operation of the Park.

Coastal Hazards

- Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and non-point source pollution hazards;
- Control development in areas subject to storm waves, tsunami, flood, erosion, hurricane, wind, subsidence, and point and non-point source pollution hazards;
- Ensure that developments comply with requirements of the Federal Flood Insurance Program;
- Prevent coastal flooding from inland projects; and

- Develop a coastal point and non-point source pollution control program.

The U.S. Federal Emergency Management Agency, National Flood Rate Map, Flood Insurance Rate Map (FIRM) has determined the Mokapu Site is largely in Zone X (areas determined to be outside the 500-year floodplain). There is a small portion of the Mokapu Site within Zone A, which indicates an area that is likely to be inundated by the 100-year flood, but for which no base elevations have been determined. No structures are proposed in this Zone A portion. The Coconut Grove site is in Zone AH (special flood hazard area inundated by a 100-year flood with flood depths of 1 to 3 feet and a base flood elevation of 6 feet). Code of Federal Regulations, Title 44 subsection 60.3, describes development requirements in flood zones and distinguishes between residential or non-residential. All structures proposed are non-residential and will be constructed such that the lowest floor is elevated at or above the base flood elevation level (6 feet).

Furthermore, the Land Use Ordinance, Section 21-9.10, regarding Flood Hazard Districts, states public outdoor recreational areas, lawns and gardens are permitted uses in floodways and flood fringe areas. In addition, fences and retaining walls, signs, bridges, walkways, comfort stations, picnic tables, and landscaping, are exempt from hazard district requirements. The County will review the building plans for compliance with flood zone development standards during the grading and grubbing review process.

Soil erosion control measures and Best Management Practices (BMPs) will be implemented during construction to minimize soil runoff into adjacent waterways and fastlands, as dictated in the County grading and grubbing permit.

Managing Development

Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal

zone development;

- Facilitate timely processing of applications for developing permits and resolve overlapping or conflicting permit requirements; and
- Communicate the potential short and long-term impacts of proposed significant coastal developments early in their lifecycle and in terms understandable to the public to facilitate public participation in the planning and review process.

The community visioning process and this EA address project impacts (short- and long-term) and encourage public participation in the planning and review. This document will support applications for a Special Management Area (SMA) Use Permit and the Conservation District Use (CDUP) Permit.

In summary, the project is consistent with State land regulatory goals. No mitigation is proposed.

6.3 COUNTY

6.3.1 General Plan

The General Plan for the City and County of Honolulu, originally adopted in 1977, was last amended in 1992. The Plan is a comprehensive statement of the long-range social, economic, environmental and design objectives for the general welfare and prosperity of the people of O`ahu. Included in the General Plan are broad policy statements that facilitate the attainment of the objectives of the Plan.

The following General Plan objectives are supported by the proposed project:

- Creation and maintenance of attractive, meaningful and stimulating environments throughout O`ahu; and
- Development of a wide range of recreational facilities and services that are readily available to all residents of O`ahu.

6.3.2 Ko`olaupoko Sustainable Communities

The Ko`olaupoko Development Plan (1983) was repealed and replaced by the Ko`olaupoko Sustainable Communities Plan in August 2000.

The Ko`olaupoko Sustainable Communities Plan, Section 3.1.3.3 (Wetlands, Wildlife Preserves and Nature Parks/Preserves), notes Ko`olaupoko is significant because of the occurrence and abundance of native waterbirds, such as the Hawaiian Stilt (*ae`o*), Hawaiian Coot (*`alae ke`oke`o*), Hawaiian Duck (*koloa maoli*), Hawaiian Moorhen (*`alae`ula*), and migratory waterfowl and shorebirds.

The section further describes Kawainui Marsh as one of eight major existing wetlands of Hawaii, proposed nature parks/preserves and/or botanical gardens of Ko`olaupoko.

Kawai Nui Marsh serves multiple purposes as a flood storage basin, wetland filter, wildlife habitat and cultural and scenic resource pursuant to a master plan prepared in 1994. The master plan proposes hiking trials through the Marsh, an environmental education center and a pedestrian path around the perimeter of the Marsh.

Kawainui Marsh Site # 7, Pahukini Heiau and Ulupo Heiau are recognized as significant archeological sites in Ko`olaupoko. In the report, Kawai Nui Marsh is designated as an Open Space/Preservation Area.

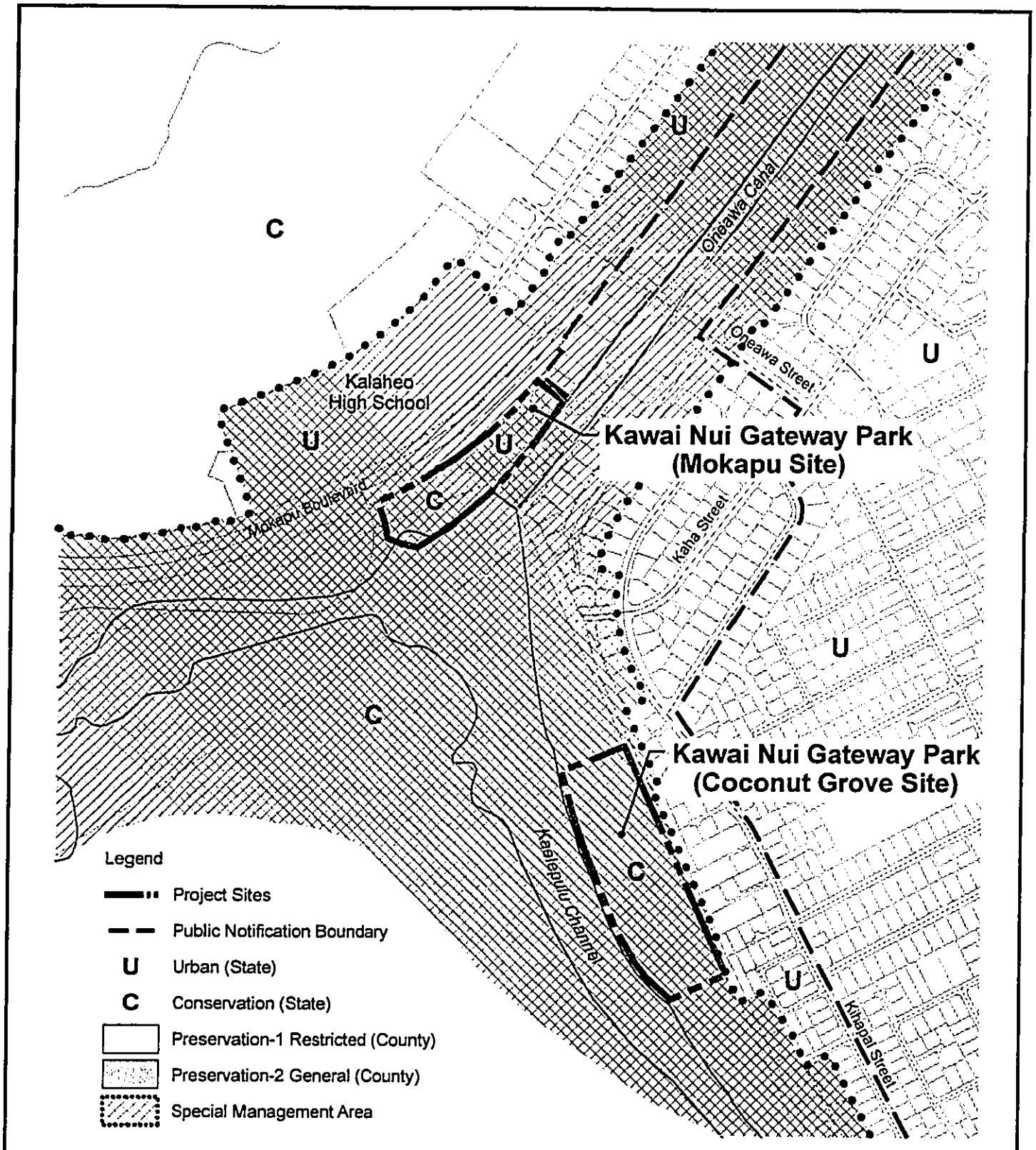
The Ko'olaupoko Sustainable Communities Plan (C&C, 2000) identifies the Kawai Nui Gateway Park parcels as "Preservation Areas and Nature Parks" on *the Open Space Planning Map*, "*Open Space/Preservation*" *on the Land Use* Map, and "Open Space/Preservation" on the Public Facilities Planning Map. Kawai Nui Gateway Park is consistent with the following Sustainable Communities Plan's policies, principles, and guidelines for open space areas (C&C, 2000):

- Protect scenic views, provide recreation and promote access to shoreline areas;
- Design and site structural improvements and landscaping in community-based parks in such a way as to enhance the aesthetic value of these open space elements;
- Expand recreational and educational resources;
- Improve in a manner that preserves the area's natural scenic quality, and provides educational and passive recreational opportunities; and
- Protect fragile natural resources, such as wildlife, from overuse through appropriate forms of management control.

6.3.3 Zoning

The Land Use Ordnance (LUO) and Zoning Maps of the City and County of Honolulu designate approximately 1.9 acres of the Mokapu Site as P-2 (General Preservation), and the remainder as P-1 (Restricted Preservation) (Figure 13). The Coconut Grove Site is entirely within the P-1 zone.

According to the LUO, recreation facilities are a permitted use within the P-2 district and proposed uses of P-1 are subject to State review through the CDUA permit process.



LAND REGULATION

Kawai Nui Gateway Park
Kailua, Ko'olaupoko, O'ahu

Helber Hastert & Fee
PLANNERS

0 Feet 600
0 Meters 180

Figure
13

6.3.4 Special Management Area

The County reviews development proposals that are located along the shoreline to evaluate their potential impact on coastal areas. The area within the delineated coastal area boundary is referred to as Special Management Area (SMA). Projects, such as the Kawai Nui Gateway Park, that lie within the SMA are subject to review in accordance with Chapter 205 HRS. The SMA project review guidelines, as stated in Section 25-3.2 Revised Ordinances of Honolulu (ROH) and the ***discussion*** of relevance to the proposed project are as follows:

> All development in the SMA shall be subject to reasonable terms and conditions set by the council to ensure that:
>
> 1. 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. ***The Park will provide greater access to the periphery of the Marsh without impacting the natural resources of the area.***
> 2. Adequate and properly located public recreation areas and wildlife preserves are reserved. ***The project is a passive recreational area and will enhance the Marsh wetlands at the Coconut Grove Site.***
> 3. Provisions are made for solid and liquid waste treatment, disposition and management which will minimize adverse effects upon special management area resources. ***The minimal solid waste and sewage waste generated will be managed by the County. There will be no discharge to the environment at the Site.***
> 4. 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. ***Alterations to the landscaping will create scenic and recreational amenities. Negligible change in the Sites' topography is anticipated. The project will not increase the flood hazard. During construction, there is potential for earth moving activities to release soils into the environment. Preacautions will be taken, as dictated by federal, State and County permits, to minimize these potential impacts.***

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

1. The development will not have any substantial, adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest. Such adverse effects 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. ***No substantial adverse environmental impacts are anticipated. No adverse cumulative impacts are anticipated as described in Chapter 5.14.***
2. The development is consistent with the objectives and policies contained in HRS Section 205A-26. ***This is addressed in Chapter 6.2.2 and 6.3.4.***
3. The development is consistent with the County General Plan, the development plans and zoning. ***This is addressed in Chapter 6.3.***
4. The City Council shall seek to minimize, where reasonable:
   a. Dredging, filling or otherwise altering any bay, estuary, salt Marsh, river mouth, slough or lagoon. ***There will be unavoidable disturbance of soils in fastlands during installation of structures at the Coconut Grove Site. The areas of disturbance will be minimized to the extent practical through BMPs and conditions attached to various permits.***
   b. Any development which would reduce the size of any beach or other area usable for public recreation. ***The project will increase the size of recreational areas.***
   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. ***The project will increase access to streams.***
   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. ***The project will not have an impact on scenic views to the ocean, and will have positive impacts on the views to the Marsh and Ko`olau Mountains.***
5. Any development which would adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential

or existing agricultural uses of land. ***One project objective is to enhance the waterbird habitat. No impact to fisheries or water quality is anticipated during park operation. The structures proposed are consistent with other park structures in the vicinity.***

In summary, the Kawai Nui Gateway Park is consistent with existing federal, State and County land use regulations. SMA and Conservation District Use permit applications will be submitted to the appropriate agencies for approval.

7.0 Findings and Determination

7.0 FINDINGS AND DETERMINATION

This chapter presents a summary of the permits and approvals anticipated to develop the Kawai Nui Gateway Park, and a summary of anticipated environmental impacts and proposed mitigation for potential negative impacts. The anticipated determination concludes the chapter.

7.1 SUMMARY OF POTENTIAL PERMITS AND APPROVALS

Table 7-1 summarizes the anticipated permits and approvals anticipated prior to Park construction. The draft EA review process will provide agencies opportunity to comment on the need for additional permits and approvals.

Table 7-1 Permits and Approvals

LEVEL OF GOVERNMENT PERMIT/APPROVAL	APPROVING AGENCY	PURPOSE
Federal		
Bridge & Causeway	US Coast Guard	Protect US navigable waterways. *Advance Approval granted* May 15, 2002 (Appendix D)
Section 10 Rivers and Harbors Act	Army Corps of Engineers	Safe structures in flood hazard zone
Nationwide Permits: 13, 27, 42	Army Corps of Engineers	Protect water quality during bank stabilization, wetland restoration and recreational facilities.
State		
CZM	DBEDT	Protect CZM when federal permit required (no federal permits anticipated)
Environmental Impact Assessment	County Department of Design and Construction (DDC); process administered by State Office of Environmental Quality Control	Public Disclosure of project impacts on the environment
Section 401 Water Quality Certification	DOH Clean Water Branch	Protect waters of US when a federal permit is involved
Approval for U-turn and traffic signal modification	DOT	Provide convenient access to park from Mokapu Boulevard westbound
Use of State highway right-of-way	DOT	Safe work in State right-of way
Review EO	Land Board	Ensure use of parcels is consistent with State's purpose for condemnation of parcels
CDUA	DLNR	Appropriate use of Conservation land

County		
Environmental Assessment	DDC	Disclose potential impacts to public
SMA	DPP	Protect coastal areas
Building Permit	DPP	Safe construction, flood design standards
Grubbing, Grading, Stockpiling	DPP	Control soil erosion, drainage, design in flood areas
Sewer connection	DPP	Approve sewer connection
Sign permit (future)	DPP	Approve design for signage

7.2 SUMMARY OF POTENTIAL IMPACTS AND MITIGATION

Table 7-2 Summarizes the potential negative impacts and the proposed mitigation for the development and operation of Kawai Nui Gateway Park.

Table 7-2 Potential Impacts and Mitigation

RESOURCE CATEGORY	POTENTIAL IMPACTS (POSITIVE (+)/NEGATIVE (-)/ MINIMAL (0)	MITIGATION PROPOSED
Hydrology	**0**	NA
Potable Water	**0**	NA
Surface Water	- Soil discharge to water during construction	Implement engineering controls described in Grading and Grubbing permit, and Water Quality Certification (WQC) BMP.
Waterbirds	+ Habitat enhancement	NA
	- Short-term disturbance during construction	Implement Grading and Grubbing permit BMP to protect water.
	- Potential for increased pedestrian traffic to wildlife areas	• Restrict access to pathways; • Prohibit animals without a leash; • Retain shoreline vegetation.
Botanical Resources	+ Use native plants in landscaping and reduce non-native species.	NA
Aquatic Resources	- Short-term disturbance during construction activities	Implement Grading and Grubbing Permit and WQC BMP.
Historical, Cultural, and Archaeological -	- Inadvertent discovery of human + remains during construction	Construction will cease and authorities notified.

RESOURCE CATEGORY	POTENTIAL IMPACTS (POSITIVE (+)/NEGATIVE (-)/ MINIMAL (0)	MITIGATION PROPOSED
Historical, Cultural, and Archaeological	Potential for disturbance of paleoenvironmental deposits at wetland enhancement area of Coconut Grove Site.	Paleoenvironmental surveys will be conducted prior to construction.
	Facilitate access to cultural resource	NA
Ambient Noise	- Short-duration noise associated with construction equipment may disturb nearby residents.	Noise levels will be within DOH regulatory limits at the property line.
	- Noise generated by park users may disturb nearby residents.	• Limit hours of park use • Post park use rules; • Locate park structures away from residences; • Install boundary berms and vegetation to buffer noise on boundaries.
Light Emissions	- Nearby residents are concerned about lights from traffic on Mokapu Boulevard.	Install/retain boundary berms and vegetation to diminish headlight beams.
	- DOFAW concern about impact of lighting on young shearwaters	Use low sodium shielded lighting directed to the ground
Health & Safety	- Nearby residents are concerned about unauthorized use of the park in evenings and by high school truants during the day.	• Restrict vehicle access to daytime hours with locked chained entrance; • Prohibit parking outside of gate along Mokapu Blvd. • Unlock gate after school day begins. • Police patrols will have unobstructed view of parking lot and comfort station from Mokapu Blvd.
	- Nearby residents are concerned about accessibility to their property.	Install boundary fencing and signage, and retain vegetation screening to discourage trespassing
	+ Developed land will discourage unauthorized dumping.	NA
Traffic & Parking	+ Provide handicapped access to Kawai Nui Marsh	NA
	+ Complete segment of Marsh peripheral pathway	NA
	- Inconvenient access from westbound lane of Mokapu Boulevard	Recommend altered traffic control at nearest intersection.
	- Canoe transport will interfere with parking lot use	Prohibit parking of trailers except for loading and unloading

RESOURCE CATEGORY	POTENTIAL IMPACTS (POSITIVE (+)/NEGATIVE (-)/ MINIMAL (0)		MITIGATION PROPOSED
Scenic & Aesthetic Resources	+	Enhance appearance of overgrown property	NA
	+	Provide views of the Marsh from Mokapu Boulevard	NA
	+	Provide access to views across the Marsh from northern corner	NA
	+	Create wildlife observation areas	NA
Socio-economics	+	New recreational amenity	NA
	+	Possible increase in property values in the neighborhood	NA
	0	No adverse impact on jobs, commerce, or populations.	NA
Utilities	0	No adverse impact on water supply, power, or sewer.	NA
Air Quality	-	Minimal construction-related fugitive dust	Implement Grading and Grubbing Permit BMP.

NA Not applicable. No mitigation required or proposed.

7.3 DETERMINATION AND REASONS SUPPORTING THE DETERMINATION

The Kawai Nui Gateway Park will have no significant adverse impacts on the environment; therefore, an Environmental Impact Statement is not required and this Finding of No Significant Impact will be filed with OEQC. The basis for this determination is the project's failure to meet any of the thirteen significance criteria that are specified in HAR Title 11 Chapter 200, Subchapter 12 (Environmental Impact Statement Rules, Significance Criteria). A discussion of the project relative to the significance criteria is presented in this chapter.

Criteria 1. Involves the irrevocable commitment to loss or destruction of any natural or cultural resource.
No destruction of natural or cultural resources is anticipated; in fact the project provides for natural resource enhancement. No known cultural resources were identified at the site. A paleoenvironmental survey at the Coconut Grove Site will completed prior to construction. Potential cultural artifacts that exist in the underlying soils of the project site will not be disturbed by the project.

Criteria 2. Curtails the range of beneficial uses of the environment.
Instead of curtailing the range of beneficial uses at the Marsh, the project facilitates the expansion of beneficial uses (e.g. scenic views, education, wetland enhancement).

Criteria 3. Conflicts 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 Kawai Nui Gateway Park complements the State's long-term policies and goals, which espouse conservation of natural resources and enhancement of quality of life.

Criteria 4. Substantially affects the economic or social welfare of the community or State.
Economic benefits would be positive and indirect. The social welfare of the community will be improved by transforming the vacant parcels into a viable recreational area.

Criteria 5. Substantially affects public health.
The project will be developed in accordance with State and County regulations protecting public health. The operation of the public park will have no adverse impacts on public health, and may have a positive mental health benefit for visitors.

Criteria 6. Involves substantial secondary impacts, such as population changes or effects public facilities.
The project will not have adverse secondary impacts on population demographics or public facilities.

Criteria 7. Involves a substantial degradation of environmental quality.
The wetland enhancement associated with the project will enhance, rather than degrade environmental quality. Construction-related disturbances (e.g. noise, earth moving) of the project will be minimal and short-lived.

Criteria 8. Is individually limited but cumulatively has considerable effect upon the environment or involves commitment for larger actions.
The proposed scenic passive park elements were identified in or are consistent with master plans for the Kawai Nui Marsh. The Park will complement the proposed Marsh perimeter pathway and education center, and the existing Kawai Nui Community Park.

Criteria 9. Substantially affects a rare, threatened or endangered species or habitat.
The impacts of the Park on threatened and endangered species is intended to be beneficial. The wetland enhancement will improve portions of the degraded Marsh habitat for endangered waterbird species. Exterior

lighting at the comfort station will be directed to the ground to mitigate the impact of minimal night lighting to young shearwaters.

Criteria 10. Detrimentally affects air or water quality or ambient noise levels.
During construction there is potential for minimal impact to air, water or ambient noise. The project will be constructed in accordance with required federal, State and County permit conditions that require the implementation of Best Management Practices to mitigate these potential impacts.

Criteria 11. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a floodplain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal water.
The project is located within the SMA and borders a floodplain. No adverse impacts are anticipated to the SMA. An SMA permit will be obtained and conditions of the permit will be implemented. The facilities proposed will not impact flood control and will be at sufficiently high elevation to mitigate damage to the Park facilities during the 100-year flood.

Criteria 12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies.
Kawai Nui Marsh is recognized as a significant vista and viewshed. The Kawai Nui Gateway Park will provide scenic viewpoints from which to appreciate the aesthetic resources of the Marsh from the periphery of the Marsh. The construction materials and landscaping will complement the surroundings. The view from Mokapu Boulevard across Marsh will be dramatically enhanced by vegetation thinning at the Mokapu Site.

Criteria 13. Requires substantial energy consumption.
Energy consumption at the Park will be minimal and limited to the electricity required to operate lighting (interior and exterior) at the comfort station.

8.0 Public Consultation

8.0 PUBLIC CONSULTATION

Management of the Kawai Nui Marsh and vicinity has been the subject of numerous complementary planning efforts over the past ten years, all of which solicited public input. The public input generated during the project-specific County Visioning process and the review if this EA are presented in this chapter.

8.1 PRE-ENVIRONMENTAL ASSESSMENT CONSULTATION

Four community meetings were held in 2001 specifically to address design considerations of the Kawai Nui Marsh Gateway Project. Additional meetings were held as requested. Residents within the geographic area bounded by Mokapu Boulevard, Oneawa Street, Kaha Street, Kihapai Street, and the Marsh were notified of the community meetings (Figure 11). These meetings solicited comments on the potential negative and beneficial impacts of the project. The Park design evolved in response to public concerns and the culmination of these efforts is the project presented in this EA. Table 8-1 summarizes the meetings held and paraphrases comments recorded regarding each of the two Sites. Note that some comments were applicable to both Sites. In those cases where the comment was a question, the response given follows in italics typeface.

Table 8-1 Key Issues Raised at Meetings

MEETING DATE - ATTENDEES	MOKAPU SITE	COCONUT GROVE SITE
5/24/01 – Community Meeting #1	Evening loitering, noise	
	Security- increase in pedestrian traffic along canal through residential parcels	
	Increase in road traffic on Kaha Street.	Insufficient parking at Kaha Park to accommodate more users
	Noise due to an increase in motor boat traffic	Keep as natural as possible
	Encourage canoe use	Need a buffer next to residences
	Improve aesthetics of vacant parcels	Room for a dog park? Unleashed dogs may scare birds.
	Comfort station- mixed views	Limit park access to boardwalk and defined paths to discourage disruption of bird habitat
	Address long-term park management	

MEETING DATE - ATTENDEES	MOKAPU SITE	COCONUT GROVE SITE
6/12/01 – Kawai Nui Heritage Foundation	Apply 1994 DLNR development plan concepts.	Nature walk design should be a loop around existing wetlands.
	There are numerous field study programs at the Marsh and a lack of sheltered gathering lecture space. A pavilion at this site would be useful.	There are valued bird habitats on the makai side of the levee.
	A footbridge across the canal to the levee would be a positive addition	
	The pavilion and footbridge should be located away from the residences	
	Recommend a comfort station	
	Would like to see parking that would relieve the pressure from Kaha Park, and reduce traffic in the neighborhood east of the park.	
7/11/01 – Kailua Canoe Club	Would like option to store canoes overnight if conditions warrant.	
	Kalaheo High School would like to store 6-8 canoes between December & February.	
	High School paddles from 3:30pm to 5:30 pm	
	Design: grassy area big enough for 8-10 canoes (canoes are 45'- long, 8-10'- wide, shower and spigot, grass boat ramp (20'-30' feet wide)	
7/12/01 – Community Meeting #2	New parks contradict intent to preserve Marsh.	
	Park is part of goal to educate people on Marsh ecology	
	What is DLNR's involvement? *DLNR did Master Planning, but not detail design*	
	How is Kawai Nui Heritage Foundation involved? *Participating in the design to encourage educational mission*	
	No funding for maintenance	
	Park is an attractive gateway to the Marsh	
	Oneawa Canal bridge negative visual impact	

MEETING DATE - ATTENDEES	MOKAPU SITE	COCONUT GROVE SITE
8/16/01 – Community Meeting #3	State will initiate executive order for the County to assume maintenance responsibility	
	County will restrict access to park in the evening as is currently done at the Gateway Park	
	High school students may loiter at park during the day.	
	Why not build educational building at Coconut Grove Site? *Access is better at the Mokapu Site*	
	Potential for negative activity at park should not prevent the project.	
	Rock wall at entrance is unattractive. Prefer combination of berms, curbs, vertical poles and landscaping for a more natural entrance.	Project expanded to include land between channel and soccer field. Provides transition between sites of project.
	Retain monkey pod and *milo* trees	Design restricts access to boardwalks and gravel pathways
	Canoe clubs volunteered to assist County with maintenance.	Ducks Unlimited supports pathway design
	Encourage use of native plants.	
	Move comfort station as close to road as possible to provide added security.	
	Provide handicapped access to water's edge.	
	Canoe ramp will be designed in consultation with canoe clubs.	
8/21/01- Steve Holmes	Move canoe storage to makai side of bridge.	Use recycled materials for boardwalk
		Clear *hale koa* and *hau* along roadways to provide view of park interior for security reasons.
9/27/01- Community Meeting #4		Does community need more parks? *It is important to consider this project as part of the larger Kawai Nui Marsh Master Plan, which envisions a significant educational and recreational community asset that must be implemented in stages for economic reasons.*
	Comfort station was moved closer to road for added security.	Design should include more habitats for endangered birds and community groups would participate in construction.

MEETING DATE - ATTENDEES	MOKAPU SITE	COCONUT GROVE SITE
9/27/01- Community Meeting #4	Development of the Site may discourage existing vagrancy.	
	Increased noise to nearby residents. Levee resulted in increased noise and traffic.	
	Could parking be along Mokapu Blvd. instead of interior? *Dept. of Transportation will not allow.*	
	Will utility lines along Mokapu Blvd. be buried? *Not part of project.*	
	Berming along Mokapu Blvd. will mitigate light pollution from cars for nearby residents.	
	Resident stated that park development has positive impact on property values.	
	How much lighting? *Need balance between security and light pollution; therefore minimal lighting proposed.*	
	High school representatives in favor of park, but acknowledge it may require more vigilance on their part.	
	Will commercial activity be allowed? *No*	
	Vote on conceptual design as presented 9/27/01: 12 in favor and 2 opposed	
2/7/02- Kailua Neighborhood Board	Traffic/parking needs to be addressed	Parking/access
	Noise impact on adjacent residents	Impacts to waterbird habitat
	May be security issues at park	
	Provide for visual view planes in project	
2/11/02- Kailua Neighborhood Board and Parks & Recreation Committee	Impacts of canoe activities	Preserve existing waterbird habitat
	Traffic/parking design elements	
	Address access along shoreline	
2/15/02- Government, Community Groups, etc.	Paved parking required.	
	ADA standards apply.	
	Permits required: SMA, CZM, Flood, Corps of Engineers, Conservation district Use, NPDES. May Need DOT approval for Mokapu Blvd. access.	
	Corps of Engineers will not allow any floating objects (docks) on waterway.	
	Canoe Club criteria will be met	

8.2 ENTITIES CONTACTED

The agencies and organizations that participated in the community planning process and/or provided information critical to the effort are as follows:

Federal

U.S. Army Corps of Engineers (USACE)
U.S. Coast Guard

State

Department of Land and Natural Resources (DLNR),
Forestry and Wildlife Division
Land Division
State Historic Preservation Division (SHPD)
Department of Transportation (DOT), Right of Way Branch

County

Honolulu Fire Department (HFD)
Honolulu Police Department (HPD)
Department of Parks and Recreation (DPR)
Department of Design and Construction (DCC)
Department of Planning & Permitting (DPP)

Community Groups

Kailua Neighborhood Board (Recreation Sub-Committee)
Kailua Vision Team
Kawai Nui Heritage Foundation
Outdoor Circle
Ducks Unlimited
Kailua Residents

8.3 DRAFT EA REVIEW

The following entities were on the Draft EA distribution list, and those that submitted written comments are denoted by *. Substantive comments are indicated by **. The text of the Draft EA was modified to address the comments received, the result being this Final EA. Individual comment letters and responses are included as Appendix E.

Elected Representatives
**Representative David Pendleton
Representative Cynthia Thielen
Council member John Henry Felix
Council member Steve Holmes

Federal Agencies
**US Army Corps of Engineers (USACE)
US Fish and Wildlife Service (USFWS)
US Environmental Protection Agency (EPA)
US Geological Survey (USGS)

State Agencies
*Department of Accounting & General Services
Department of Agriculture
Department of Business, Economic Development, and Tourism (DBEDT)
**Land Use Commission (LUC)
Librarian, DBEDT Library
Office of Planning (OP)
**Department of Education (DOE):
- Superintendent
- Hawaii State Library
- Kailua Public Library
- Kaneohe Public Library
- Kailua High School
- Kainalu Elementary School
- Kalaheo High School

Department of Health (DOH):
- **Office of Environmental Quality Control (OEQC)
- **Environmental Planning Office (summary of various DOH department comments)

Department of Land and Natural Resources (DLNR):
- Chair
- **State Historic Preservation Division (SHPD)
- **Forestry and Wildlife Division (DOFAW)
- Conservation and Resources Enforcement Division (DOCARE)
- **Land Division

**Land Division –Engineering Branch
**Planning Branch
**Department of Transportation (DOT)
Legislative Reference Bureau
University of Hawaii at Manoa (UH Manoa):
Water Resource Research Center
**Environmental Center
Hamilton Library
UHM Marine Options Program

City & County of Honolulu
*Department of Parks and Recreation (DPR)
*Department of Planning and Permitting (DPP)
Department of Design and Construction (DDC) (applicant)
Civil Engineering Branch
**City & County Fire Department
**City & County Police Department
**Board of Water Supply
Department of Environmental Services
Department of Community Services
Municipal Reference & Records Center

Businesses
**Hawaiian Electric Company
Honolulu Star Bulletin
Honolulu Advertiser
Ameron Hawaii

Community Organizations
Bishop Museum
Castle Foundation (Attention Ms. Kate Brown)
Hawaii Audubon Society
Kailua Hawaiian Civic Club
**Kailua Neighborhood Board
**Kawai Nui Heritage Foundation (Na kia'I Pono 'O Kawai Nui)
Life of the Land
Sierra Club

The Outdoor Circle
Windward YMCA

Individuals
Mr. Larry Abbott
Mr. Lunsford Phillips
Ms. Cindy Turner
Ms. Paula Loomis
Mr. & Ms. Peiterson
Mr. Ken Senter
Mr. Rob Caveney
Ms. Wendy Wiltse

9.0 References

9.0 REFERENCES

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Appendix A

Avifaunal Study

FINDINGS OF A FAUNAL FIELD SURVEY FOR THE KAWAI NUI GATEWAY PARK PLANNING PROJECT, OAHU

Prepared for:

Helber Hastert & Fee, Honolulu

Prepared by:

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21 June 2001

INTRODUCTION

The purpose of this report is to present the findings of a two day (14, 18 June 2001) field survey of the Kawai Nui Gateway Park site at Kailua, Oahu. The two sections of the proposed project (Mokapu Site and the Coconut Grove Site) were examined on both days of the field survey. The purposes of the field survey were:

1- Determine the use of these sites by native waterbirds and document which species occur on the property.

2- Note the natural resources important to native waterbirds and if these sites might be enhanced for waterbird usage.

3- To evaluate whether-or-not public access to these sites could be provided.

GENERAL SITE DESCRIPTION

Mokapu Site:

This property is mostly overgrown with brush and grass. The edge adjoining Kawai Nui Canal provides foraging habitat for waterbirds. Some nesting may also occur in the vegetation along the canal.

Coconut Grove Site:

A canal runs the length of the mauka boundary and residential housing lines the makai edge. Three small canals traverse the site. A dense thicket of brush, trees and grass cover most of the dry land portions of this site. Wetland vegetation lines the edges of the canals. One portion of the site has been cleared and is maintained as a lawn fronting a residence. At the north end of this site there is a large patch of emergent (wetland) vegetation.

METHODS OF SURVEY

The two sites were visited on both survey days. More time was spent on the Coconut Grove Site due to its size and greater potential for recording waterbirds. The Mokapu site was accessed from Mokapu Boulevard. This area was also viewed from the end of the levee beyond Kawai Nui Neighborhood Park. All waterbirds seen or heard were tallied and where possible notes were taken of their activity ie. foraging, resting, swimming, flying. The Coconut Grove Site can be best viewed from the levee makua (west) of the property. Access to the northern end of the Coconut Grove Site was made from the Kawai Nui Neighborhood Park. The sites were visited both early in the day and late in the afternoon. No night observations were attempted.

RESULTS

Mokapu Site:

Two pairs of the endemic and endangered Hawaiian Duck also known as Koloa (*Anas wyvillana*) were observed foraging and resting along the edge of Kawai Nui Canal fronting this site on 14 June. One pair was recorded on 18 June.

Coconut Grove Site:

On 14 June, 26 Hawaiian Duck were tallied foraging, resting, and swimming. Two pairs had young. Three Hawaiian Coot also known as Alae Keokeo (*Fulica alai*) were seen in the edge of the vegetation along the canal on the west side of the site. This species is also endemic to Hawaii and is listed as endangered. Six Common Moorhen or Alae Ula (*Gallinula chloropus*) an endemic and endangered waterbird were tallied. This species is shy and quickly retreated into the vegetation when approached. Eight Black-crowned Night-Heron or Aukuu (*Nycticorax nycticorax*) were recorded. Some were foraging along the edge of the canals while others were spotted roosting in trees or flying. This species is the only native waterbird that is not listed as endangered. On 18 June the survey tallied 31 Hawaiian Duck, four Hawaiian Coot, eight Common Moorhen and five Black-crowned Night-Heron.

Waterbird Habitat:

On both sites the waterbird habitat is confined to the edges of the canals. The interior of these sites are covered for the most part in dense brush and trees. Night herons roost in the trees but the other waterbirds do not utilize the interior forested portions of the sites.

DISCUSSION AND CONCLUSIONS

Mokapu Site:

To make this site more attractive to waterbirds the west side of the property would need to be cleared and low lying areas flooded. Waterbirds are mostly confined to the vegetation along the existing canals. If more open water were created this would increase waterbird habitat which presently is overgrown with vegetation. The wetland vegetation along the Kawai Nui Canal should be maintained. This vegetation provided cover, foraging opportunities and perhaps nesting habitat for waterbirds. The creation of a series of small interior ponds on this site would also improve the area for waterbirds. Vegetation control will be an ongoing maintenance cost in order to keep the ponds accessible to waterbirds.

Coconut Grove Site:

The canals which traverse the site and run along the western boundary contain wetland vegetation that is attractive to a large number of waterbirds (see tallies in results). The forested interior sections are not good waterbird habitat. The creation of small ponds, particularly at the north end of the site where some wetland vegetation already exists would improve the habitat. The present wetland vegetation along the canals should be maintained. A trail system through the interior sections with perhaps a small footbridge over the northern most canal which traverses the site would allow greater public access to the area. The dense buffer of vegetation between the edge of the canals and these trails would preclude most visual access to waterbirds. The waterbirds can best be seen from the existing levee along the western boundary of the site. One issue that will need resolution is the use of portions of the property by adjoining residents. One section has been cleared and is maintained as a large lawn.

Appendix B

Botanical Survey

BOTANICAL RESOURCES ASSESSMENT
KAWAI NUI GATEWAY PARK
KAILUA, KO'OLAU POKO DISTRICT, O'AHU

by

Winona P. Char

CHAR & ASSOCIATES
Botanical Consultants
Honolulu, Hawai'i

Prepared for: HELBER HASTERT & FEE

July 2001

BOTANICAL RESOURCES ASSESSMENT
KAWAI NUI GATEWAY PARK
KAILUA, KO'OLAU POKO DISTRICT, O'AHU

INTRODUCTION

The gateway park project consists of two parcels in Kailua, island of O'ahu. The first parcel is the Kawai Nui Gateway Park Mokapu Site which consists of approximately 4.4 acres. The parcel is owned by the State of Hawai'i. It is bounded by the Kapa'a Quarry Road, Mokapu Boulevard, a residential houselot, and the Kawai Nui Canal.

The second parcel is the Kawai Nui Gateway Park Coconut Grove Site. It is approximately 15 acres in size and is owned by the City and County of Honolulu. It is bounded by Oneawa Canal, the Kawai Nui Neighborhood Park (also known as Kaha Park), and residential houselots in the Coconut Grove neighborhood.

Field studies to assess the botanical resources on the two parcels were conducted on 10 July 2001 by a team of two botanists. The primary objectives of the survey were to provide a general description of the vegetation on the two parcels, search for threatened and endangered species as well as species of concern, and identify areas of potential environmental problems or concerns and propose appropriate mitigation measures.

SURVEY METHODS

Prior to undertaking the field studies, a search was made of the pertinent literature to familiarize the principal investigator with other botanical studies conducted in the general area.

Topographic maps as well as a recent, colored aerial photograph (1" = 100') were examined to determine vegetation cover patterns, terrain characteristics, access, boundaries, and reference points.

A walk-through survey method was used. Notes were made on plant associations and distribution, disturbances, substrate types, drainage, topography, etc. Plant identifications were made in the field; plants which could not be positively identified were collected for later determination in the herbarium, and for comparison with the most recent taxonomic literature.

DESCRIPTION OF THE VEGETATION

The plant names used in this report follow Wagner et al. (1990) and Wagner and Herbst (1999). The few recent name changes follow those reported in the Hawaii Biological Survey series (Evenhuis and Eldredge, editors, 1999-2000).

Mokapu Site

Portions of the site have been used to store State maintenance vehicles and there are gravel-lined parking areas now overgrown with swollen fingergrass (Chloris barbata) on the north half of the property. Also found in this area are large piles of soil and an illegal dump site with old lumber and household trash. Patches of wedelia (Spagneticola trilobata), a commonly planted ground cover, are found on the largest pile of soil. Other plants found here include Bidens alba, Jamaica vervain (Stachytarpheta jamaicensis), kahki weed (Alternanthera pungens), graceful spurge (Chamaesyce hypericifolia), and Heliotropium procumbens var. depressum. A single plant of beach naupaka or naupaka kahakai (Scaevola sericea) and one plant of tree heliotrope (Tournefortia argentea) are also found here.

The majority of this site is covered by koa haole (Leucaena leucocephala) scrub vegetation. Guinea grass (Panicum maximum) forms dense clumps between the koa haole shrubs. In some places, coral berry (Rivina humilis), a small shrub with orange to red berries, is locally common. Where the property borders the quarry road, Java plum trees (Syzygium cuminii) are common.

On the canal-side of the parcel there is a strip of grassy lawn, mainly Bermuda grass or manienie (Cynodon dactylon), which is periodically mowed. Along the canal is a narrow band of Indian pluchea shrubs (Pluchea indica), 6 to 8 ft. tall. Seashore paspalum (Paspalum vaginatum) forms thick, green mats along the waters' edge. Where the canal nears the quarry road, the vegetation consists of mangrove trees (Rhizophora mangle), up to 25 ft. tall, and scattered stands of milo trees (Thespesia populnea). Christmas berry (Schinus terebinthifolius) and Indian pluchea shrubs are also common here. A few coconut (Cocos nucifera) trees are found between the milo trees.

Coconut Grove Site

This site is composed of four sections which are separated by drainage channels which provide runoff for the adjacent residential area. The section adjacent to Kaha Park supports a large wetland dominated by kaluha or bulrush (Schoenoplectus californicus) and California grass (Brachiaria mutica). Along the banks of Oneawa Canal and the drainage channels, mangrove forms thickets, 7 to 8 ft. tall. Where this section adjoins the residential area, the vegetation consists of dense Christmas berry and koa haole thickets. Chinese violet (Asystasia gangetica), a woody trailing herb, is the most abundant ground cover.

Section 2 is covered by Christmas berry, Indian pluchea, and koa haole thickets. Along Oneawa Canal the vegetation is more open

with scattered, large Java plum trees and lumpy mats of California grass.

Section 3 is primarily koa haole thicket with Guinea grass on the unmaintained areas. A grassy lawn with a few ornamental trees and shrubs is also found here.

Section 4 is extensively landscaped and maintained. It consists of Bermuda grass lawns and plantings which include plumeria (Plumeria rubra hybrids), coconut, kukui (Aleurites moluccana), Cook pine (Araucaria columnaris), Areca palm, etc.

DISCUSSION AND RECOMMENDATIONS

The vegetation on both the Mokapu Site and the Coconut Grove Site is dominated by introduced plants. These include plants such as koa haole, Guinea grass, Java plum, mangrove, Indian pluchea, Christmas berry, etc. Introduced or alien species are all those plants which were brought to the Hawaiian Islands by humans, intentionally or accidentally, after Western contact, that is, Cook's arrival in the islands in 1778. Both sites have been bulldozed in the past and appear to have been disturbed for a long time. Parts of the Coconut Grove Site are landscaped and maintained.

A few native species occur on the two sites. These plants are the milo, kou, beach naupaka, bulrush, and 'uhaloa (Waltheria indica). None of these plants is a threatened and endangered species or a species of concern (U.S. Fish and Wildlife Service 1999; Wagner et al. 1999). All of the native plants are indigenous, that is, they are native to the Hawaiian Islands and elsewhere.

The Mokapu Site will be grassed over and a pavilion is planned

for this site. It is recommended that native plants be used for landscaping. The Indian pluchea scrub and mangrove trees along the banks of the canal should be removed and seashore paspalum planted. The seashore paspalum grass would prevent soil erosion.

The Coconut Grove Site will be used for a nature trail along the Oneawa Canal. The parcel closest to Kaha Park supports an overgrown wetland. Portions of this wetland should be cleared and deepened to provide open water areas which could be utilized by endangered Hawaiian waterbirds. Native plants are also recommended for planting along the trail and Kaha Park. The mangrove along Oneawa Canal and the smaller drainage channels should be removed and replaced with seashore paspalum, 'ae'ae or water hyssop (Bacopa monnniera), and bulrush. Mangrove if left unchecked can fill in drainage channels and streams.

Members of the Kawai Nui Heritage Foundation and 'Aha Hui Malama I Ka Lokahi have landscaped the Na Pohaku O Hauwahine area with native plants, some of them endangered species. Species which do well at this site should also do well at the two park sites. Some native plants recommended for landscaping include the native fan palm or loulu (Pritchardia spp.); 'alahe'e (Psydrax odoratum), a member of the coffee family with fragrant, showy flowers; ma'o or Hawaiian cotton (Gossypium tomentosum), wiliwili (Erythrina sandwicensis), and kou. The Kawai Nui Heritage Foundation should be contacted for planting recommendations. The City and County's Ho'omaluhia Botanical Garden could supply planting material.

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Appendix C

Archaeological & Cultural Survey

ARCHAEOLOGICAL ASSESSMENT OF THE PROPOSED KAWAI NUI GATEWAY PARK, *AHUPUA'A* OF KAILUA, DISTRICT OF KO'OLAUPOKO, ISLAND OF O'AHU (TMK 4-2-16: por. 1; 4-2-17: por. 20; 4-4-34: 25, 37)

By

Melanie Mann, B.A.,
Matt McDermott, M.A.,
and
Hallett H. Hammatt, Ph.D.

Prepared For:

Helber, Hastert, and Fee Planners

Cultural Surveys Hawaii, Inc.
July 2001

EXECUTIVE SUMMARY

At the request of Mr. David Curry of Helber, Hastert, and Fee, Planners. Cultural Surveys Hawaii, Inc., has completed an historic background study and archaeological assessment for the proposed Kawai Nui Gateway Park, Kailua *Ahupua'a*, district of Ko'olaupoko, island of O'ahu (TMK 4-2-16: por. 1; 4-2-17: por. 20; 4-4-34: 25, 37). The purpose of this study was four-fold: 1) provide a cultural context and land-use history for the subject parcels; 2) provide an archaeological context based on a summary of relevant archaeological investigations in the Kailua area; 3) discuss the interpretive potential of the project area from a historic preservation stand point; and, 4) provide planning information and recommendations related to the potential for encountering significant historic properties in the project area. This includes recommendations for completing the required historic preservation review process for the proposed development of the project area.

The basis for this study was detailed historical background research, review of previous archaeological investigations, and a field inspection of the subject parcels to determine actual landscape conditions. The project area is located on the inland (*mauka*) margin of the Kailua sand berm, immediately adjacent to Kawai Nui Marsh. Previous archaeological research in the vicinity has demonstrated the potential for cultural deposits in the sandy deposits along this margin of the marsh and the potential for palaeoenvironmental research using sediment cores within the marsh itself. Pedestrian inspection of the project area has confirmed that sandy deposits do exist within the project area, particularly in the Coconut Grove portion. This area could contain subsurface cultural deposits related to traditional Hawaiian activities, including habitation, agriculture, and interment of the dead. The wetland portions of the project area have potential to yield important information related to human induced environmental change in the late Holocene. Much of the project area has been affected by mechanized earth moving and the deposition of fill sediments. This is particularly true for the Mōkapu portion of the project area.

In consultation with the State Historic Preservation Division (SHPD), and as a result of the information gathered in the this report, it is recommended that prior to development of the Kawai Nui Gateway parcels, an archaeological inventory survey take place to determine the types and locations of historic properties within the project area. As subsurface cultural and palaeoenvironmental deposits will most likely comprise any historic properties located within the project area, it is less likely that the subject parcels will be overly suited for public interpretation, at least from a historic preservation standpoint. If significant cultural deposits are located within the project area, they will most likely consist of buried sediment layers that have been enriched by various cultural activities. It is unlikely they will be available for display. A possible exception would be portable artifacts found during excavations. Nevertheless, in the absence of tangible "sites" for display, signage could be developed to interpret the park location within the overall Kailua *Ahupua'a* and Kawainui Marsh cultural context. This interpretive program could incorporate any significant findings that result from the archaeological inventory survey of the project area.

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I. INTRODUCTION

A. Project Background

In May 2001, Cultural Surveys Hawaii, Inc., was contacted by Helber, Hastert, and Fee, Planners, Inc., to provide an archaeological assessment for the Kawai Nui Gateway Park project, Kailua *Ahupua`a*, Ko`olaupoko District, Island of O`ahu. The project area consists of two separate parts, which combined total approximately 20 acres. The assessment focused on evaluating the potential for encountering historic properties within the project area. An initial, brief pedestrian inspection of the project area indicated that the area had been previously graded level and there was little potential for surface historic properties.

Historic background and previous archaeological research for the current assessment was accomplished in June, 2001. A walk through of the project area was completed by Matt McDermott on June 11, 2001.

B. Project Area Description

The project area is located northwest of Kailua Town, in the *Ahupua`a* of Kailua, district of Ko`olaupoko, island of O`ahu (TMK 4-2-16: por. 1; 4-2-17: por. 20; 4-4-34: 25, 37). The project area consists of two parts: 1) the Kawai Nui Gateway Park Mōkapu Site and 2) the Kawai Nui Gateway Park Coconut Grove Site. Figure 1 shows a map of the project area, provided by Helber, Hastert, and Fee, Planners, Inc. Figure 2 shows the USGS Topographic Map of the project area. The proposed park parcels are located on the inland (*mauka*) margin of the sand accretion berm on which Kailua town was constructed. Kawai Nui Marsh, the largest freshwater marsh in the State of Hawaii, is immediately adjacent to the project area.

The Mōkapu parcel is approximately 4.4 acres in size and incorporates TMK 4-2-16: por 1, 4-2-17: por 20, 4-4-34:25, and 4-4-34:27. The Mōkapu parcel is to be more developed, with canoe landing sites along Kawai Nui Canal, and possible parking and restroom facilities. The Mōkapu site is bounded by the Kapa`a Quarry Road to the west, Mōkapu Boulevard to the north, a residential house lot to the east, and the Kawai Nui Canal to the south. A small portion of the Mōkapu parcel is currently used as a temporary base yard for City and County of Honolulu vehicles. It has also been used extensively as repository for construction and construction fill materials. Vegetation in the Mōkapu parcel is characterized by a combination of exotic grasses and weeds, and an abundance of *haole koa* (*Leucaena leucocephala*). Figures 3 and 4 show the vegetation and fill materials within this portion of the project area.

The Coconut Grove parcel is approximately 15 acres in size and incorporates TMK 4-2-17: por 20. Development plans for the Coconut Grove parcel calls for lesser impacts such as nature pathways and possible vegetation clearance. The Coconut Grove parcel is located south of the Kawai Nui Neighborhood Park, east of the `Oneawa "inner" drainage canal, and west of the residential house lots in the Coconut Grove

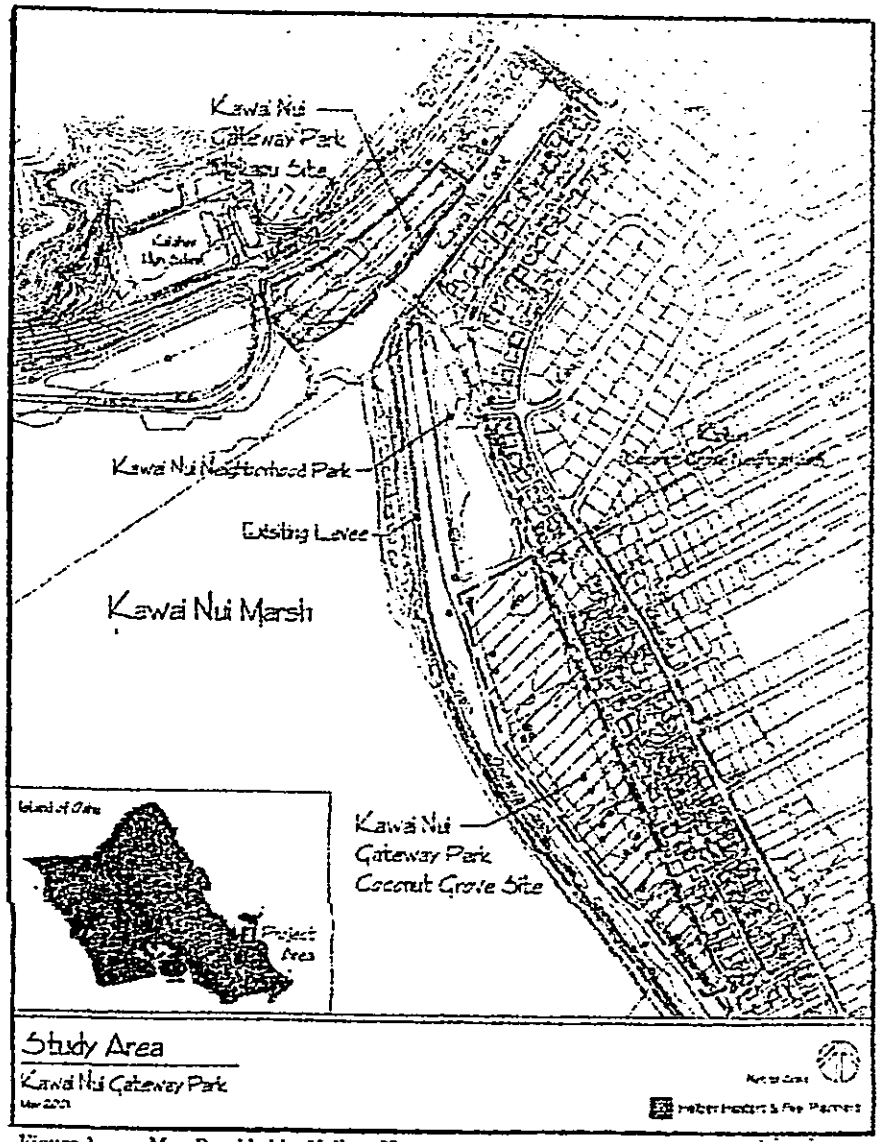

Figure 1 Map Provided by Helber, Hastert, and Fee, Planners, Showing the Project Area.

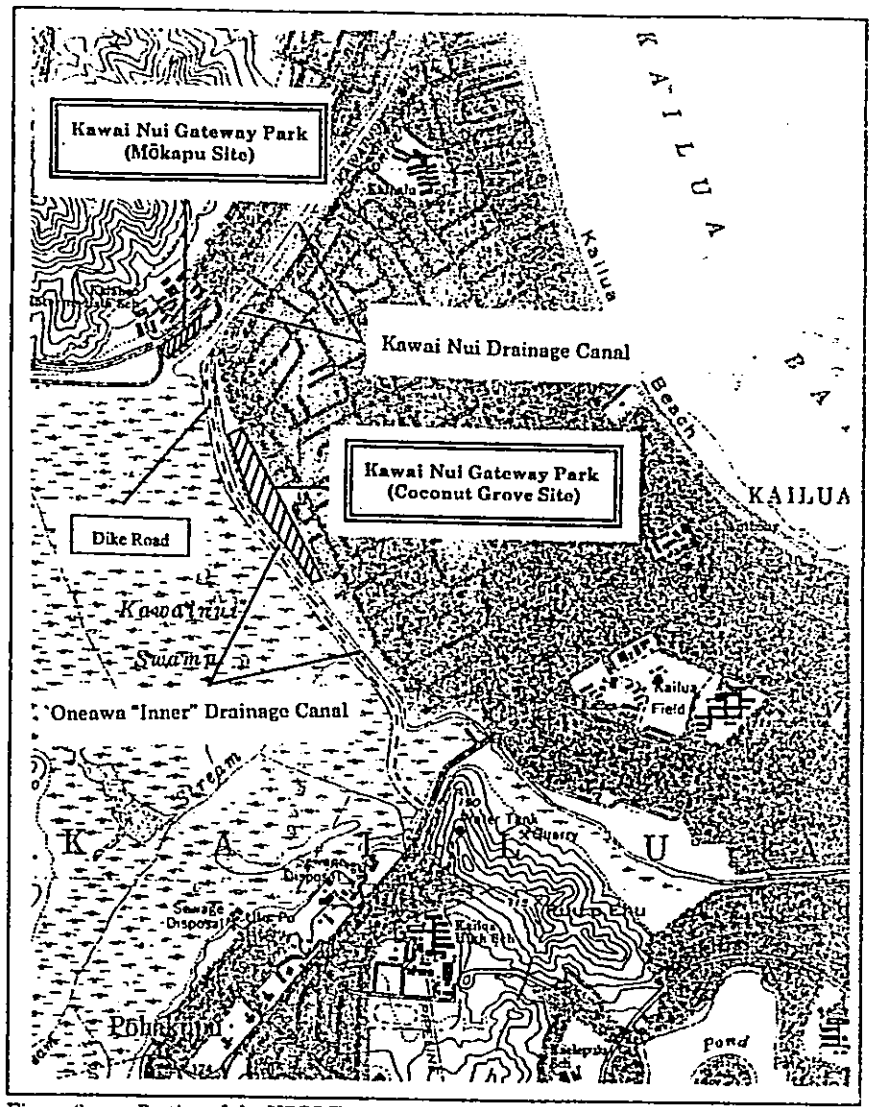

Figure 2 Portion of the USGS Topographic 7.5 Minute Series Mōkapu Quadrangle, Showing the Project Area in Hatching and Geographic Features Mentioned in the Text.

Figure 3 Shot of the Mōkapu Site, Showing the Density of *Haole Koa* and Weed Vegetation encompassing the project area.

Figure 4 Shot of the Mōkapu Site, Showing the Distribution of Fill Material (gravel, rubble, and asphalt) Found Throughout the Project Area.

neighborhood. The area is currently a flat embankment, *makai* of the Kawai Nui dike road. This parcel of land is largely unused and inaccessible to the general public, although a number of residents whose parcels abut the area have made various uses of the portions of the parcel that abut their property. These uses include an apiary, a large kennel or pen, and extensions of their lawns. A number of mechanically excavated drainage features bisect the Coconut Grove parcel and connect with the 'Oneawa "inner" drainage canal immediately to the west.

The vegetation in the Coconut Grove parcel is generally either overgrown or well-maintained lawn. The overgrown sections consist of grasses and *haole koa* and other introduced weed-type species, including some larger trees, such as banyan (*Ficcus* sp.), ironwood (*Casuarina equisetifolia*), octopus tree (*Schefflera actinophylla*), Java plum (*Eugenia cuminii*), and Christmas berry (*Schinus terebinthifolius*). The well-maintained lawn portions consist of areas were the Coconut Grove property owners that abut the parcel have adopted the section of land immediately adjacent to their parcel. These areas contain children's play equipment, barbeque facilities, and informal "docking" structures along the margins of the 'Oneawa drainage canal. These maintained portions of the Coconut Grove parcel consist of lawn grass, coconut palms (*Cocos nucifera*), mango trees (*Mangifera indica*), and Cook pine (*Araucaria columnaris*). These "improved" areas of the Coconut Grove parcel are located at the southern end of the parcel. There is a section of wet land-type vegetation, consisting of low, marshy areas with reeds and grasses in the northern portion of the Coconut Grove parcel adjacent to the Kawai Nui Neighborhood Park. Mangrove (*Rhizophora* sp.) is found along the margins of the inner 'Oneawa drainage canal. Figures 5 and 6 show typical vegetation in the Coconut Grove parcel.

The soils within the project area are Mokulē'ia clay loam and Jaucas Sand (Foot *et al.* 1972). Mokulē'ia Clay loam and Jaucas Sand are common soils that occurs in small areas near coastal plains. Rainfall in the Kailua area averages 1000 mm (40 inches) per year (Giambelluca *et al.* 1986).

C. Scope of Work

The agreed upon scope of work consisted primarily of historical and archaeological literature review and a reconnaissance-type field inspection of the proposed Kawai Nui Gateway Park. Background research provided the historical and cultural context of the proposed Park. The field reconnaissance assessed and addressed potential impacts of nature pathways, parking facilities, restroom, and canoe landing construction. The specific scope of work included three items:

1. Historical research included study of archival sources, historic maps, Land Commission Awards, and previous archaeological reports to construct a history of land use and to determine if archaeological sites have been recorded on or near this property.

2. Field inspection sought to identify surface archaeological features and investigated and assessed the potential for impact to such sites. This assessment identified sensitive areas that will require further investigation and/or mitigation before the project proceeds.

Figure 5 Shot North from the Kawai Nui Dike Road Across the "Inner" Oneawa Drainage Canal, Showing Vegetation within the Coconut Grove Parcel

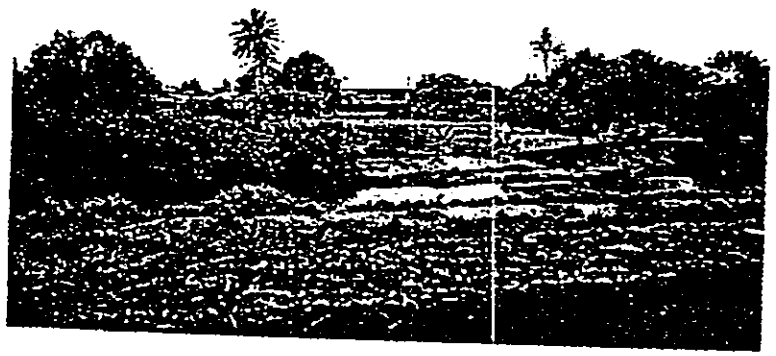

Figure 6 Shot East from the Kawai Nui Dike Road Across the 'Oneawa Canal. Showing One of the Manicured Lawns in This Portion of the Project Area

3. Preparation of this report that includes the results of the historical research and the fieldwork with an assessment of archaeological potential based on that research, with specific recommendations for further archaeological work to be preformed in an archaeological inventory survey. This report provides mitigation recommendations for archaeologically sensitive areas that need further consideration.

This document is not intended for review by the Department of Land and Natural Resources/State Historic Preservation Division (DLNR/SHPD) as part of the State's historicpreservation review process. This document is for planning purposes and is intended to guide decisions regarding the completion of the SHPD historic review process and the potential for public interpretation of cultural resources in the development of the proposed park.

D. Methods

Background Research

Background research included a review of previous archaeological/historical studies on file at the State Historic Preservation Division of the Department of Land and Natural Resources; a review of geology and cultural history documents at Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Mission House Museum Library, the Hawai'i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai'i State Archives and the Archives of the Bishop Museum; and a study of historic maps at the Survey Office of the Department of Accounting and General Services. Land conveyance research related to the *Māhele* of the mid-19th century was done through *Waihona-'Aina.com*, the Internet search company. This research provided the environmental, cultural, historic, and archaeological background for the project area.

Many good historical and/or archaeological sources exist for Kawai Nui Marsh and its vicinity. These include, but are not limited to, Cordy (1977), Kelly and Nakamura (1981), Creed (1992), Clark (1980), Hall (1997), Erkelens (1993), Athens (1983a), Hammatt (*et al.* 1990), and Athens and Ward (1991). The purpose of the background research was to glean information from these existing sources and present it in the context the propose Kawai Nui Gateway Park. Previous historic and archaeological reports were used to prepare site location maps and site tables.

Field Inspection

Helber, Hastert, and Fee, provided a good aerial photograph of the project area. This photograph greatly facilitated the location of specific features and areas within the project area during the pedestrian inspection. All portions of both the Mōkapu and Coconut Grove parcels were subjected to pedestrian inspection. This consisted of crossing through the parcels through a series of switchbacks so that all of the project area was inspected. Photographs were taken of vegetation, ground surfaces, and the manufactured drainage features that bisect the parcels. General observations were noted and the potential for historic properties was assessed. Modern land use and ground surface disturbance were also noted. As there was little potential for surface historic properties, this assessment focused on the potential for subsurface cultural deposits. General observations were recorded regarding the scope of work for the archaeological inventory survey of the parcels.

II. CULTURAL AND HISTORICAL BACKGROUND

The history of Kailua region of O'ahu has been documented in a number of studies including, but not limited to, Hall's (1997) "The History of Kailua". Creed and Chiogioji's (1991) "Facets of Maunawili Valley and Kailua *Ahupua'a* History", and Kelly and Nakamura's (1981) "Historical Study of Kawai Nui Marsh Area, Island of O'ahu". All of these studies detail the legendary history and oral traditions, the legendary rulers and personalities, the early historic accounts, land ownership and utilization changes during and following the *Māhele*, and the changes in land use from traditional to modern times. With so many sources already documenting Kailua's rich historical and cultural past, the purpose of this section is only to orient the present project area within the overall historical and cultural setting. For more detailed accounts of Kailua's past, the reader is referred to the above sources, as well as the ones cited in the following text. Included in this section, under the discussion of the *Māhele* land divisions of the mid 19th century, is a detailed discussion of the Land Commission Awards claimed and awarded along the margins of Kawai Nui Marsh.

A. Setting

Kailua *Ahupua'a* is the largest valley on the windward side of O'ahu, and the largest *Ahupua'a* of the Ko'olaupoko District (approximately 15 km by 11 km). Flanked by the *Ahupua'a* of Waimānalo on the southeast, Kāne'ohe on the northwest and Honolulu to the south, the *Ahupua'a* of Kailua is shaped like a rectangle. From the Ko'olau ridge line it extends down two descending ridge lines which provide the natural boundaries for the sides of the *Ahupua'a*. The fourth side of the rectangle is the reef line of Kailua Bay.

The natural environment includes the sand accretion barrier upon which Kailua Town stands, the mountainous upland terrain and alluvial valley of Maunawili, the largest fresh water marsh in Hawai'i (Kawai Nui Marsh), another inland pond (Ka'elepulu), approximately 18 permanent and intermittent streams, a freestanding mountain halfway between the shore and the Ko'olau (Olomana–1,643 ft.), several low ridge lines, and off-shore the Mokulua Islands, Mokole'a Rock, and Popoia Island. It comprises 11,885 acres of land according to the Boundary Commission Review of the mid-19th century, but in fact extends beyond the shore approximately a mile out to sea, to the reef.

During the estimated 1000 to 1500 years since initial Polynesian settlement, the sand barrier that forms the shore at Kailua Bay has provided a desirable location for residences with a sunny, dry beach area. The well-watered interior lands, including the two marsh/pond areas of Ka'elepulu and Kawai Nui and the many springs and streams of Maunawili, provided bountiful agricultural and resource gathering areas. During the 15th and 16th centuries, Kailua, O'ahu was the center of a large royal complex with sample playgrounds for sports and physical training, and recreation (Sterling and Summers 1978:231-232). Supporting this large complex was a most bountiful garden hinterland where fish, fowl, and vegetables were plentiful (Sterling and Summers:227-228).

Mele or chants about Kailua frequently mention the two fishponds famous for their mullet or *awa*. They also tout the taro gardens of the area (see Beckwith 1970 and Drigot 1982), in the legendary *mo'olelo*, or epics (e.g. Hi'iakaikapoliopele, Kahinahinanui, Makalei Tree and Ka'ulu are a few of the stories). Early visitors (Bowser 1880, in particular) also mention a wealth of birds in the area.

Besides a sunny beach area and uplands watered by frequent showers, other resources were easily available in Kailua. As the center of the caldera of the ancient Ko`olau Volcano (MacDonald and Abbott 1974:363) a basalt quarry (the present Ameron Quarry is built upon the site of the pre-contact quarry) for material for lithic tools was near at hand. Kailua was a residential district surrounded by *Ahupua`a* that were also highly cultivated and capable of providing ample resources for a large resident and visiting population. Kailua apparently also was a *pu`uhonua* (place of refuge) before Kamehameha I conquered the island of O`ahu. After this time the ancient *pu`uhonua* were abolished.

B. Oral Traditions and Legends

Legends and oral history provide stories for many of the place names and also give specific beliefs Hawaiians held and hold about the land. The name Kailua, meaning "two seas", apparently refers to the two large inland waters, Ka`elepulu Pond and Kawai Nui Pond (Pukui *et al.* 1974:69; Quebral 1991:14). That Kailua was a "fat" land, a land of plentiful food in all times, is suggested by several legends. The *Makalei*, or Fish-Attracting Tree was a mythological tree or stick which could summon fish from Kawai Nui. Reportedly located near the present day Hāmākua Street Bridge, it was described as a never failing source of a plentiful supply of food (Beckwith 1970:279-280 and Pukui and Elbert 1981:382, cited in Kelly and Nakamura 1981:5). Another tradition of the ample productivity of the Kailua region involves the edible, *haupia*-like mud, called *lepo`ai`ai*, which was available from Kawai Nui Marsh (Kelly and Nakamura 1981:5). This legend implies a bountiful Kailua where even the mud is edible.

Kailua is one of the places where, following their arrival on O`ahu from Kahiki, the *menehune* were assigned to live. These legendary workers are credited with the construction of numerous fish ponds and religious structures. Fornander points out that the term menehune in Tahitian had become the name for the lowest laboring class of people–suggesting a Tahitian origin for the term for the legendary workers (Fornander 1969:23).

There are legendary accounts of the prominent Mount Olomana, that is named after a great mythological giant and/or chief (Kelly and Nakamura 1981:1). Tradition also says Kawai Nui was inhabited by a *mo`o* (large dragon-like mythical creature) called Hauwahine, whose name literally means "female ruler". Her residency at Kawai Nui follows Haumea's, the earth-mother goddess whose name literally means "red ruler". She made sure all the people of the *Ahupua`a* shared in the pond's wealth and punished those who were greedy (Beckwith 1970: 126).

Oral history notes that the stones overlooking Kawai Nui on Pu`u o `Ehu are sacred to Hauwahine and her companion (Paki 1976). The reason for this is connected to the ancient Hawaiian notion that the channel/canal beneath Pu`u o `Ehu connects Kawai Nui and Ka`elepulu and was considered to be the coital connection between the two fishponds, giving the area great *mana*. Kawai Nui Marsh was considered male and Ka`elepulu Pond, female. They mated at Kawailoa according to a Hawaiian tradition (Paki 1976).

Traditional history credits Kailua as the residence of many prominent O`ahu ruling chiefs. There is `Olopana "who with his brother Kahikiula came to O`ahu from Kahiki...He is said to have established several *heiau* in Kāne`ohe and Kailua, including Pahukini and Holomakani in the Kawai Nui area" (Kelly and Nakamura 1981:3). One of the earliest great chiefs to reside in Kailua was Kakuhihewa, who built himself a great house at `Alele in Kailua (Kelly and Nakamura 1981:5). At approximately the same time (the 16th century) another prominent chief,

Kūali`i, born at Kalapawai, Kailua, and raised in Kualoa and Kailua, had his navel cutting ceremony at the *heiau* of Alala (present day Lanikai point), and, after being the hero of many battles, became the high chief of all O`ahu (Kelly and Nakamura 1981:6). In early historic times the conquering chief Kahekili followed by Kamehameha I resided in Kailua for a time (Kelley and Nakamura 1981.:6-7).

C. Early Population Estimates

The drastic depopulation of the Hawaiian Islands following the introduction of Western disease has been documented in a number of sources (Bingham 1847; Stannard 1989; and Bushnell 1993). According to one estimate the population of Hawaiians and part-Hawaiians fell from approximately 300,000 in 1778 to 82,593 by 1850 (Schmitt 1968:43; 74 cited in Kelly and Nakamura 1981:10). Population counts from the 1830s place the population of Kailua at approximately 760 individuals (Schmitt 1973:19 cited in Kelly and Nakamura 1981:10). This low population figure is incongruous with the productivity of the region, but well in keeping with population decline estimates due to western disease. Westerners passing through Ko`olaupoko in the mid 1840s made note of the cold and flu symptoms among the native Hawaiians and that much formerly productive land appeared abandoned (Wyllie 1848:20 cited in Kelly and Nakamura 1981:10).

D. Early Historic Accounts

Historic accounts of Kailua before 1850s are rare. One of the only accounts that could be located is that of Levi Chamberlain, a missionary who made a circuit around O`ahu to inspect the mission schools in 1828. This account is particularly important because Chamberlain travels through and describes the landscape in the immediate vicinity of the current project area. Chamberlain describes his progress from the settlement at Kailua through the low hills, today called the Kalaheo hills and the location of Kalaheo High School, that separate Kailua from Kāne`ohe.

> Directing our course towards Kāne`ohe, the next district, we were obliged to pass over a tract of low land mostly overflowed with water by the late rains. Here I was obliged to wade, as the distance was too great to admit of my being carried on the shoulders of my attendants, as was generally the case in passing a small stream of water. After emerging from the flat, our path was not improved, for we had now to walk through mud instead of water–we walked some distance along the steep hill, and at length by a winding path ascended to the top of it. We sat down to rest for a few minutes, and I found myself upon the summit of a ridge extending from the mountains in a right line to the sea and dividing the low lands of Kailua from those of Kaneohe (Chamberlain Ms.:664 in Kelly and Nakamura 1981:7).

It is clear from this account that this west-northwest portion of Kailua, in the vicinity of the current project area, was low lying and prone to flooding. As we shall see in later discussions, this does not appear to change with the passage of time.

E. Māhele Records

Māhele records are an important resource for determining land-use during the first half of the 19th century. In the great division of lands among Kamehameha III and his people between

1848 and 1853, approximately 250 Land Commission Awards (LCAs) were claimed before the Board of Commissioners to Quiet Land Titles (Land Commission) in Kailua. Many persons claimed their land from the time of their *makuakane* (ancestors) but no one indicates any time farther back than the time of Kaloli (contemporaneous with Kamehameha I). The most recent claims are probably those granted by Governor Kekū`anao`a. Not all claimants told how long they had occupied the land but of those who do they refer primarily to the ruling chiefs and then some refer to the local *konohiki*.

Many Kailua claimants list kings, queens, *kuhina nui* or governors to provide a time frame for when they received their land. The earliest such reference appears to be Kaloli, the wife of Kalaniopu`u who lived from 1752 to 1782 (Kuykendall 1980, vol I:30-32), followed by Kamehameha I, *Mo`i* or king and conqueror of O`ahu in 1795 (p.87), Liholiho, King Kamehameha II in the 1820s, Knomi, the Tahitian companion of Kamehameha III who died in 1833 (p. 135), Boki, governor in the 1820s and his wife Liliha, *kuhina nui* - after 1829 and during the 1830s, Kīna`u, Queen from 1832-1839, Ka`ahumanu, Queen and *kuhina nui* in the 1820s and Kekū`anao`a, the governor of O`ahu in the 1830s and 40s (p. 286), Paki, a high chief during the same period (p. 285), and Kamehameha III during the early 1840s. Some claimants give specific dates and these range from 1828-1848. Thus, the people established in Kailua by 1848-1853 only ascribe their roots to the land from the period of the 60-70 years before the Land Commission Awards. While some claimant's lands may have been in their family for longer periods, it would not have been political in the land commission claims for land offered to them by Kamehameha III to refer to rulers prior to the Kamehameha dynasty.

At the time of the *Māhele*, it would appear that Kailua, Kāne`ohe and Waimānalo were considered choice locations, for these *Ahupua`a* were awarded to the Crown, the royal family, and then to important *ali`i*, particularly warrior chiefs for Kamehameha I. The entire *Ahupua`a* of Kailua was awarded to Queen Kalama. Within the *Ahupua`a* the Crown took for itself the *`ili* of Kawailoa which surrounds the Olomana peaks, with a portion in Maunawili Valley and the major portion descending to the sand barrier and yet another detached portion of this *`ili* is found along the shoreline. Kawailoa encompasses the current project area. Princess Victoria Kamāmalu was awarded the *`ili* of Ka`elepulu, which has both a down land and upland portion.

At the time of the *Māhele* land claimants testified before the Land Commission. This testimony provides valuable information in terms of land use circa 1850 and before. The LCAs records for Kailua document a thriving area of garden areas clustered along its 18± permanent and intermittent streams. The Maunawili/Kahana`iki Stream delta is a large, marshy low-lying area with no more than a 6% slope, with fertile soils along stream beds with many taro *lo`i*. Kapa`a Valley is narrow but also had many gardens along its stream. Other fertile areas are on the *mauka* side of Ka`elepulu Pond (modern fill now surrounds most of the former pond) going toward Waimānalo; and several very fertile areas are found within the present-day MidPac Country Club. The two great lagoonal fish ponds joined underneath the lookout point of Pu`u o `Ehu and a few LCAs are found nearby. Another area between Keolu Hills, just to the southeast of the Pond/Lake, which shows fertile soils but does not have recorded Hawaiian farming there. This is not to say that farming was not taking place there, merely that we have no records of it. A very narrow fertile area sits on the Pōhākupu upland about the location of Kailua High School. These fertile soil areas are the location of most of the awards in the LCAs Native Register, Foreign Testimony and Native Testimony.

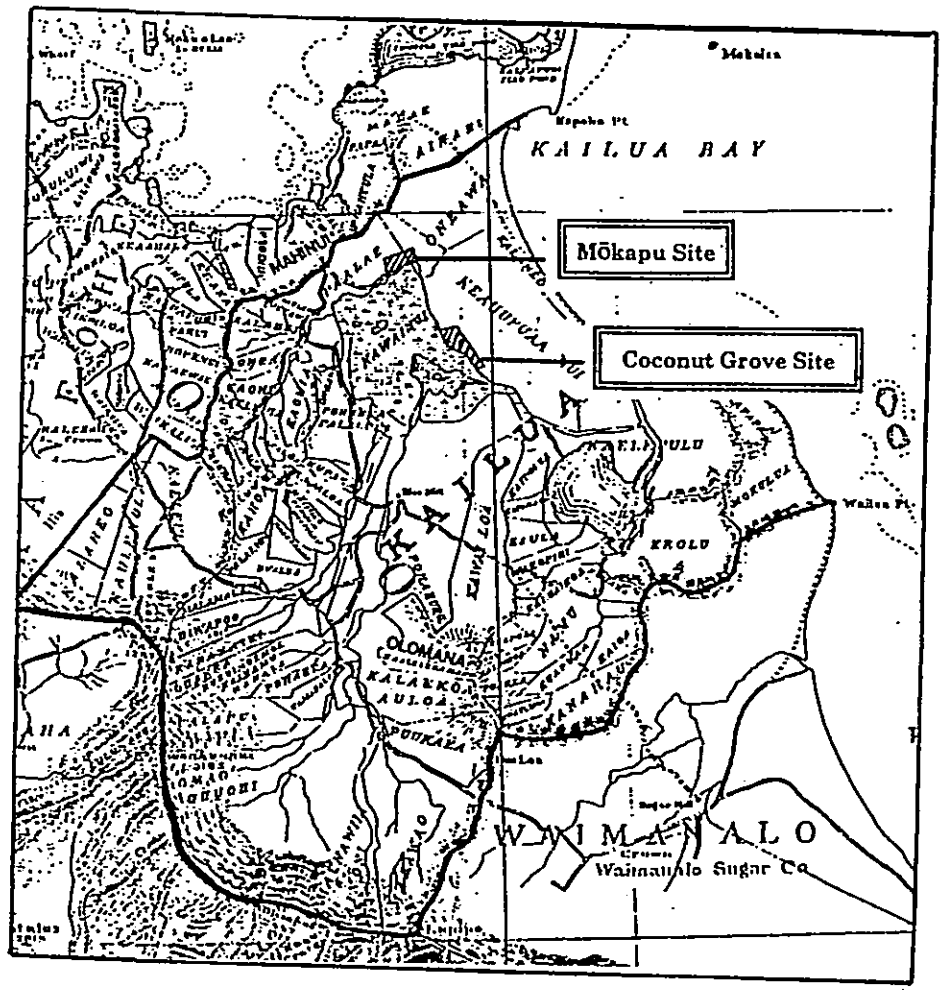

Figure 7 Map Showing the *`ili* Land Divisions of Kailua *Ahupua`a*, From John M. Donn, 1902, Hawai`i Territory Survey.

'Ili are the land divisions within the *Ahupua'a* and these were governed by the lesser chiefs and *konohiki*. The *'ili* of Kailua are shown in Figure 5, a portion of a map prepared by John Donn in 1902. Land divisions came about supposedly under the reign of Ma'ilikūkahi (born about 1360 A.D.), one of the chiefs who spent time in Kailua. There were approximately 70-80 *'ili* exploited in Kailua at the time of the *Māhele*.

A majority of the *'ili* in Kailua, O'ahu were divided up among 41of Kamehameha III's high chiefs. Others (39 *konohiki* awards) received *'ili* or partial *'ili* from Kamehameha III (13 or 20% of the 60 *ali'i* granted land in Kailua). These 39 are given 38 *'ili* (two each get a half of Pohakupu). Thirteen of the 60 high chiefs and *ali'i* retained the majority of the 70-80 *'ili*. At least two of the descendants of these chiefs still live on their land in Kailua; the descendants of Kuke (Tute) and the descendants of Peleleu. In addition to the names of those persons applying for a claim, we have witnesses' names and names of neighbors. Field boundaries are described by naming the neighboring cultivators, and many of these names did not appear on the LCAS list. Some claimants mention where they are cultivating under the aegis of another. In all, there are about 251 names given in the Native Register, Foreign and Native Testimony in the claims dealing with the Kailua, O'ahu area. Of these 251,200 persons are mentioned tilling the land in Kailua Ko'olaupoko in some way. About 65% of those working the land actually applied for an award.

In the *Māhele* records, 123 house lots are mentioned in the awards. This probably does not offer a true reflection of habitations, as the majority of 171 claimants probably lived within the *Ahupua'a*. Where "kauhale" or homes are mentioned the location of these house lots is typically bounded "on all sides by upland." However, although they were close to the field, they had to be out of the wetlands. There are several house lots in the vicinity of the current project area.

Ali'i in Kailua don't specify what use they are making of their land in the LCAs. Most land use information comes from the LCAs (*kuleana*) belonging to commoners. In Kailua most claims include taro patches. All the many upper and lower valley streams are lined with taro *lo'i*. Upper valley springs also have their taro patches. Some 1255± taro *lo'i* are listed in the LCAs. (Where Native Register and Foreign Testimony differ, the smaller number was used for conservative estimation, (cf Kelly 1981:27)). Kelly researched both the *'ili* of Olohana and Kumu and found no boundaries ever defined, the LCAs listed there all claimed taro *lo'i*. Although we don't have information on the size of the taro patches, we know that there were 1255 taro *lo'i* being tilled by some 200 claimants at the time of the *Māhele* in Kailua, O'ahu.

Kailua LCAs list other crops: *malas* of *wauke* or tapa fields, bananas, sugarcane, *'awa*, sweet potatoes and gourd fields; coconut, *hala*, *kukui*, *koa*, and fruit trees and one in Kukanono mentions cotton growing. An upland *'ili* is named for a *koa* pit, which would indicate that at some time in the past, *koa* existed in the area. Other woods mentioned in the *'ili* names are *noni* (*'Ainoni*-"to eat noni"), *koa* (*Kālaikoa*-"to hew koa"), *'ohia* (*Ka'ohia*), *kukui* (*Kukuimoemoe*-kukui and sleep or ambush), and *kamani* (*Kalelokamani*-"where the kamani trees sway"). *Wauke* (paper mulberry), melons and potatoes, potatoes or sweet potatoes and *'awa* are some crops mentioned in the LCAs. Four *'ili* in Kailua have names associated with tapa/kapa. Kapaloa (long kapa), (LCAs 2464, 8799 mention a *mo'o* or *kula* without specifying what kind of cultivation), Kapa'ele (dark kapa), Kapalai (silent kapa), and Kapalepo (dirty kapa). There are many *mo'o* (garden plots) mentioned in the LCAS testimonies with no crop designated. According to local farmers (Rocky Mikami, pers. comm.), the small piles of rocks in rows that one encounters on hillsides in Kailua are a sign of sweet potato patches and because sweet potatoes were a staple of the Hawaiian diet, it would make sense that these *mo'o* where crops are unspecified were mostly being used to grow

sweet potatoes.

No mention of livestock shows up in the claims, but presumably there was some. Mention is made of numerous fisheries and pools where fish would have been raised. Early 20th century testimony (S. Mahoe) indicates that the fishermen at the shore traded ocean fish for taro with the upland farmers and this is probably a long-established pattern.

F. Ranching

In the early 1900s Kāne'ohe Ranch comes to dominate land holdings in the Kailua and Kane'ohe area. Included within this acreage is much ranch land which has been bought, sold, let and used as ranch land by numerous parties since the mid-1850s. Kelly and Nakamura's history (1981:34-35) mentions that Government land sales amounting to 3,000 acres were sold to 21 buyers in Kailua between the years 1849 and 1863. The largest parcel went to William Jarrett of the *'ili* of Maunawili in 1849. The second largest was 399.5 acres to T. Cummins in Mokulua. Both parcels were used for ranching. Other land holdings which were turned into ranch land in the mid-1850s included the *'ili* of Puanea and 'Ohua'uli (by the sone of Paula Marin, Paul F. Manini). These large land holdings were used for years as ranch lands before becoming part of the Castle's Kāne'ohe Ranch. Cattle, sheep, and horses, were thus allowed to roam at will through many parts of Kailua, and would have destroyed many gardens and abandoned habitation areas. Kelly and Nakamura point out that although specific records are not available, based on tax information, it is not unreasonable to estimate that several thousand head of cattle were grazing in Kailua by 1975 (Kelly and Nakamura 1981:69).

Kāne'ohe Ranch (Castle Trust) eventually acquired much of the land in Kailua (Hall 1997:84). Kāne'ohe Ranch, in addition to ranching, grew pineapple and sugarcane. With the decline of rice farming around the margins of Kawai Nui, cattle stock move onto the abandoned agricultural lands. Ranching in Kailua continues to this day, albeit on a drastically reduced scale.

G. Growth of Cash Crops in Kailua

For the nearly 100 years following the *Māhele*, Kailua grew into an important area of commercial agriculture. Until the early 1900s, rice was the major crop. Rice was followed by truck farming of taro and Western crops. The truck farming gave way to suburbanization, as Kailua became the premier bedroom community for growing Honolulu.

The Reciprocity Treaty between the United States and the Kingdom of Hawaii allowed for the duty free exportation of Hawaiian sugar to the U.S. This 1876 treaty greatly fanned the flame of the already smoldering Hawaiian export sugar industry. The duty free export of rice was also covered under the treaty, however, it was the growing Asian population, first Chinese and later Japanese, brought to Hawai'i to supply labor to the escalating export sugar industry, that provided the main impetus for the expansion of rice growing. With local consumption steadily growing, and duty-free export, rice growing in Hawaii had a boom period of its own.

Unlike the adjacent *Ahupua'a* of Ko'olaupoko, Kailua's main cash crop became rice rather than sugar. Kailua's numerous abandoned taro *lo'i* in the former taro lands of Maunawili and Kawai Nui provided perfect areas for the expansion of rice. At one time, there were multiple rice mills functioning in Kailua *Ahupua'a*. By the first part of the 20th century, rice growing in California were using more modern production methods to reduce their costs. This lead to the

rapid decline in rice farming in Hawai'i (Kelly and Nakamura 1981: 51-63).

Sugar never became an important crop in Kailua itself, but the need for water for the adjacent sugar lands of Waimānalo was an important factor in the transformation of the Kailua water shed. Following the 1876 Reciprocity Treaty the adjacent *Ahupua'a* of Waimānalo became the site of rapid sugar development, what became the extensive Waimānalo Sugar Company's fields. The development of these fields relied upon water from Kailua. As early as the late 1870s a system of flumes, ditches, and tunnels were built in the *mauka* portion of adjacent Maunawili to collect water from the abundant springs and streams. By 1881 close to 1,000 acres of sugar had been planted, and milling operations were underway in Waimānalo (Kelly and Nakamura 1981:76). Expansion in acreage continued, increasing the need for water. By the 1920s, improvements to the Waimānalo Irrigation System included catchment tunnels that were excavated into the base of the Ko'olau in Maunawili to increase flow.

Also, completed in 1923, was a system of pumps, pipelines, tunnels, and ditches, that conducted water from Kawai Nui Marsh into the Kailua ditch, a portion of the Waimānalo Irrigation System. This system continued to supply Kawai Nui water to Waimānalo until the early 1950s (Harland, Bartholomew, and Associates 1959:53-54; Hall 1997:94; Kelly and Nakamura 1981:778-79). According to Wilcox (1996:111) two pumps lifted water from Kawai Nui and took it to the head of a 10,000-foot system of small tunnels, most through stone or hard earth, into a reservoir in Waimānalo.

In 1909, the Hawaiian Copra Company was established on the sandy area that is today bounded by Kalaheo and 'Oneawa Streets. Over 130 thousand trees were planted in an operation that involved leveling "the sand dunes and smooth[ing] out the sand hillocks" (Honolulu Star Bulletin, Sept. 12, 1931 cited in Kelly and Nakamura 1981:100; Hall 1997:77-78). The name Coconut Grove stuck, referring to most of the sand barrier area of Kailua. Clearly this leveling and smoothing of former dune areas had a great impact on the archaeological record of this area in Kailua.

The most prominent inroad made by sugar agriculture in Kailua was the establishment of the Hawaiian Sugar Planter's Association's field laboratory in 1926. It was established in former rice fields in stream bottoms, near present day Kailua Town. By 1946 the laboratory was in the process of moving further *mauka* into Maunawili (Kelly and Nakamura 1981:100).

By the 1950s, the truck farms that had flourished since the turn of the century within the bounds of present day Kailua Town, are slowly replaced by housing, municipal and retail developments. Kailua is promoted as the bedroom community for Honolulu businessmen, only "8 miles and 20 minutes" from Downtown. Residential developments are planned for more outlying areas of Kailua Town, such as Olomana, Pohakupu, and Oneawa Hills (Hall 1997:141).

H. Kawai Nui Flood Control

As Chamberlain's early account, quoted above, shows, Kailua has historically been susceptible to flooding. From 1902 to 1940, Kawai Nui Marsh was hit with numerous heavy rainfalls resulting in major alluvial run-off. The Kawai Nui Marsh area became the target for federal flood control projects in the 1930s and a report was authorized by the Flood Control Act of August 11, 1939 (Wheeler 1949; Kelly and Nakamura 1981). Plans for this project initially called for a canal that was expected to provide for a discharge of water at the rate of 4,000 cubic feet per

second and maintain control of the water levels in the marsh. The plan for the canal was drawn out on an aerial photograph in December of 1948 (figure 22 in Kelly and Nakamura 1981:87). In March of 1951, Kailua experienced a major flood, resulting from two days of continuous rain (Swain and Hexel 1971:8), where Kawai Nui overflowed and 250 people were forced to evacuate. The flood extended from Noela Place to Uluniu Street (Brady 1959:10).

III. PREVIOUS ARCHAEOLOGY

A. Summary of Previous Archaeological Research in Kailua *Ahupua'a*

This previous archaeology section is intended to compliment the cultural and historical background section. It discusses the archaeology of Kailua *Ahupua'a* in general, with many specific references to Kawai Nui, to provide an archaeological context for the immediate project area. Table 1 summarizes the many previous archaeological investigations that have taken place in Kailua.

Table 1. Previous Archaeological Reports, *Ahupua`a* of Kailua, Ko`olaupoko, O`ahu

Reference	Location	Description and Results
Thrum, various 1907-1918.	Kailua *Ahupua`a*	In his articles for the *Hawaiian Almanac and Annual* (1907-1918) Thrum is the first to document many of the *heiau* in the *Ahupua`a* of Kailua.
McAllister 1933	Kailua *Ahupua`a*	McAllister's island-wide survey of the major archaeological sites of O`ahu supplies some of the first detailed descriptions, maps, and photographs of Kailua's archaeological remains. He describes 16 sites within Kailua *Ahupua`a*, including Kawai Nui pond (#370), Ka`elepulu fishpond (#377), Ulupo *heiau* (#371),Holomakani *heiau*, and Pahukini *heiau* (#359). In all eight *heiau* are reported for Kailua.
Handy 1940	Kailua *Ahupua`a*	Handy's discussion of traditional Hawaiian agriculture gives regional descriptions of what crops were planted where within the Hawaiian chain. Kailua *Ahupua`a* is described as a rich, productive, well terraced taro growing area (p. 99). The "sandy plains" of Kailua were planted in sweet potato, using a planting system of small soil mounds (p. 155, plate 8)
Clark and Connolly 1977	Hāmākua Drive along Kaelepulu Stream.	This survey identified five stacked-stone alignments, a possible wall alignment, a potential habitation site, two agricultural sites, the remains of an irrigation ditch, and surface midden. A possible *heiau* was also recorded, however, when Hommon (1982) and Morgenstein (1982) revisited this project area, they found no remains of the possible *heiau* structure reported by Clark and Connolly.
Cordy 1977	Kawai Nui Marsh	Cordy, working for the U. S. Army Corps of Engineers, performed archaeological survey, historic document research, and aerial photograph analysis, for the alignment of a proposed City and County sewer-line along the south and southeastern margin of Kawai Nui Marsh. He documented historic house sites and both dryland and wetland agricultural features, including terraces.
Cordy 1978, Morgenstein 1978	Kawai Nui Marsh	Agricultural features from Cordy's earlier identified "Site 7" (from Cordy 1977) were subjected to excavation to determine the chronology of land use. Previous examination of aerial photographs revealed extensive agricultural fields in this southern extension of Kawai Nui Marsh. Excavations revealed sequential land use of the area, from prehistoric irrigated taro agriculture, into historic irrigated taro agriculture, into later historic rice agriculture. Prehistoric agricultural features, such as terrace walls, were found buried below sediments, suggesting that they had not been substantially disturbed by later historic rice and livestock grazing activities in the area.
Dye 1979b	Kapa`a Ridge	Reports the discovery, mapping and excavation of Bishop Museum site # 50-Oa-G6-31, a combination of terrace remnants and cobble paving, thought to be prehistoric agricultural remnants. The site is located just below the summit of Ulumawao Ridge, in a hanging valley of an intermittent stream. After the work was completed these features were destroyed by the expansion of the Ameron Quarry facility

Kraft 1980a,b	Kawai Nui Marsh	John C. Kraft is a specialist in prehistoric and historic coastal land form changes. Based on his research, which included coring various spots around the marsh. Kawai Nui Marsh was a shallow marine embayment of the coastal reef tract, very similar to present day Kāne'ohe Bay. Between 6000 and 2800 years B. P., before the Kailua sand berm had formed, corals grew and marine foraminiferal sands and carbonate muds were deposited around the margins of the embayment. Only after 2500 B.P. did the sand berm begin to form, slowly closing off the embayment. Until 400 or 500 years B. P. both the north and south outlets of the embayment (`Oneawa and Ka`elepulu) remained open. Kraft suggested the possibility that formation of the sand berm could be related to human factors, such as the construction of stacked stone fish ponds within the embayment. According to Kraft's recreation, the terrigenous in filling of the margins of the embayment was a relatively recent development, in the last 400-500 years B. P., with most taking place in the last 200 years.
Allen-Wheeler 1981	Kawai Nui Marsh	Allen-Wheeler conducted excavations in the Marsh with results that confirmed and refined Krafts' (1980) sequence of Kawai Nui development from embayment to marsh. Terrestrial in-filling of the marsh began about 650 A.D. with the formation of a peat layer. By 1300 A. D. a layer of alluvial soil had been deposited--possibly the result of human agricultural activity within Maunawili. Rapid alluvial in-filling continued at a rapid rate until the present. Taro cultivation within the marsh could not have taken place until approximately 1200 A.D.
Morgenstein 1982; Hommon 1982	Hāmākua Drive adjacent to Ka`elepulu Stream	Morgenstein and Hommon report surface survey and subsurface testing conducted to assess the potential of archaeological features along the Ka`elepulu truck sewer line. The investigation documented layers of historic fill in the upper layers and the presence of one potential agricultural bund, thought to be associated with rice farming, below.
Neller 1982a	Kawai Nui, Kukanono area TMK 4-2-13:38	Neller reports the work he undertook in Kukanono as part of a field school on behave of the Sierra Club School Hikers Program and Hawaii Science Teachers Association. These limited subsurface investigations were carried out in the same area reported by Clark (1980) and Athens (1983a). Neller dismisses the early date reported by Clark (1980).
Neller 1982b-	Maunawili Valley TMK 4-2-09:1	This short letter report documents a field trip to investigate archaeological sites in the back of Maunawili Valley. The reported locations of McAllister's sites 373 (Halaulolo *Heiau*), 374 (Kukapoki *Heiau*), and 375 (house sites, were visited. The extensive agricultural terraces, abandoned *lo`i*, were noted along large portions of both Omao and Maunawili Streams.
Athens 1983a	Pohakupu Kukanono slope S.S. #50-80-11-2022	Working in much the same area documented by Clark (1980), these investigations consisted predominantly of surface collections and subsurface testing. Excavation revealed that the abundant surface features (primarily agricultural mounds and terraces) were built in the most recent soil layers after 1900 A. D. Only one small area of the project area contained undisturbed prehistoric deposits. An earth oven in this prehistoric deposit was dated to the 13th to 15th centuries A. D., calling into question the early dates (4th to 7th century A. D.) obtained by Clark on the same slope of Kawai Nui. Soil erosion on the Pohakupu-Kukanono slope was apparently intense during the prehistoric period and soil deposition and development was infrequent prior to construction of the historic terraces.

Athens 1983b	83 Kihipai Street, Kailua TMK 4-3-57:65	This report documents the 11 grid units excavated in site 50-Oa-G6-40, the H.A.R.C. site. The site consists of marine midden, and subsurface features including hearths and pits. Radiocarbon dates indicate occupation of the site sometime in the mid- 13th to early 15th century. Midden remains were analyzed and conclusions suggest a change through time in the exploitation pattern. Athens suggests the use of the Kailua accretion barrier for habitation may have started about the same time as the occupation of the site. This site was originally located and excavated by Wheeler (1981)-.
Toenjes and Donham 1986	Maunawili Valley	This reconnaissance for the City and County's Maunawili District Trunk Sewer was located along Maunawili Stream north (*makai*) of Maunawili Road to the southern extent of Kawai Nui Marsh and Kalaniana'ole Highway. One historic site, a ditch which once carried water from Maunawili Stream to a rice mill, and several potentially prehistoric terrace remnants were discovered within the project area. The authors report previously unreported archaeological features within the vicinity of the project area, associated with Maunawili Stream.
Brennan 1986	Maunawili Valley	This reconnaissance survey was done for Royal Hawaiian Country Club, Inc., for a parcel proposed for a golf course in MAUNAWILI. Brennan located and described 42 sites, some of which had been previously identified. Sites include historic features (a bath site), a *heiau* (which appears to match McAllister's site 374, "*Heiau* on the land of Kukapoki") prehistoric irrigated taro fields, habitations, walls, burials and stream embankments.
Allen 1986, 1987	Maunawili Valley	These mitigation and data recovery plans and preliminary reports detail the results of archaeological investigations at the site of the Royal Hawaiian Country Club, Inc. golf course. Sites investigated included historic habitations, charcoal kilns, roads and trails, and agricultural sites. The final report for these investigations is forthcoming
Shun, Prico-Beggerly, and Athens 1987	Kailua *mauka*, west of the Pali Golf Course	This inventory survey of approximately 200 acres, the site of a proposed golf course, revealed that the area was not used extensively by traditional Hawaiians for habitation, agriculture, or other activites. Historic document research revealed that Pineapple agriculture (c. 1912) and truck farming, in the 1920s, were some of the greatest land uses of the parcels. Sites found included a small terrace complex, two charcoal kilns or seepage wells, a habitation complex, and a rock wall.
Williams 1988	Maunawili	This reconnaissance survey took place to investigate the proposed new location for the displaced Luluku farmers (by H-3 development). 13 sites were recorded in this *mauka* portion of Maunawili (540'-920' elevation), including probable historic charcoal kilns and agricultural complexes.
Szabian 1989	Foot of Mount Olomana	During this archaeological reconnaissance survey of the proposed site of the Women's Community Correctional Complex (adjacent to Maunawili Elem. School) no new surface or subsurface archaeological sites of deposits were discovered. The authors did reap the remains of Kukuipilau *Heiau* (State Site # 50-80-11-372), which was first reported by Thrum and McAllister (site # 372), and re-discovered by Neller. They also note the freshwater spring "Kawailoa freshwater spring" adjacent to the *heiau*.

Hammatt, *et al.* 1990	Kawai Nui Marsh	The sediments from sediment cores from 10 locations in the Marsh were analyzed to characterize their "depth, age, and nature". Conclusions Kawai Nui was marine bay with open circulation and tidal activity for most of the Holocene. Around the end of the first millennium B. C., in a relatively sudden geological event, the bay was partially blocked by a sand barrier, becoming a lagoon of mixed fresh and saline waters. This change is marked by a 600% increase in sedimentation rates on within the Kawai Nui basin. The lagoon persisted until as late as 570 A. D. By 1400 A. D. the lagoons outlet to the sea was closed and the Kawai Nui basin, already largely filled with terrestrial silty clays developed its wetland appears of today. Pollen samples which bracket the periods from bay to marsh show no apparent changes resulting from early Polynesian settlement. At approximately 1400 A. D. there are dramatic changes showing voluminous drops in mixed mesic forest species and an increase in grasses and sedge. These changes may well be the result of increases in Hawaiian subsistence activities.
Quebral, Orndoff, and Athens 1991	Hāmākua Drive and Pu`u o Ehu Ridge	Four most likely historic sites were locate during this inventory survey along the margins of Ka'elepulu Stream, in an area that has seen modern in filling. Although background research indicated the importance of the project area for traditional agriculture, no specific indication of traditional Hawaiian land use was found. The project area was used for historic rice cultivation and livestock grazing.
Athens and Ward 1991	Kawai Nui Marsh	Thirty-seven core/auger units were dug along the eastern margin of Kawai Nui Marsh, in the vicinity of the drainage control levee, three small test excavations were undertaken, and two cores were extracted from the central portion of the marsh. Conclusions: The marsh basin was transformed into a relatively closed, freshwater system at about 200 B. C. Data from other locations on O'ahu (Ft. Shafter Flats and Kahana Valley) support the conclusion that the transformation was due to regional causes, namely a fall in mean sea-level, rather than local forces, as had previously been proposed. The Kailua sand berm begins to form between 600 and 1000 B. C. Until approximately 1000 A. D., the Kailua lowlands were dominated by *Pritchardia*-palm forest. After 1000 A. D. these forests decline rapidly. The vegetation transformation is attributed to rising human population levels and the expansion of agriculture. Counts for cheno-am type and grass pollen rise dramatically after approximately 1200 A. D. These pollen types are indicators of disturbed environments and are thought to be indicators of the expansion of agriculture. Based on increases in sedge pollen after about 1000 A. D., it appears that Kawai Nui basin was too deep to support a marsh community, except along its margins, until this time.
Hammatt and Shideler 1991	Maunawili	This inventory survey for the Na Ala Hele Trail Corridor through the *mauka* portion of Maunawili Valley found seven sites. Sites included the Old Pali Road, two probable historic charcoal kilns, and a large agricultural complex. It was unclear if any of the sites were prehistoric.
Hammatt, Pfeffer and Creed 1992	Pu`u o Ehu Ridge TMK 4-2-03:46	This inventory survey for the proposed location of the Kailua 272 Reservoir found no historic properties. Oral history research did reveal the traditional Hawaiian significance of Pu`u o Ehu peak as a spot overlooking the waterway that joined Ka'elepulu and Kawai Nui ponds.

Brennan 1993	Maunawili Valley	This short letter report, address to Dr. Tom Dye, SHPD, documents and explains significance evaluations for 8 newly recorded sites in Maunawili. These sites were found during monitoring for the Royal Hawaii Country Club Golf Coarse. Features include pondfields, firepits, trash dumps, a cemetery documented from oral history, habitations, slope retainers, terraces, and a possible military training bunker.
Hammatt, Creed and Masterson 1994	Maunawill Estates (TMK 4-2-63:31,38)	This reconnaissance survey of a 10 acre parcel revealed no historic properties.
Williams, Mills, and Allen 1995	Upper Maunawili Valley	Excavations at six sites within upper Maunawili Valley (the location of the Luluku Banana Farmers Relocation) are reported. These six predominantly prehistoric agricultural sites, based on radiocarbon dating results, were constructed between 1260 and 1650 A. D. These radiocarbon dates suggest that extensive agricultural and other cultural activities began in the valley by the 14th century, and posaibly a few centuries earlier. No human burials or definite habitation areas were discovered in the six sites, but evidence for pre-Contact habitation was found at a previously unidentified site.
Hammatt and Chiogioji 1997	`Aulos Road	This reconnaissance assessment of a 0.8 mile section of `Aulos Road, immediately *makai* of Castle Junction, found no historic or archaeological sites, other than the previously recorded Kine`ohe Ranch office building and the adjacent war memorial monument (State site 60-80-10-1360).
Hammatt and Medeiros 1999	Kailua Ahupua`a TMK 4-3-28:73	Inadvertent burial find of a single individual, represented by the remains of one bone fragment (radius or ulna) in situ. The lower skeletal remains were recovered by SHPD/DLNR staff, while the contents of the excavated sand was intensively screened and fragmented remains were recovered. The remains collected by the Burial Program staff included both femora, both fibulae, one tibia, both innominates, both humeri, proximal fragments of right ulna and radius, distal fragment of left ulna, mandible, sacrum, and a frontal fragments of the cranium.
Medeiros, Bush, and Hammatt 2000	Kailua Ahupua`a TMK 4-3-53:29	Inadvertently discovered burial of a single individual was partially recovered because of previous disturbance of this Kailua project area. A total of 5 human bones were recovered during the length of this project, including 1 adult skull (minus the mandible), 1 rib fragment, 1 carpal fragment, and two unidentified fragments. This represents less than 5% of the total remains. The remains collected appear to represent one individual. The ethnicity of the remains is not apparent, especially with the low percentage of the entire burial recovered. There was no evidence near the remains, or anywhere within the stratum containing the burial, to suggest ethnicity.
Kikiloi, McDermot t, and Hammatt 2000	Kailua Ahupua`a TMK 4-2-17:por 4	Archaeological inventory survey with a focus on the evaluation of subsurface deposits of a small lot on the north-northwest margin of Kawai Nui Marsh. Backhoe testing revealed modern fill sediments overlying sandy marsh type sediments at a depth of 1.25-1.5 m below the current land surface. No historic properties documented. This margin of the marsh was heavily modified by the dredging of the adjacent Oneawa and "Inner" canals that control Kawai Nui drainage.

McDermot t *et al.* 2000	Kawai Nui Marsh Periphery	This archaeological assessment and background literature search explores the cultural context of the marsh periphery, discusses the impact of the proposed Circle-Kawai Nui Trail on archaeological sites, and makes recommendations for public interpretive signage along the proposed trail.

Recent Archaeological Reports on Kawai Nui Marsh

Most relevant to the current project area are four archaeological investigations by Kikiloi *et al.* (2000), Athens and Ward (1991),Hammatt *et al.* (1990), and Athens (1983b) (See Table 1 for detailed project descriptions and conclusions). In the summer of 2000, Kikiloi, McDermott and Hammatt (2000) conducted an archaeological inventory survey for the Kawai Nui Marsh Park Improvement area. Emphasis was placed on subsurface deposits of a small lot on the north-northwest margin of Kawai Nui Marsh, immediately north of the current project area. Backhoe testing revealed modern fill sediments overlying sandy marsh type sediments at a depth of 1.25-1.5 meters below the current land surface. No historic properties or human burials were documented. This margin of the marsh was heavily modified by the dredging of the adjacent Kawai Nui and `Oneawa "Inner" canals that control Kawai Nui drainage. The results of this investigation indicate that at least this portion of the inner (*mauka*) extent of the Kailua sand accretion barrier have been greatly modified by the flood control projects of the last 50 years.

In 1991, Athens and Ward (1991) carried out an archaeological investigation for a flood control project at Kawai Nui Marsh. Thirty-seven core/auger units were dug along the eastern margin of marsh, in the vicinity of the drainage control levee. The purpose of the investigation was to evaluate the presence or absence of significant archaeological remains in the vicinity. The investigation revealed no archaeological deposits or architectural features. Some possible archaeological sites proved to consist only of levee fill and previously dredged sediment. The palaeoenvironmental investigations of Athens and Ward (1991) were highly successful. These results, coupled with those of Hammatt *et al.* (1990), did much to broaden our understanding of prehistoric human induced environmental change in the Hawaiian lowlands, see the summary in Table 1.

Hammatt *et al.* (1990), like Athens and Ward (1991), conducted sediment coring in Kawai Nui Marsh with the goal of palaeoenvironmental reconstruction. The U.S. Army Corps of Engineers proposed construction of open water channels in the marsh for flood control. There was concern for impacts to archaeological resources within/surrounding the marsh. The objective of the study was to (1) characterize depth, age and nature of sediments to be impacted in relation to present marsh sediments and (2) reconstruct environmental history of marsh to determine nature and location of native Hawaiian use including shoreline habitation, fishponds, and agricultural sites. Ten sediment cores were taken from Kawai Nui Marsh and analyzed for pollen, organic clay mineralogy, stratigraphy and heavy metals.

Athens (1983b) documented the 11 excavation units in site 50-Oa-G6-40, the H.A.R.C. site, in 1983. The site consisted of marine midden, artifacts, and subsurface features including hearths and pits. Radiocarbon dates indicated occupation of the site sometime in the mid- 13th to early 15th century. Midden remains were analyzed and conclusions suggest a change through time in the exploitation pattern. Athens suggested the use of the Kailua accretion barrier for habitation may have started about the same time as the occupation of the site. This site was originally located and excavated by Wheeler (1981). This study demonstrated the potential for significant

archaeological deposits within the sandy deposits of the previously disturbed residential neighborhoods along the inland margin of Kawai Nui Marsh.

Summary of Archaeological Findings in Kailua

Twentieth century archaeological findings from inventory surveys, data recovery projects, and inadvertent finds during development are the main sources of our knowledge about the archaeological record in Kailua. Archaeological work in the last 25 years in Kailua has been fairly extensive. This work has been concentrated along the margins of Kawai Nui Marsh and within Maunawili Valley for the most part. This is largely due to the fact that most of the *makai* portions of the *Ahupua'a* had been developed prior to the implementation of State and Federal Historic Preservation Rules (Dye 1992). The many archaeological reports dealing with Kailua are listed and briefly summarized in Table 1, above.

The earliest habitation of Kailua area is still under debate. A radiocarbon date obtained from a charcoal enriched soil layer has been interpreted as evidence for human habitation in Kailua to have begun somewhere in the neighborhood of 350-650 A.D. (Clark1980:32-33, 77-78). This site is located near the project area . This date is not universally accepted, however, it is fairly well agreed among the archaeological community that by approximately 1200-1300 A.D. dramatic changes in the pollen record are indicative of the expansion of agriculture in the Kailua area, most likely in the well-watered margins of Kawai Nui Marsh (Hammatt *et al.* 1990; Athens and Ward 1991). Human colonization of the region would clearly have had to precede this agricultural expansion, perhaps by many centuries. Erkelens (1993:51) reports three early dates, A.D. 1024-1296, A.D. 779-1256, and A.D. 770-1270, from his excavations along Kukanono slopes within the current project area. It is logical that Kailua, and other regions of Ko'olaupoko, with their abundant marine and terrestrial resources, would have been attractive to the initial Polynesian colonizers.

The work of Hammatt (*et al.* 1990) and Athens and Ward (1991), has largely discredited Kraft's (1980) earlier assertions that Kawai Nui Marsh was an open water embayment at the time of initial Polynesian colonization. Athens and Ward (1991) suggest the Kawai Nui Embayment was sealed off during the first millennium B.C. as the result of a drop in sea-level. They correlate the Kawai Nui event with similar events at the same time in Kahana Valley and Ft. Shafter Flats, O'ahu.

Remains of upland terraces show that taro has been grown extensively and intensively in Kailua since the 13th or 14th century, and possibly earlier (Allen 1981, Williams, Mills and Allen 1995). The work of Cordy (1997, 1978), Allen (1981, 1986-87), and Athens (1983a) all document the mix of irrigated and dryland agriculture that was carried out in Kailua during prehistoric and continuing into the historic period. Dryland agriculture, including yams, gourds, and sweet potato, would have been carried out on slopes and on drier flat-lands. Modification to the landscape would have been variable, ranging from none at all to the construction of terraces and mounds for planting. According to Handy (1940:155) the beach barrier at Kailua (current-day Coconut Grove) was famous for its production of sweet potatoes, grown in small mounds. Irrigated agriculture would have been carried out along streams and below springs. Associated landscape modifications would have included construction of terrace and/or pondfields, *'auwai*, and earthen and stacked-stone berms. These types of dryland and irrigated agricultural features have been found in Maunawili and along the margins of Kawai Nui Marsh.

Previous archaeological investigations in Kailua have located dispersed prehistoric habitation remnants. This is in keeping with the observations of early Westerners in Hawai'i that the settlement pattern for the most part was dispersed habitations scattered across the landscape amid agricultural fields. It should be remembered that settlement data is conspicuously absent from the lowland, beach berm areas of Kailua, due to early development of these areas.

McAllister (1933) reported eight *heiau within* the *Ahupua'a* of Kailua, and it is not unreasonable to conclude there were several more of which McAllister's information had no knowledge. This is well in keeping with Kailua's status as a productive *Ahupua'a*, the residence of *Ali'i*. The three known *heiau* closest to the current project area are McAllister's site 359 Pahukini *Heiau*, 360 Holomakani *Heiau*, and 371 Ulupo *Heiau* .

In the last eleven years, over 15 reports of inadvertent finds of human skeletal remains have been made in Kailua, on the sandy beach berm of Coconut Grove and Lanikai. As with other near shore sandy areas in Hawai'i, clearly Kailua was used for burial of the deceased. These burial remains are not nearly as extensive, however, as the hundreds of human burials discovered from nearby Mōkapu peninsula (Snow 1974).

B. Recorded Historic Properties Along the Margins of Kawai Nui Marsh

The recorded historic properties around the margin of Kawai Nui Marsh are shown on Figure 8, an adaptation from the State Historic Preservation Division/Department of Land and Natural Resources GIS historic property location data base. Table 2, below, is a site number correlation list that outlines the various site designations that have been used for the Kawai Nui periphery sites over the years. This site distribution reflects the relative lack of archaeological investigation along the eastern and northern margins of the Marsh. It may also reflect environmental conditions that made the land use, including agriculture and habitation, more suitable along the southern and western margins of the marsh. A recent archaeological assessment for the proposed Circle-Kawai Nui Trail Project (McDermott *et al.* 2000) discusses the distribution of this Kawai Nui Marsh sites in greater detail.

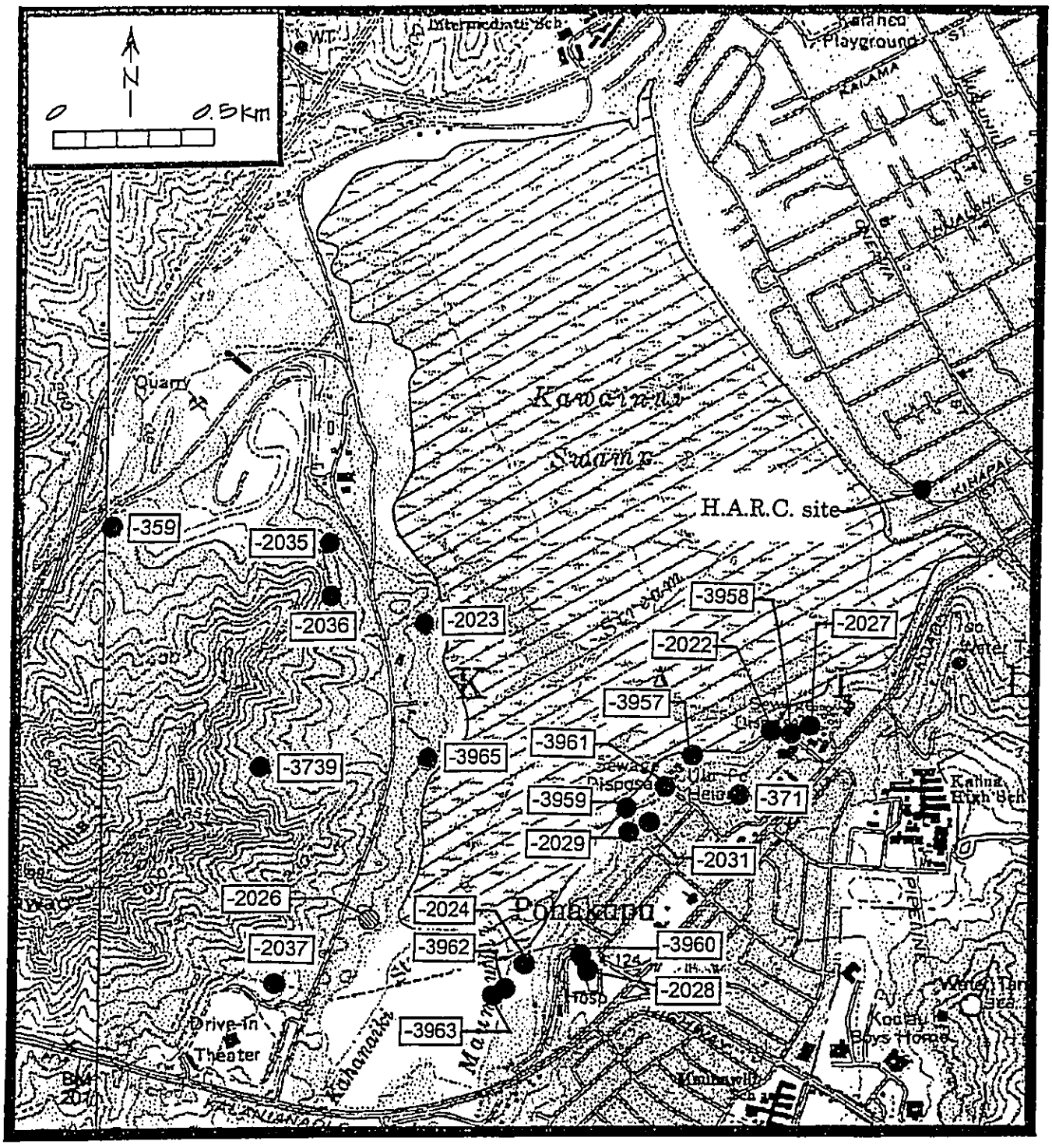

Figure 8 Portion of the 1983 USGS Topographical Map, Mōkapu Quadrangle, Showing the Location of Recorded Historic Properties Along the Margins of Kawai Nui Marsh (Crated Using Information from the SHPD/DLNR GIS Data Base).

Table 2: Kawai Nui Archaeological Sites - Correlation Table of Site Nomenclature & Site Descriptions

State Site #	Mc Allister #	Bishop Museum Site #	Clark (1980a &b) #	Cordy (1977/ 1978) #	Ewart & Tuggle (1977) #	Site Description	Site name/ TMK
50-80-11-359	359	50-Oa-G6-4	---	---	---	—*heiau* located by McAllister and now in middle of landfill in Kapa'a Quarry. This site is now on the National Register and State Register of Historic Sites as State Site 50-80-11-359. This *heiau* was also called *Mo'okini heiau* referring to many lineages; the name *pahukini* means "many drums" (see Pukui & Elbert, 1974). Thrum also lists an alternate name of Makini. It is said to have been built by the high chief Olopana in the 12th century and is a *luakini* or state-class of *heiau*, important enough to accommodate preparations of war and other highly important state matters. Rescued from oblivion in 1987 when a restoration project was begun. The upkeep is now shared by Ameron HC&D and the Lani-Kailua Business & Professional Women's Club.	Pahukini Heiau TMK 4-2-15:1

State Site #	Mc Allister #	Bishop Museum Site #	Clark (1980a &b) #	Cordy (1977/ 1978) #	Ewart & Tuggle (1977) #	Site Description	Site name/ TMK
50-80-11-360	360	50-Oa-G6-5	---	---	---	*-heiau* that McAllister (1933) noted on Ulumawao Ridge, NE of the quarry; supposedly built by high chief Olopana in the twelfth century. The name means "wind running or racing". Holomakani (Site 369; State site 50-80-11-369), McAllister lists on the slopes below Pahukini, & was thought to have been destroyed when the land it occupied was cleared for agriculture (Sterling & Summers 1978:229). Between the present landfill and Kalaninaole Highway, a site was recently located which may be this *heiau*. C. Kawachi of the State Historic Preservation Division and staff did a field check on 6/15/88 (memorandum) in response to a call from Susan Miller to check the site. LCA 6966, awarded to Keala, listed its land use as "a kula." State archaeologists said that this site may be Holomakani Heiau (Site 360).	Holomakani Heiau TMK 4-2-14:2
50-80-11-371	371	50-Oa-G6-1	---	---	---	—*heiau*, (State site #50-80-11-380) agricultural *heiau* dominating the Kawai Nui Marsh. Located on the southeast side of marsh in the area known as Kukanono, near the present YWCA site. Its large 43 m. (140') x 9.1 m. (30') high terrace dominates the marsh. Its name means "night inspiration." It is said to have been built in a night by the Menehune, The spring beneath was used for washing the pigs before bringing them up to the temple oven (Akuni Ahau in Sterling and Summers, 1978). The land was accepted as a part of the territorial park system in 1951 and now is a state park.	Ulupo Heiau TMK 4-2-13:2

State Site #	Mc Allister #	Bishop Museum Site #	Clark (1980a &b) #	Cordy (1977/ 1978) #	Ewart & Tuggle (1977) #	Site Description	Site name/ TMK
50-80-11-2022	---	50-Oa-G6-32	cluster 1	site 1	site 1	Series of terraces from marsh edge up edge of slope, a long retaining wall upslope, ruins of a historic house, a spring, excavation yielded charcoal dates in range of A.D. 353-655 & A.D. 529-0965, Artifact found on surface	Kawai Nui Terraces 2022 TMK 4-2-13:38
50-80-11-2023	---	50-Oa-G6-33	clusters 10 & 11	---	---	cluster 10: 12 features: retaining walls, L-shaped alignments of rocks, terraces, a roadbed, a level terrace or platform, surface scatter; cluster 11: 2 retaining walls	Kawai Nui Cluster 2023 TMK 4-2-13:10
50-80-11-2024	---	50-Oa-G6-34	cluster 7	---	site 4	mounds, wall remnants, a terrace	Makalii Slope Cluster 2024 TMK 4-2-13:10
50-80-11-2026	---	50-OA-G6-36	cluster 12	---	---	a large agricultural terrace; 67 m. long along marsh edge in a NE/SW direction, 14 m SE/NW; walls single-course high; rusting crane	Kapaloa Agricultural Terrace 2026 TMK 4-2-13:10
50-80-11-2027	---	50-Oa-G6-37	cluster 15	---	---	stone-walled enclosure, linear pile of rocks, terrace, surface artifacts	Kukanono Habitation Site 2027 TMK 4-2-13:38

State Site #	Mc Allister #	Bishop Museum Site #	Clark (1980a &b) #	Cordy (1977/ 1978) #	Ewart & Tuggle (1977) #	Site Description	Site name/ TMK
50-80-11-2028	---	50-Oa-G6-38	cluster 14	---	---	2 walls which meet at a right angle	Ulukahiki Walls 2028 TMK 4-2-06:4 or 7
50-80-11-2029	---	50-Oa-G6-39	cluster 13	site 7	---	large agricultural complex of rectangular fields, probable water channel; excavation yielded basaltic glass date A.D. 1738+34 years as well as large taro root stains and taro pollen	Kawai Nui Marsh site 7 TMK 4-2-13:14, 16:06
50-80-11-2030	---	50-Oa-G6-40	Allen-Wheeler 1981	---	---	excavation exposed a truncated cultural layer under modern fill and overlying beach sand producing prehistoric artifacts. Dates obtained were between A.D. 1374 to 1630	Kihapai Occupation Site 2030 TMK 4-02-57:65
50-80-11-2031	---	50-Oa-G6-41	Athens 1983	---	---	evidence for prehistoric occupation/ many surface artifacts; corrected carbon dates range A.D. 1240-1385 obtained were between A.D. 1374 to 1630	Kawai Nui Slope Site 2031 TMK 4-3-13:38
50-80-11-3957	---	50-Oa-G6-32	cluster 2	site 2	site 2	9 dryland agricultural terraces, 20 mounds, small c-shaped structures, walls, a walled depression, remains of a historic structure; surface artifact recovered.	Kawai Nui Agricultural Complex 3957 TMK 4-2-13:38

State Site #	Mc Allister #	Bishop Museum Site #	Clark (1980a &b) #	Cordy (1977/ 1978) #	Ewart & Tuggle (1977) #	Site Description	Site name/ TMK
50-80-11-3958	---	50-Oa-G6-32	cluster 3	site 3	---	terrace, walls 38+ m. & 28+ m. long	Kukanono Terrace 3958 & Habitation Complex TMK 4-2-13:31 or 38
50-80-11-3959	---	50-Oa-G6-32	cluster 4	site 4	site 3	26 mounds, 19 dryland agricultural terraces, linear walls, one 53 m. long, a historic house foundation, a prehistoric basalt mirror found on surface & other prehistoric basalt artifacts, large boulder grindstone; historic artifacts, date ranges from AD 1362+ 70 to A.D. 1742 + 79	Miomio Agricultural & Habitation Complex TMK 4-02-13:38
50-80-11-3960	---	50-Oa-G6-32	cluster 5	site 5	---	a large *lo'i*, ca 40 x 30 m.; a stone and earthen platform, a stone-lined channel 10 m. long, stone mounds	Pohakupu Agricultural Cluster 3960 TMK 4-2-13:38
50-80-11-3961	---	50-Oa-G6-32	cluster 6	site 6	---	stone mounds, a stone-edged canal, terraces, retaining walls	Kukanono Cluster 3961 TMK 4-2-13:38

State Site #	Mc Allister #	Bishop Museum Site #	Clark (1980a &b) #	Cordy (1977/ 1978) #	Ewart & Tuggle (1977) #	Site Description	Site name/ TMK
50-80-11-3962	---	50-Oa-G6-34	cluster 8	---	site 5	3 historic buildings	Makalii Historic Site 3962 TMK 4-2-13:10
50-80-11-3963	---	50-Oa-G6-34	cluster 9	---	site 6	earthen mounds	Makalii Mounds 3963 TMK 4-2-13:10
50-80-11-3964	---	50-Oa-G6-36	---	---	sites 8, 9	recently abandoned houses	Kaelauli House site TMK 4-2-15:06
50-80-11-3965	---	50-Oa-G6-36	---	---	site 7	low stone terrace perpendicular to stone wall; abut at SE corner	Pohnkon Terrace 3965 TMK 4-2-13:10

State Site #	Mc Allister #	Bishop Museum Site #	Clark (1980a &b) #	Cordy (1977/ 1978) #	Ewart & Tuggle (1977) #	Site Description	Site name/ TMK
50-80-11-3739	---	50-Oa-G6-85	---	---	---	Kawachi (1988) did a field inspection and describes a large level terrace (30 by 15 m.), NW-SE with three levels of wall terracing. Suggests this is a *heiau* and may be Holomakani Heiau. Pantaleo and Cleghorn (1989) did a reconnaissance survey, found the same feature and describes it as a large, rock-faced terrace and an L-shaped terrace. Mentions this site as a possible *heiau*, but does not associate it with Holomakani.	Unnamed Heiau, possibly Holomakani TMK 4-2-14:2

IV. BACKGROUND RESEARCH SUMMARY AND PREDICTIVE MODEL

The historical and archaeological resources for the *Ahupua'a* of Kailua help reconstruct the land use and settlement pattern history of Kailua, from prehistoric times up until the present. From archaeological research we know that the margins of Kawai Nui Marsh and Maunawili Valley were the site of expanded agriculture by the 13th and 14th century A.D. This expansive agriculture is most likely the result of an expanded population, the descendants of original settlers from centuries earlier. That the area was productive is confirmed by oral traditions. Oral tradition also associate Kailua with numerous legendary rulers, implying that the area was important politically as well as agriculturally. The many *heiau* that dot the landscape further attest the productivity and political importance of Kailua. Settlement would have been dispersed, from the beach berm along the coast, up into Maunawili Valley. Agriculture would have been a combination of dryland, on the slopes and drier flat lands, and wetland along the margins of streams. The two fish ponds of Kaelepulu and Kawai Nui were reportedly famous for their productivity. Although we lack early historic population estimates from Kailua, it is reasonable that this productive area would have been well populated.

Western disease was responsible for drastic depopulation of the Hawaiian Islands in early historic times. The earliest accounts of Western visitors of Kailua document the depopulation appearance of the land and sickly native inhabitants of the region. Kailua's first census count, from the 1830s, of 760 individuals is apparently much reduced from precontact population figures–based on the number of recently abandoned agricultural terraces noted by visitors. This depopulation was a significant factor in the transformation of land use in Kailua, as abandoned land was transformed from traditional use to cash-crop production.

During the *Māhele*, Kailua's status as a highly desirable location is reaffirmed. Along with other Ko'olaupoko *Ahupua'a*, Kailua land is given to many chiefs. The current project area, as part of the *'ili* of 'Oneawa, was not awarded by the Land Commission in the *Māhele*. Records show that approximately 170 land claims were made for agricultural and residential land in Kailua however. Kula land, taro *lo'i*, and house lots, were all most commonly claimed. No claims were made within the current project area however.

Cattle grazing and rice growing became large scale commercial pursuits in Kailua following the *Māhele*. Abandoned taro lands were perfect for the expansion of rice, which was having its own boom period related to the 1876 Reciprocity Treaty with the United States. With the decline of rice farming in the early part of this century, truck farming became popular throughout much of Kailua. Again we have no specific reference to land use within the current project area during this time. As a somewhat peripheral area, where the sandy dune deposits meet Kawai Nui marsh sediments, it is possible that it was used for taro or rice agriculture, or even cattle grazing in the later periods. By the 1950s, the suburbanization of Kailua, which began as early as the 1920s, began to displace the truck farmers. This process continues into the present day and Kailua becomes the premier "bedroom community" for downtown Honolulu.

The current project area is located along a section of the northern, as well as the eastern margin of Kawai Nui Marsh. No traditional accounts or legends are ascribed to these sections of land. Although immediately outside the current project area, Kawai Nui Marsh itself has been described to have had traditional-Hawaiian significance. No early historical accounts mention land use in the vicinity of the current project area. Chamberlain's early historic account describes this portion of Kailua as low and flooded. The periodic flooding of this area continued through the

later historic period into the present day. The flooding undoubtedly occurred with the same frequency in the prehistoric era. It is unclear how this recurrent flooding would have affected land use during prehistoric and early historic times. As the site distribution map for the margins of Kawai Nui Marsh (Figure 7) shows, there is a paucity of sites along the northern and eastern margins of the marsh. This may simply be a reflection of the lack of archaeological investigation of these areas. It could also be an indication that these areas were not particularly suited for traditional Hawaiian land-use.

During the *Māhele*, the project area was not among any of the land awarded by the Land Commission within the *'ili* of 'Oneawa. There are LCAs claimed in the vicinity of the project area, but none within the property boundaries itself. Also, traditional land boundary maps (W.A. Wall 1899 Map of Kailua) indicate that there were several house sites in the area, none of which however were on the proposed area. The adjacent *'ili* of Keahupua'a nui was received in its entirety in the *Māhele* by Queen Kalama, as well as the fish pond of Kawai Nui itself (shown on maps as part of portion 12 of LCA 4452).

With the turn of the century the Kailua sand accretion berm was subjected to large scale modifications. The first was associated with the installation of a copra business around 1910. The associated grading for the coconut tree farm likely moved large amounts of sand and greatly affected the former natural sand dune deposits. The second was the subdivision and construction of the Coconut Grove housing developments, with its associated drainage management projects. Both of these land modifications may have affected the current project area.

The modern construction of Kawai Nui drainage features, the 'Oneawa Canal and the Kaelepulu "inner" Canal, may have also had a distinct impact on the land form of the project area. Recent archaeological investigations in the nearby Kawai Nui Neighborhood Park (Kikiloi McDermott and Hammatt 2000), immediately north of the current project area, documented thick layers of fill that artificially raised the formerly low-lying, marshy land surface. The excavation and dredging associated with the installation of these large drainage features may have resulted in the deposition of sediments within the current project area. A brief inspection of the Mōkapu Parcel did indicate that large fill deposits make up the current land surface.

Based on a brief field inspection of the project area, there are sandy deposits within the current project area–at least in the Coconut Grove parcel. Although these deposits are disturbed, it is possible they contain traditional Hawaiian cultural deposits similar to those documented at the nearby H. A. R. C. site (Athens 1983b).

Previous palaeoenvironmental research in the vicinity of the current project area (Athens and Ward 1991; Hammatt *et al.* 1990) has demonstrated the great potential for this type of research within Kawai Nui Marsh. The current project area may very well contain a sedimentary record that will increase our understanding of the environmental impacts of traditional Hawaiian land use.

V. FIELD INSPECTION RESULTS

A. The Mōkapu Parcel

According to soil survey data (Foote *et al.* 1972) the Mōkapu parcel consists of a Jaucas sand substrate. There is little or no indication of Jaucas sands in the current land surface in this portion of the project area. The entire approximately 4-acre area has been heavily modified by mechanized earth moving, deposition, and grading associated with the Kawai Nui Canal excavation, the adjacent construction of Mōkapu Boulevard, and, quite possibly, the excavation the "saddle road" that connects Mōkapu Boulevard in Kailua with Kane'ohe Bay Drive in Kane'ohe. The current land surface is a terrigenous sandy loam that contains abundant construction remnants, such as construction gravels, concrete fragments, and asphalt. As was noted in the project area description, the current Mōkapu parcel land surface is littered with fill material from construction activity, the deposition of which appears to be ongoing. This includes large concrete and asphalt fragments, portions of large diameter concrete conduits, roofing materials and wooden crating, and truck loads of coral and terrigenous fill sediments, see Figures 4 and 9. The central portion of the parcel contains the most abundant construction material deposits (Figure 4).

The pedestrian inspection of the Mōkapu parcel located no surface historic properties. However, there were indications that potentially informative palaeoenvironmental information might be available from former marsh sediments buried by the recent fill deposits. In the southwest portion of the Mōkapu parcel is a drainage ditch feature, associated with the adjacent Kapa'a Quarry Road, that extends into the Kawai Nui Canal, see Figure 10. This drainage feature is cut down through the overlying fill sediments, to the water level in the Kawai Nui Canal, and exposes the original marsh sediments that predated the construction related deposition. Based on the depth of these sediments below the current land surface, it is likely that fill sediments, at least in this portion of the Mōkapu parcel, are over 2 meters thick. The fill sediments in other areas of the parcel may be twice as thick, judging by the topography of the current land surface. These exposed marshy sediments consist of low energy alluvial deposits, fine sands and silty clays. Large fragments of coral heads are exposed, which most likely date to the Holocene period when Kawai Nui was a marine embayment. These coral heads have undoubtedly been disturbed by the excavation of the drainage feature itself and it is unclear how they relate stratigraphically to the apparently overlying fine-grained alluvial sediments.

The stratigraphic exposures of this drainage feature would provide a good location for further investigation of the exposed marsh sediments. With additional excavation, assisted by a backhoe, fresh exposures could be used for sampling, including sediment coring. Detailed investigation of these sediments, including pollen analysis, radiocarbon dating, and diatom analysis, could be informative regarding human induced landscape change following human colonization of the Windward side of O'ahu. Such information would expand upon the results of other palaeoenvironmental investigations in Kawai Nui Marsh, such as Athens and Ward (1991) and Hammatt *et al.* (1990).

B. The Coconut Grove Parcel

Soil survey maps label the Coconut Grove parcel as primarily Mokulnia Clay Loam with some Jaucas Sand along the makai margins of the parcel (Foote *et al.* 1972). Mokulcia Clay loam consists of calcareous sand enriched with terrigenous sediments. This is appropriate for the

Figure 9 Shot Southeast of a Typical Coral-Dredge Type Fill Deposit Within the Mōkapu Parcel

Figure 10 Shot Southeast of the Excavated Drainage Feature Within the Mōkapu Parcel. Original Marsh Sediments Are Exposed at the Base of the Excavation

interior margin of the Kailua sand accretion barrier with its exposure to the alluvial terrigenous sediments of the Kawai Nui Marsh environment. During the field inspection of the Coconut Grove parcel, the vast majority of the parcel's land surface consisted of disturbed calcareous sand deposits, see Figure 11. There was evidence that dumping of construction materials and construction related sediments has been taking place within the parcel for some time. The land surface contains asphalt and concrete fragments and piles of bulldozer pushed and/or dump truck deposited sediments.

Based on surface observations this sandy land surface, although disturbed, appears to be natural. It is, however, important to consider the historic land alterations to the Kailua sand accretion barrier. As was noted in the cultural history section, above, in the early 1900s as part of a copra producing development, large portions of the Coconut Grove area that were once natural sand dunes were bull-dozed level in preparation for the planting of the Coconut Grove for which the area became known. It is unclear exactly what effect this grading had on the current project area, but it is not inconceivable that it resulted in the deposition of a substantial amount of sand. Later in the century, in the 1950s and 1960s, the Coconut Grove area was developed for residential use. The preparation of the subdivision areas may also have affected the project area through associated grading and depositon of sediment. So, although the predominant sandy deposits in the Coconut Grove parcel appear to be historically disturbed natural sand deposits, it is possible that they are the result of historic mechanized sediment transport. Whether the sand deposits are *in situ* or not will need to be established by subsurface testing associated with the archaeological inventory survey of the parcel.

If the sand deposits are natural, it is possible that they contain cultural deposits related to traditional Hawaiian land use. These subsurface deposits could consist of culturally-enriched, former sandy A-horizons that contain the artifacts, midden, and subfeatures, such as post holes and earth ovens, related to traditional Hawaiian habitation. *In situ* human burials are also possible. The work of Athens' (1983b) at the H.A.R.C. site off of Kihipai Street, also on the interior portion of the Kailua accretion sand berm, has demonstrated the potential for relatively intact cultural deposits despite the area's residential development.

If the sand has been deposited historically, it may contain the disturbed remnants of cultural deposits. For example, isolated finds of traditional Hawaiian artifacts from disturbed cultural layers or disarticulated human remains from burials that were disturbed during the large- scale grading of the Kailua accretion berm.

The Coconut Grove parcel is subdivided into four parts by the drainage features that cut through the parcel--see Figure 1. These drainage features connect storm drains from the Coconut Grove subdivision to the "inner" 'Oneawa drainage canal. The northernmost section is adjacent to the Kawai Nui Neighborhood Park. The northwestern portion of this section consists of a marshy, wet-land type ground surface and vegetation, see Figures 12 and 13. This may or may not be a natural wet-land area. This area could have been created inadvertently as part of the excavation associated with the "inner" 'Oneawa drainage canal and the associated drainage channels that connect to the Coconut grove storm drains.

If the area is an undisturbed portion of the Kawai Nui Marsh wetland, then it has potential for palaeoenvironmental coring. Aerial photographs of the excavation of the "inner" 'Oneawa drainage canal, taken by the Army Corp of Engineers, and reproduced in Kelly and Nakamura (1981), may help determine if this is indeed a natural wet-land area. The remainder of

Figure 11 Shot South of the Disturbed Sandy Land Surface (Foreground) and Vegetation of the Coconut Grove Parcel

Figure 12 Shot East from the Kawai Nui Dike Road, Across the 'Oneawa Canal, Showing the Wet-Land Land Surface in the Northern Portion of the Coconut Grove Parcel

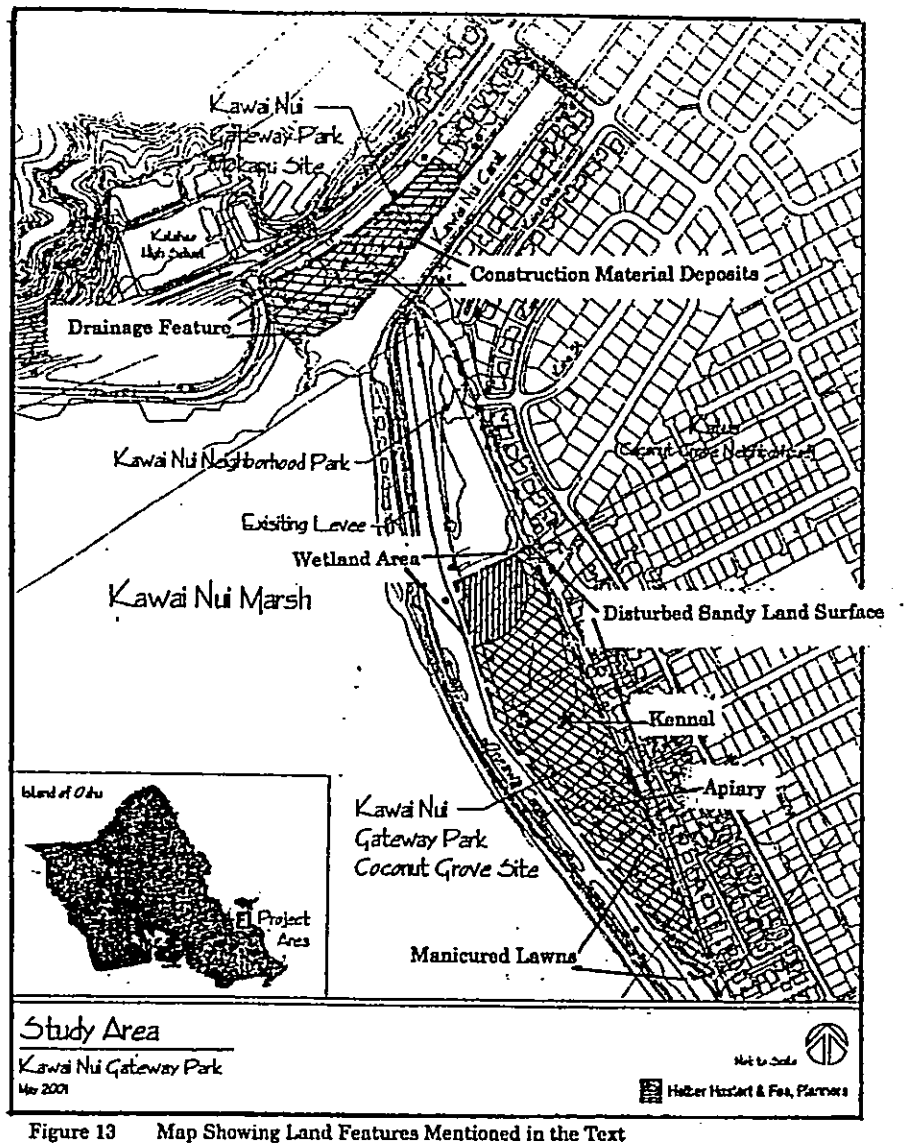

Figure 13 Map Showing Land Features Mentioned in the Text

this northernmost section consists of the disturbed sand deposits described above.

Continuing to the south, the next section of the Coconut Grove parcel consist entirely of the disturbed sand deposits described above. The central portion of this section has been cleared of over grown vegetation and a large kennel or pen has been constructed.

The next section to the south also consists entirely of the disturbed sand deposits, see Figure 11. Some local resident has set up an apiary in the overgrown vegetation in the northern portion of the section. During the walk through, four or five white boxes were noted. This is clearly a danger to the uninformed. The southern portion of this section has largely been developed into manicured lawns. One local resident has created a broad "fairway" complete with golf flags and holes, see Figure 6.

The southernmost section has been completely developed by local residents into manicured lawns, see Figure 6. Barbeques and children's play equipment have been set up. The land surface in this portion of the Coconut Grove parcel is sandy, with some exposures of a reddish, most likely terrigenous, fill sediment.

VI. CONCLUSIONS AND RECOMMENDATIONS

The proposed Kawai Nui Gateway Park is located on the margins of present-day Kailua Town. The area has clearly been affected by Kailua's development over the last century. The large- scale grading associated with the leveling of the original dune surfaces and the construction of the large Kawai Nui drainage features were most likely of particular impact to the current project area. Despite the potential disturbance that took place in the project area and its vicinity, the results of this study indicate there is the potential for significant historic properties within the parcels of the proposed Kawai Nui Gateway Park.

Based on the results of this assessment, and in consultation with SHPD archaeologists, it is recommended that the archaeological inventory survey of the project area take place prior to its development. This inventory should focus primarily on the calcareous sand deposits within the Coconut Grove parcel, see Figure 13. The pedestrian inspection of this area found no surface historic properties, and based on land surface conditions, it is unlikely that any exist. The sandy land surface has apparently been disturbed by modern fill deposition and grading. These sandy deposits, although apparently disturbed, may well contain subsurface remains of traditional Hawaiian land use. These deposits could include human burials and other subfeatures, such as hearths, stone alignments, and midden and artifact concentrations, related to Hawaiian habitation.

The sampling of this rather large area of sandy deposits, approximately the southern 10-12 acres of the Coconut Grove parcel (see Figure 13), would be best accomplished through a program of backhoe trenches. Backhoe trenches provide a relatively cost efficient means of sampling large geographic areas for subsurface cultural deposits. A program of backhoe trenches would better establish the extent of later historic and modern disturbance within this portion of the project area. It would also help delineate any portions of the Coconut Grove parcel that might require more controlled hand excavations, for example in areas that are shown to have subsurface historic properties.

If traditional Hawaiian cultural deposits do exist within these sandy deposits, their careful documentation is important. With the exception of the H. A. R. C. site (Athens 1983b) on Kihipai street, there has been little documentation of traditional Hawaiian cultural deposits, other than burials, within the Kailua sand accretion berm. Such deposits could potentially correspond to early Polynesian settlement. Whether "early" or not, such deposits would help better understand traditional Hawaiian settlement patterns in Kailua.

The Kawai Nui Gateway Park parcels also potentially contain palaeoenvironmentally informative sedimentary records. The inventory survey should also focus on the investigation and documentation of these deposits. The sediment coring and related analytic results of Athens and Ward (1991) and Hammatt *et al.* (1990) have demonstrated the potential for this type of work within the adjacent Kawai Nui Marsh. These sediments may be buried under modern fill deposits.

This assessment identified two areas that are worthy of further research during the archaeological inventory survey. The first area is the modern drainage feature at the southwestern end of the Mōkapu parcel, see Figures 10 and 13. Here the underlying marsh sediments have been exposed beneath the modern fill deposits. With the help of a backhoe, undisturbed sediments could be exposed. This location may be suitable for sediment coring.

The second area of palaeoenvironmental interest within the project area is located at the northern end of the Coconut Grove parcel, see Figures 12 and 13. This wet-land area is clearly discernable by its reed-type vegetation and low-lying marshy land surface. This area may also be well suited for sediment coring. Before coring is undertaken in this area, however, available aerial photographs from the construction of the ʻOneawa "Inner" drainage canal should be inspected (copies available of the Army Corp of Engineer originals in Kelly and Nakamura 1981). It may be that this wet-land area is not natural, but the result of modern excavation associated with the inner canal construction. If this wet-land area is the result of modern disturbance, it is much less likely to contain the undisturbed sedimentary record that is sought after.

It is recommended that the specific scope of work for the inventory survey be worked out in consultation with SHPD. Based on inventory survey results, it is possible that additional historic preservation work will be needed. Possibilities include data recovery work–for example if extensive subsurface archaeological deposits are located within the project area– or a burial treatment plan–if human burials are located–or a preservation plan–to detail how significant historic properties will be safeguarded during the development and use of the proposed park. Of course, based on this assessment it is difficult to know what, if any, additional historic preservation work will be needed beyond the inventory survey.

It is unlikely that surficial historic properties are located in the project area. Accordingly, there is less potential for public-interpretive signage and displays. If significant subsurface archaeological and palaeoenvironmental deposits are located during the archaeological inventory survey it is possible that these findings could be incorporated into an interpretive program. It is also possible that public interpretation could focus on the project area's general context within the *Ahupuaʻa* of Kailua and along the margins of Kawai Nui Marsh.

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Appendix D

U.S. Coast Guard Correspondence

U.S. Department of Transportation
United States Coast Guard

Commander
Fourteenth Coast Guard

300 Ala Moana Blvd
Honolulu, HI 96850-4982
Staff Symbol: (oan)
Phone: (808) 541-2319
FAX: (808) 541-2309

16590
15 May, 2002

Helber Hastert & Fee, Planners Inc.
Attn: Faith R. Caplan, AICP
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Subj: KAWAI NUI GATEWAY PARK PEDESTRIAN BRIDGES

Dear Ms. Caplan:

Thank you involving us in your environmental assessment of the Kawai Nui Gateway Park project. As you know, the Kawai Nui Canal (Oneawa Canal) is considered to be a navigable waterway of the United States but meets the criteria for advance approval of bridges as set forth in the following paragraph.

> Title 33, Code of Federal Regulations, section 115.70, as amended, gives the advance approval of the Commandant, U.S. Coast Guard to the location and plans of bridges to be constructed across navigable waterways or waterways navigable-in-law but not actually navigated other than by logs, log rafts, rowboats, canoes, and small motorboats. In such cases, the clearances provided for high water stages will be considered adequate to meet the reasonable needs of navigation.

In view of the above, a bridge permit will not be required and the Coast Guard offers no objection to construction of the proposed bridges. Additionally, Coast Guard bridge lighting requirements are hereby waived for any bridges constructed, and we do not need to be notified upon commencement or completion of construction. However, please ensure that your environmental assessment gives full consideration to the applicable laws and regulations in Enclosure (1). If you have any further questions on this matter please contact my bridge administrator, LT Mike McBrady, at the above number or by email at mtmcbrady@d14.uscg.mil.

Sincerely,

M. C. COSENZA
Commander, U. S. Coast Guard
Chief, Aids to Navigation Branch
By direction of the District Commander

Encl: (1) Categorical Exclusion Checklist
Copy: U.S. Army Corps of Engineers, Honolulu District, Permit Branch

CATEGORICAL EXCLUSION CHECKLIST FOR ADVANCE APPROVAL BRIDGE PROJECTS

Categorically excluded bridge projects are subject to the following orders, regulations and laws:

a. Section 303 (formerly 4(f)) of the Department of Transportation Act (P.L. 89-670).

b. Executive Order 11990 – Protection of Wetlands.

c. Executive Order 11988 – Floodplain Management.

d. Section 106 of the National Historic Preservation Act (P.L. 89-665) and Executive Order 11593.

e. Section 401 of the Federal Water Pollution Control Act, as amended (P.L. 92-500).

f. Fish and Wildlife Coordination Act (P.L. 85-624).

g. Endangered Species Act (P.L. 93-205).

h. Coastal Zone Management Act (P.L. 92-583).

i. Section 309 of the Clean Air Act (P.L. 90-148)

j. Noise Control Act (P.L. 92-574)

k. Wild and Scenic Rivers Act of 1968 (P.L. 90-532)

l. Prime and Unique Farmlands (Council on Environmental Quality Policy dated 16 January 1980).

m. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646).

n. Magnuson-Stevens Fishery Conservation and Management Act Provisions

Appendix E

Draft EA Correspondence

Federal

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

REPLY TO ATTENTION OF

Regulatory Branch

September 10, 2002

Ms. Faith Caplan
Helber Hastert & Fee
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Ms. Caplan:

This letter responds to your request for a determination of Department of the Army (DA) permit requirements for the Kawai Nui Gateway Park, dated September 5, 2002. Based on the information you provided in the form of the draft Environmental Assessment (undated) I have determined that, as a minimum, a DA permit will be required for the "hard edge" to be constructed along the water's edge. This portion of the project can be authorized by Nationwide Permit Number 13, Bank Stabilization.

If the proposed park area is determined to be a wetland, or if there will be additional discharges of dredged or fill material into waters of the United States other DA permits may be required.

If you have any questions concerning this determination, please contact William Lennan of my staff at (808) 438-6986 or FAX (808) 438-4060, and reference File No. 200200531.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. George Young, PE, Chief
Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Ft. Shafter, Hawaii 96858-5440

Dear Mr. Young:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated September 10, 2002, regarding the subject document and project. Based on a subsequent conversation with Mr. William Lennan of your office, we acknowledge the following Nationwide Permit coverages are likely to be required per CFR 33, Part 330:

- Number 13, Bank Stabilization for the hardening of shoreline for the boat launch area of the Mokapu Site. The bank stabilization will be less than 500 feet in length
- Number 27, Stream and Welland Restoration Activities for the wetland enhancement at Coconut Grove Site.
- Number 42, Recreational Facilities for the pathways and pedestrian bridges.

A Section 401 Water Quality Certification will be obtained through the State of Hawaii Department of Health in conjunction with the federal permit(s) coverages.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

State

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENT QUALITY CONTROL
[illegible]
TELEPHONE [illegible]
FACSIMILE [illegible]

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FACILITIES DESIGN & ENG.
DEPT OF DESIGN & CONST
CITY OF HONOLULU

June 24, 2002

Rae Loui, Director
Department of Design & Construction
650 South King Street
Honolulu, Hawaii 96813

Attention: ~~Gregory Sue~~ Rae Loui

Dear Ms. Loui:

Subject: Draft Environmental Assessment (EA) for Kawai Nui Gateway Park

We have the following comments to offer:

Paving: Hawaii Revised Statutes 103D-407 requires the use of recycled glass in paving materials whenever possible. For the text of this section of HRS contact our office for a paper copy or go to our website at http://www.state.hi.us/health/oeqc/guidance/index.html.

Contacts: Document all contacts in the final EA, including those made during the pre-consultation phase. Enclose copies of any correspondence with state or county agencies, especially the State Historic Preservation Division of DLNR.

Significance criteria. In section 7.3 of the final EA include a synopsis of your reasons, according to the significance criteria listed in HAR 11-200-12, that will support your forthcoming determination, either Finding of No Significant Impact (FONSI) or EIS preparation notice.

Cumulative impacts.

The EIS law requires discussion and analysis of cumulative impacts on all geographically-related projects. HAR §§11-200-5 states "the agency shall assess at the earliest practicable time the significance of potential impacts of its actions, including the overall, cumulative impact in light of related actions in the region and further actions contemplated" and §§11-200-2 clarifies the role of the assessor by referring to the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions."

The draft EA refers to the 1994 Master Plan. Our records show the *Kawai Nui Education Center* (1998) is still a pending EA. The *Kawai Nui Marsh Management Plan* EA, submitted by

DLNR, and the *Kawai Nui Community Park Parking Lot & Landscape Improvements* EA, submitted by the Department of Design & Construction, were both finalized in 2000. In addition to these projects, *Kawai Nui Marsh Pathway* draft EA was recently published in the June 8th, 2002, *Environmental Notice*.

In the final EA please provide such an analysis. Factors should include traffic, noise, air quality, water resources, drainage and flora and fauna.

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,

Geri Salmonson

GENEVIEVE SALMONSON
Director

c: David Curry, Helber Hastert & Fee

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

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

Dear Ms. Salmonson:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated June 24, 2002 regarding the subject document and project. Our responses to your four concerns are noted in the following table:

Subject	DEA Chapter	Comment	Response	Action
paving materials	not addressed	Use recycled glass in paving materials.	concur	Final EA (Chapter 3.3.1.3) specifies use of recycled glass in paving materials in accordance with HRS 103D-407
contacts	8.0	Document consultations.	concur	Comments on the DEA are included as Appendix E of the Final EA.
significance criteria	7.3	Specifically address significance criteria when stating the determination.	concur	The FONSI determination is supported by failure to meet the significance criteria and the Final EA addresses each criteria in Chapter 7.3.
cumulative impacts	5.14	Address cumulative impacts relative to four projects that have been identified in the Kawai Nui Marsh vicinity.	concur	Chapter 5.14 describes each of the four projects in the vicinity and assesses potential cumulative impacts on various resources.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

FD-PLANNING

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FISHERIES AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT
WATER RESOURCE MANAGEMENT

02 JUN 28 PM 2:47

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

RECEIVED
July 1
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June 24, 2002

Ms. Rae M. Loui, P.E.
Director, Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Ms. Loui:

Subject: **Draft Environmental Assessment (DEA), Chapter 25, ROH Projects Within the Special Management Area for Kawai Nui Gateway Park, Kailua, Oahu, Hawaii TMK: 4-4-34:25, 4-2-17: 20 and 4-2-16: 01.**

We have reviewed the subject DEA for impacts the project may have on native flora and fauna that may affect DLNR, Division of Forestry and Wildlife programs. The attached brochure should explain our concerns regarding exterior or overhead parking and/or park walkway light problems for young Newell Shearwaters. Since young Shearwaters have a natural attraction to bright lights, they oftentimes become confused by the blinding lights at night and may fly into utility wires and poles, trees, or buildings. Exterior lights should be of "low sodium light fixtures," and they shall be shielded and directed downward to the ground. This will prevent further bird strikes that could be fatal to this species. Thank you for the opportunity to comment on your project.

Very truly yours,

Paul J Conry
for Michael G. Buck
Administrator

Attachment

C: DOFAW, Oahu Branch

7/1
10

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Michael Buck, Administrator
Division of Forestry and Wildlife
State of Hawaii, Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, HI 96813

Dear Mr. Buck:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated June 24, 2002, regarding the subject document and project.

Your comment regarding the potential negative impact of upwardly or laterally-directed lighting on young Newell Shearwaters is an important point. The Final Environmental Assessment (EA) describes the often fatal attractive nuisance of exterior night lighting on young shearwaters, based on the information you provided, and proposes the use of low sodium shielded light fixtures to mitigate the impact of the project's exterior comfort station lighting, per your suggestion. The EA text is modified accordingly in Sections 3.3.19, 5.3.1 and 5.7.2.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

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BENJAMIN J. CAYETANO
GOVERNOR

ANTHONY J.H. CHING
EXECUTIVE OFFICER

DEPT OF DESIGN & CONSTR
CITY OF HONOLULU
02 JUL -3 AM 8:44

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
LAND USE COMMISSION
P.O. Box 2359
Honolulu, HI 96804-2359
Telephone: 808-587-3822
Fax: 808-587-3827

July 1, 2002

Ms. Rae M. Loui, P.E., Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Ms. Loui:

Subject: Draft Environmental Assessment (DEA), Chapter 25, ROH
Projects Within the Special Management Area (SMA)
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii
TMK No: 4-4-34: 25; 4-2-17: 20; 4-2-16: 1

We have reviewed the subject DEA transmitted by your letter dated June 21, 2002, and confirm that the project sites, as generally represented on Figure 11, are designated within the boundaries of the State Land Use Urban and Conservation Districts. We would like to point out that on page 6-1, the Agricultural District is incorrectly referenced as the "Agriculture" District.

We have no further comments to offer at this time. Thank you for the opportunity to comment on the subject DEA. Please feel free to contact Bert Saruwatari of my office at 587-3822, should you require clarification or any further assistance.

Sincerely,

ANTHONY J. H. CHING
Executive Officer

c: Office of Environmental Quality Control

10/16

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Anthony Ching, Executive Officer
Land Use Commission
Department of Business, Economic Development & Tourism
P.O. Box 2359
Honolulu, HI 96840-2359

Dear Mr. Ching:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 1, 2002, regarding the subject document and project.

We understand that you concur with the land use designations as described in the Draft Environmental Assessment (EA). The typographic error you identified on page 6-1 has been corrected in the Final EA.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 621
HONOLULU, HAWAII 96809

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
STATE PARKS
WATER RESOURCE MANAGEMENT

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FACILITIES DESIGN & ENG.
DEPT. OF DESIGN & CONST
C & C OF HONOLULU

July 5, 2002

MEMORANDUM

To: Dierdre Mamiya
Land Administrator

Attn: Nick Vaccaro

From: Steve Lau
Land Agent

Subject: Draft Environmental Assessment,
Kawai Nui Gateway Park
C&C of Honolulu, Dept. of Design and Construction
TMKs:4-4-034:25, 4-2-017:20 and 4-2-016:01.

We have no comment on the proposed project. However, please be advised that Tax Map Key:4-4-034:25 and 4-2-017:20 were lands acquired by the State by Condemnation for the Kawainui Marsh Resource Management Plan.

The above two(2) properties were acquired by DLNR and would require Land Board approval for the set aside to the City and County, Department of Design and Construction.

DDC Fax:5234767 Aug 7 2002 14:08 P.11

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Steve Lau, Land Agent
Land Division
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Lau:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 5, 2002, regarding the subject document and project. The letter was forwarded to us by Ms. Mamiya.

We understand that parcels 4-4-34:25 and 4-2-17:20 of the Moikapu Site were acquired by the State by condemnation for the Kawai Nui Resource Management Plan and that Land Board approval is required for conveying park management responsibility to the County. Language to this effect is included in the Final Environmental Assessment (Chapter 7.1).

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

BENJAMIN J. CAYETANO
GOVERNOR

PATRICIA HAMAMOTO
SUPERINTENDENT

OFFICE OF THE SUPERINTENDENT

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

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cc: Eric

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FACILITIES DESIGN & ENG.
DEPT. OF DESIGN & CONST
C & C OF HONOLULU

July 8, 2002

Ms. Rae M. Loui, P.E., Director
Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawai'i 96813

Dear Ms. Loui:

Subject: Kawai Nui Gateway Park, Kailua, Oahu
TMK: 4-4-34:25, 4-2-17:20, 4-2-16:01

The Department of Education (DOE) has reviewed the Draft Environmental Assessment (DEA) for a 12.7-acre park on two different sites in the northeast corner of the Kawai Nui Marsh. DOE's concerns are focused on the 5.1-acre Mokapu site which is directly across Mokapu Boulevard from Kalaheo High School.

The DEA lists repeated concerns of community groups that the Mokapu site could attract Kalaheo students loitering during the day. Mitigations listed in the DEA are limited to the park being closed in the evenings, the posting of county park guidelines, and visibility of the comfort station for police patrols along Mokapu Boulevard. DOE encourages more consultation with Kalaheo's administrators to determine if there are additional mitigations that can be identified.

DOE is also concerned about the unresolved issue of traffic at the intersection of Mokapu Boulevard and Kapaa Quarry Road where westbound park users might make illegal U-turns on to Mokapu's eastbound lane which is the park's only entrance. The DEA described traffic in both directions along Mokapu as traveling at high speeds, often above speed limits. It did not mention that the Mokapu-Quarry intersection is also the main entrance for Kalaheo High School. Any discussion of changing the configuration of traffic in the intersection should include representatives from Kalaheo High School.

DOE appreciates the opportunity to review the plans for the Kawai Nui Gateway Park.

Should you have any questions or concerns, please call Ms. Heidi Meeker of the Facilities and Support Services Branch at 733-4862.

Very truly yours,

Patricia Hamamoto
Superintendent

PH:hy

cc: A. Suga, OBS
Principal, Kalaheo High School

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Ms. Patricia Hamamoto, Superintendent
Department of Education
P.O. Box 2360
Honolulu, HI 96804

Dear Ms. Hamamoto:

Draft Environmental Assessment (EA)
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 8, 2002, regarding the subject document and project.

The potential for inappropriate use of the park by Kalaheo High School students was identified in the Draft Environmental Assessment (EA). Per your suggestion, we spoke with Mr. Pete Smith, Vice Principal of the school regarding the issue and possible mitigation measures. He concurred that the park may be attractive to students before school and during school hours. One suggestion to mitigate impacts is for the gate to the park to be opened after 8:00 am (beginning of the school day) Monday through Friday. Canoe practices will be limited to the afternoons and should not be impacted. A second suggestion is for increased police patrols along Mokapu Boulevard when the park first opens as a deterrent. A third suggestion was for the community to organize a watch group as they have at other Kailua Beach parks. A fourth suggestion was to encourage student government participation in future discussions of the park and Marsh plans. A fifth suggestion is to encourage education of the students about the value of the Marsh and the sensitivity of waterbirds to noise. All of these proposed mitigation measures will be included in the Final EA

The Draft EA failed to mention that the Mokapu Boulevard-Kapaa Quarry Intersection is the main entrance to Kalaheo High School, and this information is included in the Final EA (Chapter 5.9). The project should have no impact on access to and from the high school.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal
cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

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STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 621
HONOLULU, HAWAII 96809

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DEPT OF DESIGN & CONSTRUCTION
CITY & COUNTY OF HONOLULU

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
STATE PARKS
WATER RESOURCE MANAGEMENT

MEMORANDUM

To: Dierdre S. Mamiya, Administrator
Land Division

From: Traver Carroll
Planning Branch

SUBJECT: Kawai Nui Gateway Parks at Mokapu & Coconut Grove, Draft Environmental Assessment (DEA)

We have reviewed the DEA for development of two Gateway Parks bordering Kawai Nui Marsh at Kailua, Oahu. The DEA appears to be quite thorough. Because the entire area of one of the parks and approximately half of the other is located in the Conservation District, a Conservation District Use Application (CDUA) will be required. We look forward to reviewing the CDUA.

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Aug 7 2002 14:08 P.12 Fax:5234767 DDC

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Traver Carroll
Planning Branch
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Carroll:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 9, 2002, regarding the subject document and project. The letter was forwarded to us by Ms. Mamiya.

We concur that a Conservation District Use Application will be required and the Final Environmental Assessment states this in Chapter 7.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

FD-Planning 5

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCES MANAGEMENT

DEPUTIES
ERIC T. HIRANO
LINNEL NISHIOKA

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

02 JUL 15 AM 10:42 STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

RECEIVED
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FACILITIES DESIGN & ENG.
DEPT OF DESIGN & CONST
CITY OF HONOLULU

July 11, 2002

Rae M. Loui, P. E., Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

LOG NO: 30243
DOC NO: 0207EJ10

Dear Ms. Loui:

SUBJECT: Chapter 6E-8 Historic Preservation Review – Draft Environmental Assessment (DEA) for the Kawai Nui Gateway Park, Kailua, O`ahu
Kailua, Ko`olaupoko, O`ahu
TMK: (1) 4-4-034:025, 4-2-017:020, 4-2-016:001

Thank you for the opportunity to comment on the DEA for the proposed Kawainui Gateway Park. Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the project areas. We received the DEA for comment from your office on June 24, 2002.

The proposed Kawai Nui Marsh Gateway Park project comprises two non-contiguous parcels: the Mokapu Site, located north of Oneawa Canal, and the Coconut Grove site, located to the south of Kawai Nui Community Park. Proposed for the Mokapu Site are a parking lot, comfort station, passive recreational space, an education shelter, a small boat access (canoe launch), and a pathway and pedestrian bridge connecting the Mokapu Site to the eastern bank of Oneawa Canal. Besides fence construction and landscaping activities, ground disturbance also includes sewer lines, water lines irrigation lines and electrical lines. Proposed for the Coconut Grove site are a "nature walk" experience including gravel pathways, an observation deck, wetland enhancement, and vegetation clearing and landscaping. No utilities or vehicular access are planned for these parcels. The gravel pathway will be constructed of compacted gravel on a sub-grade landscape fabric. Two board walk segments will be constructed of treated recycled lumber, or of concrete posts with recycled plastic lumber planking and handrails. Two footbridges will be constructed as a connection between the drainage channels, and a nature deck will be constructed at the mouth of drainage channel #2 along Kaelepulu Channel.

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An archaeological assessment was conducted for the proposed Gateway Park (*Archaeological Assessment of the Proposed Kawai Nui Gateway Park, Ahupua`a of Kailua, District of Ko`olaupoko, Island of O`ahu*, CSH) in July 2001. No surface historic sites were found at either parcel. The assessment found that the Mokapu Site consisted of disturbed Jaucus sand and soil deposits. The parcel has been extensively disturbed and the area has been used as a construction material dump site with debr at least 2 meters thick covering the surface. The DEA states that the project will on impact the upper 3 feet of fill material and that the underlying marsh sediments will not be disturbed. We agree that if ground disturbance in the Mokapu Site area does not exceed the depth of fill material, there will be "no effect" on significant historic sites.

We do not agree, however, that paleoenvironmental deposits will not be impacted by improvements to this site. The archaeological assessment (Appendix C of the subject DEA) recommends archaeological investigations at the two areas that have the potential to contain paleoenvironmental deposits, (one at the modern drainage at the southwestern end of the Mokapu Site parcel and the other at the northern end of th Coconut Grove parcel). Judging from the description of proposed construction give the subject DEA, we are not certain about the depths of impact in these specific are Thus, we request site-specific information on the actions proposed for these two are with potential for paleoenvironmental deposits. (Note: Paleoenvironmental deposits can contain pollen and charcoal evidence identifying when initial settlement of an ar begins, as well as identifying later human impacts to the landscape. Such deposits, thus, can be of considerable importance to historic preservation concerns.)

The assessment found that the majority of the surface at the Coconut Grove site consisted of disturbed calcareous sand deposits which appear to be natural although previously disturbed. According to the assessment, this sand deposit may still conta remains of traditional Hawaiian land use including human burials and other subsurfa features related to Hawaiian habitation. We agree with the assessment's recommendations that an archaeological inventory survey with subsurface testing for the Coconut Grove Site in order to identify if historic sites are present and determi the effect the proposed park would have on such sites.

In general, we concur with the findings presented and recommendations in the archaeological assessment (Appendix C). We recommend that the subject DEA be revised to provide an accurate reflection of the information contained in the archaeological assessment.

With regard to the subject SMA permit application, we recommend that the following condition be attached to the subject permit, if approved:

(1) Prior to carrying out any ground disturbance, the applicant shall ensure that a qualified archaeologist conducts an archaeological inventory survey with subsurface testing within the Coconut Grove Site. A report of the findings should be provided to our office for review and approval. If significant historic sites are found, and if they will be adversely affected by the proposed park development, then an acceptable mitigation plan will need to be prepared and executed prior to any ground disturbance.

(2) If more detailed information (e.g., site plans) indicates that the two areas with potential for containing paleoenvironmental deposits will be adversely affected by the planned park development, then the applicant shall ensure that these areas are appropriately investigated during any archaeological inventory survey work, and that the findings are included in a report of findings.

If these two conditions are attached to the subject permit, if approved, then we believe that the proposed park development will have "no adverse effect" on significant historic sites.

Should you have any questions, please feel free to call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027.

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

EJ:jk

c: Nick Vaccaro, DLNR, Land Division (L-3666)

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Don Hibbard, Administrator
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Room 555
Kapolei, Hawaii 96707

Dear Mr. Hibbard:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 11, 2002, regarding the subject document and project. We acknowledge your concurrence that if ground disturbance at the Mokapu Site does not exceed the depth of fill, then there will be "no effect " on historic sites.

We concur that based on the Archaeological Survey referenced in the Environmental Assessment (EA), there are two potential areas of paleoenvironemntal deposits. One area is located at the westernmost edge of the Mokapu Site along a modern drainage ditch; and the other is at the northwestern portion of the Coconut Grove Site. The Mokapu Site improvements do not extend as far west as the drainage ditch; and no impact to the paleoenvironmental deposits in the vicinity are anticipated. The Final EA identifies the potential paleoenvirionemental deposit area of the Mokapu Site on Figure 4, and shows there is no ground disturbance planned for that area.

The area of paleoenvironmental deposits at the Coconut Grove Site are likely to coincide with the proposed wetland enhancement area. Figure 9 of the Final EA identifies this general area. We concur that further archaeological surveys should be conducted prior to construction activities at the Coconut Grove Site and your two recommendations for SMA permit conditions are restated in the Final EA.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

BRIAN
DEPUTY DIRECTOR

LAWRENCE T. MIYAMOTO
DEPUTY DIRECTOR FOR
THE COMMISSION ON WATER
RESOURCE MANAGEMENT

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE
MANAGEMENT
CONSERVATION AND RESOURCES
ENFORCEMENT
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FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE
COMMISSION
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STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF STATE PARKS
P.O. BOX 621
HONOLULU, HAWAII 96809

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MEMORANDUM

To: Dierdre S. Mamiya, Administrator
Land Division

From: Daniel S. Quinn, State Parks Administrator

Subject: Draft Environmental Assessment (DEA) for the Department of Design and Construction, City and County of Honolulu, Proposed Kawai Nui Gateway Park; TMK: 4-2-16: 01 (Coconut Grove Site) o:· 4-2-16: 01, 4-2-17: 20, and 4-4-35: 25 (Mokapu Site) Kailua, Koolaupoko, Oahu

We have reviewed the DEA and have no objections to the proposed project provided it remains consistent with the Department's plans for the area as stated in the 1994 Kawai Nui Master Plan report.

Thank you for the opportunity to review and comment on the subject proposal. Should you have questions, please contact Lauren Tanaka at 7-0293.

DOC Fax:5234767 Aug 7 2002 14:06 P.04

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Daniel Quinn, Administrator
Division of State Parks
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Quinn:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your letter, dated July 11, 2002, regarding the subject document and project.

Your support of the project is appreciated. The project is consistent with the 1994 Kawai Nui Master Plan. Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

HOUSE OF REPRESENTATIVES

STATE OF HAWAII
STATE CAPITOL
HONOLULU, HAWAII 96813

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DEPT. OF PLANNING
& PERMITTING
CITY & COUNTY OF HONOLULU

Office of Representative David A. Pendleton

July 16, 2002

Mr. Randal K. Fujiki
Director, Department of Planning & Design
650 S. King St.
Honolulu, HI 96813

Dear Director Fujiki:

I am writing to you because my office has received concerns over the proposed Kawai Nui Gateway Park.

My constituents are concerned over the proposed plan that will open the marsh to community. They feel that there will be increased traffic into their communities. They are concerned that the park will not be secured after dark, and illegal activities could take place. They are also very concerned about the park's impact on the environment of the marsh and the habitat it supports.

These concerns I share with you as the Representative from Kailua and Kaneohe in hopes that you will see these concerns are addressed by the appropriate authorities.

With warmest personal regards,

Aloha,

DAVID A. PENDLETON
Representative
Kailua-Kaneohe

DAP:clg

Phone: (808) 586-9490; fax (808) 586-9496
House of Representatives: State Capitol; Room 442; Honolulu, HI 96813
Email: reppendleton@capitol.hawaii.gov *** Davidrepdleton@cs.com
http://www.capitol.hawaii.gov/site1/house/members/rep50.asp?press1=house&press2=member

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. David Pendleton, Representative
State of Hawaii
State Capitol, Room 442
Honolulu, HI 96813

Dear Mr. Pendleton:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 16, 2002, regarding the subject project.

We appreciate the fact that some of your constituents have safety and environmental concerns with respect to the development of a new park. We have addressed these issues to the extent possible in the Draft EA. Based on other comments received, these issues are elaborated upon in the Final EA.

Briefly, the park will be managed as other County parks with respect to security issues. Vehicle access will be restricted in the mornings and evenings and signs will post the allowed hours of use. Police patrols will have a clear view into the park from Mokapu Boulevard. Illegal activities will be handled as they are at other parks via a call to the Police Department. Currently the Mokapu site is overgrown with vegetation and could be harboring illegal activities that are not readily apparent. Landscaping the area may improve security and will improve the aesthetics of the community.

With respect to potential impacts to the marsh environment, the Kawai Nui Gateway Park is consistent with the Kawai Nui Master Plan of 1994 by the Department of Land and Natural Resources. The proposed passive park will enhance waterbird habitat and provide limited public access to the perimeter of the marsh to observe waterbird habitats. No long-term adverse impacts are anticipated from the use of the park. During construction, best management practices will be dictated by the project's building permit to protect the surface water from construction activities.

There will not be significant impacts on traffic in the surrounding neighborhoods. The Mokapu Site is accessed from Mokapu Boulevard, which is a primary corridor between Kailua and Kaneohe. The parking lot at the site is designed for 22 vehicles, which is not a significant load on existing Mokapu Boulevard traffic. Pending completion of the Oneawa Canal pedestrian bridge, access to the Coconut Grove Site will be from the

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

Kawai Nui Community park parking lot. There will likely be minor increases in vehicular traffic in the residential neighborhood, but the capacity of a nature trail is self-limiting, in that it is an amenity best appreciated in the absence of crowds.

This is a Kailua Vision Team project; therefore many of your constituents are proponents of the passive park. There are numerous potential benefits to the community as a whole and the applicant is confident the negative impacts will be minimal on adjacent residents.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

File No: KAV/AINUIGATEWAY.CMT

State of Hawaii
Department of Land and Natural Resources
DIVISION OF AQUATIC RESOURCES
July 19, 2002

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C & C OF HONOLULU

MEMORANDUM

To: Dierdre S. Mamiya, Administrator
Land Division
From: William Devick, Administrator
Division of Aquatic Resources
Subject: Comments on _X_ Draft Environmental Assessment
Comments Requested By: Nick Vaccaro

Summary of Project

Title: Kawainui Gateway park
Proj. By: Department of Design & Construction, C&C of Honolulu
Location: Kailua, Oahu, Hawaii

Brief Description:

As the largest remaining wetland in Hawaii, the Kawainui Marsh provides important habitat for endangered species of water birds, is a critical flood control basin for neighboring residential communities, and is eligible for listing on the National Register of Historic Places. The idea for the Kawainui Gateway Park grew out of a desire on the part of government agencies, non-profit groups, community groups and other interested parties to preserve and protect the natural and cultural resources of the marsh.

The proposed Kawainui Marsh Gateway Park will be located in Kailua, Oahu, within the northeastern boundary of Kawainui Marsh. The project area will be comprised of two non-contiguous development areas: the Mokapu Site, located north of Oneawa Canal, and the Coconut Grove site, located south of the Kawainui Community Park, which is also known as Kaha Park. A standard concrete curb will delineate the park landscaped boundary along the northwest edge of the park on either side of the vehicular entrance.

Proposed improvements will include: parking areas, a comfort station, passive recreational space, an education pavilion, pedestrian bridges, walkways, boardwalks, small boat access to Oneawa Canal, and a canoe launch and open lawn storage area

Comments:

The proposed Kawainui Marsh Gateway Park will rehabilitate lands that are currently vacant and overgrown, and improve public access to the largest remaining wetland in Hawaii. In doing so, it will increase public appreciation of the natural and cultural resources of the marsh.

We anticipate no long term adverse impacts due to the construction activities, provided appropriate mitigative measures are taken to minimize erosion and siltation to the extent possible. Precautions should also be taken to prevent cement products, paint, wood preservatives, oil, gasoline, hydraulic fluid, lubricants and other toxic substances associated with the use of heavy machinery from falling or leaching into the water.

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DDC Fax:5234767 Aug 7 2002 14:08 P.10

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. William Devick, Administrator
Division of Aquatic Resources
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Devick:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 19, 2002, regarding the subject document and project. The letter was forwarded to us by Ms. Mamiya.

We concur that the Kawai Nui Gateway Park will be beneficial to the community. Precautions will be taken during construction to mitigate potential construction impacts on water quality. Although the details of the best management practices plan are not yet available, they will be reviewed by the County and the State during subsequent permit approval processes.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

DLNR-LAND DIVISION
ENGINEERING BRANCH

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STATE OF HAWAII

COMMENTS

We have reviewed the Draft Environmental Assessment for the subject project parcel and concur that the proposed project is located in Special Flood Hazard Areas (SFHA) AH and X (unshaded) according to FIRM panel 0290B (November 20, 2000). However, a portion of the Mokapu Site is within SFHA Zone A. The National Flood Insurance Program (NFIP) does not have any regulations within Zones X, however § 60.3 (b) and (c) of Title 44 of the Code of Federal Regulations (CFR) describes the minimum standards for development within SFHA Zones A and AH.

Since the proposed improvements are located on parcels that are located within a SFHA, those improvements should conform to the development requirements of the NFIP as stated in the above CFR chapters. The NFIP does not impose requirements based on whether a structure is habitable or not. Rather the NFIP uses the term "Residential" or "Non Residential". There are NFIP regulations that do apply to "Non-Residential" structures such as walls, comfort stations and bridges. The minimum NFIP regulations do not exempt certain developments based solely on the intended use. Developments within SFHAs are permitted based on what their impact is on the Base Flood Elevation or Flood Risk to the surrounding area. The improvements within the SFHA need to comply with the more stringent regulations of either the NFIP or the local City and County of Honolulu Ordinances. We are attaching a copy of City & County's GIS map with TMK boundaries and flood zones delineations identified, and a copy of pertinent portions of the NFIP Flood Insurance Rate Map with the proposed development parcels delineated for your use in determining what portions of the sites are within the SFHA.

Furthermore, the Kawai Nui Marsh Flood Control Levee and Oneawa Channel serve a vital role in flood prevention and protection. Any improvements along the levee or channel would need to be assessed for potential impacts on the operations and maintenance of this flood control facility.

As a side note, according to preliminary Kawai Nui Marsh Transfer Documents, the Coconut Grove Site is not included in the parcels proposed for transfer to the State. The 1994 Master Plan was also unclear on whether the proposed park site at Mokapu was to be a State Park or City Park. If it is a City Park, specific usage criteria should be stated in the EIS to ensure that the park satisfies the original intent of providing a buffer for the marsh, and any other criteria from the Federal Bureau of Outdoor Recreation, as some of their funds were used to purchase the parcel.

If you have any questions, please call Mr. Eric Yuasa of the Planning Section at 587-0229.

Signed: Andrew M. Monden
ANDREW M. MONDEN

Date: 7/24/02

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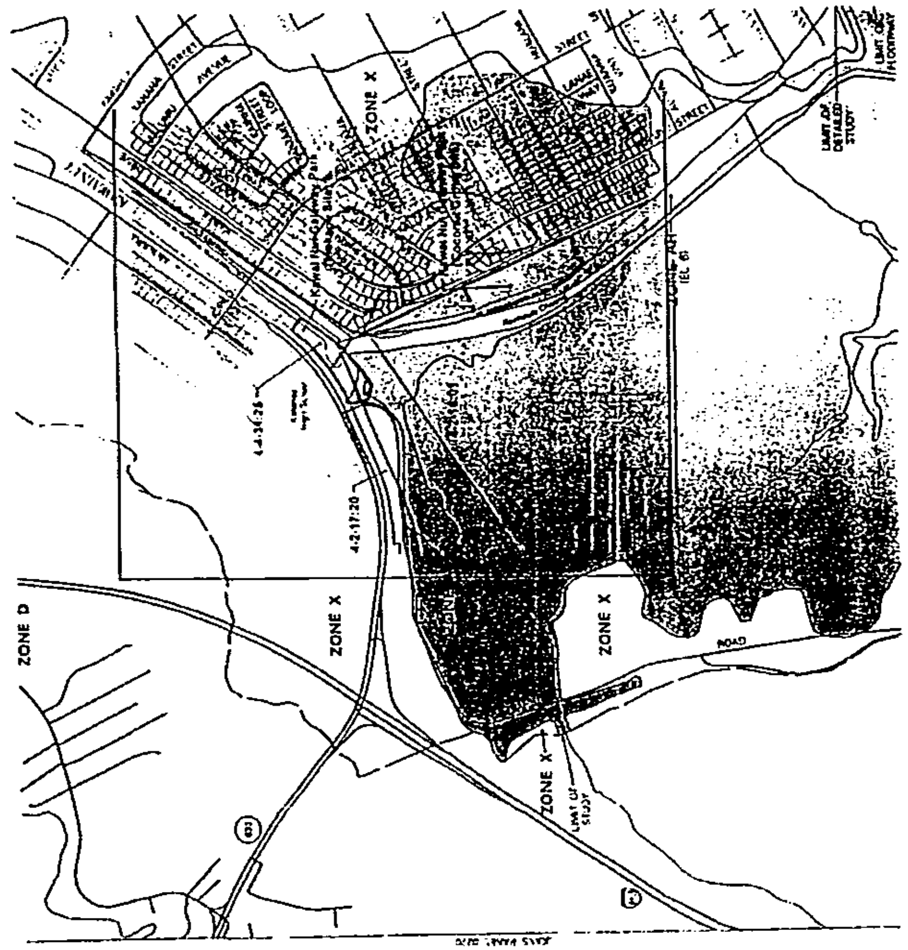
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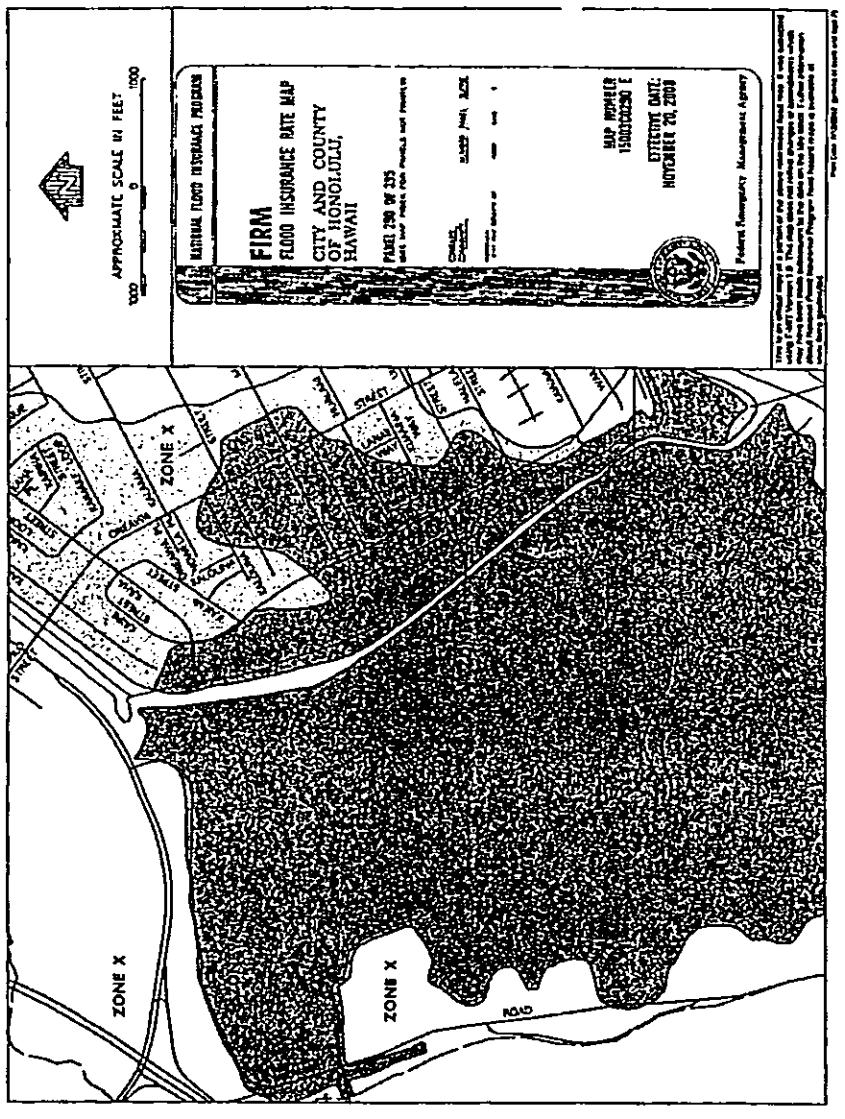

Helber Hastert & Fee
Planners, Inc

October 4, 2002

Mr. Andrew Monden
Land Division- Engineering Branch
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Monden:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 24, 2002, regarding the subject document and project. The letter was forwarded to us by Ms. Mamiya and attachments were sent to us directly via fax.

As you suggested, the Final Environmental Assessment (EA) is corrected to state that a small portion of the Mokapu Site near the Kapaa Quarry Road is within the "A" flood hazard area, based on the Flood Insurance Rate Map (FIRM). The remainder of the Mokapu Site is designated "X" (i.e. outside of the 500-year floodplain). The Coconut Grove Site is within the "AH" zone where flood depths of 1 to 3 feet are anticipated during the 100-year flood.

The project will meet the federal and County development standards for zones A and AH. There are no development standards for zone X. Footbridges and pathways are permitted uses within flood hazards long as development standards are met. The Final EA was modified to distinguish between the federal and County development standards. The project construction drawings will be reviewed during the Building Permit process to ensure compliance with flood safety regulations.

The project will not affect the flood prevention and control functions of the levee and Oneawa Channel.

Regarding your comments on Coconut Grove ownership and park management, we concur the Coconut Grove parcel is County land and will remain County land. Both the Mokapu and Coconut Grove sites will be managed as a County Park. The land ownership and park management issues are unresolved, and the park will not be developed until these issues are resolved. The Final EA states these issues as unresolved.

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

Helber Hastert & Fee
Planners, Inc.

We acknowledge your comment that the Federal Bureau of Outdoor Recreation funds were used to purchase the Coconut Grove parcels with intent to preserve the areas as a buffer for Kawai Nui Marsh. This information is included in the Final EA (Chapter 3).

The Coconut Grove site will be retained by the County and no executive order (EO) will be required. An EO will be required for the Mokapu Site parcels.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

BENJAMIN J. CAYETANO
GOVERNOR

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
JEAN L. OSHITA
JADYNE Y. URASAKI

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

IN REPLY REFER TO:
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UTILITIES DESIGN & ENG.
DEPT OF DESIGN & CONST
CITY & CO OF HONOLULU

Ms. Rae M. Loui, P.E.
Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Ms. Loui:

Subject: Kawai Nui Gateway Park Draft Environmental Assessment (DEA), Kailua, TMK: 4-4-34: 25, 4-2-17: 20, 4-2-16: 01

Thank you for requesting our review of the Draft EA. We have the following comments:

1. The Final EA should address the feasibility of providing access to the proposed Mokapu Boulevard park site from Kapaa Quarry Road.

2. The Final EA should address the traffic impacts of the City's proposal to add protected left-turn phases to the traffic signals at Mokapu Boulevard's intersection with Kapaa Quarry Road. Specifically, the Final EA should:

   a. evaluate likely impacts on intersection level of service due to the need for an additional signal phase;

   b. assess whether it will be necessary to extend existing left- turn storage lanes;

   c. determine necessary restrictions on U-turns.

3. Plans for work within the State highway right-of-way must be submitted to our Highways Division Traffic Branch for review and approval.

If you have any questions, please contact Ronald Tsuzuki, Head Planning Engineer, Highways Division, at 587-1830.

Very truly yours,

BRIAN K. MINAAI
Director of Transportation

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Brian Minaai, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, HI 96813-5097

Dear Mr. Minaai:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 26, 2002, regarding the subject document and project.

Access to the Mokapu Site from westbound traffic on Mokapu Boulevard is an issue that remains unresolved in the Final Environmental Assessment. Your suggestion to consider access to the Mokapu Site from Kapaa Quarry Road was considered briefly during the environmental assessment; however the western end of the Mokapu Site is a valued waterbird habitat and that access alternative was eliminated from further consideration. The Final EA documents that this access alternative was considered and rejected in Table 4-1.

We understand that prior to making the proposed traffic signal changes at the Kapaa Quarry Road-Mokapu Boulevard intersection, a study is required to assess potential impacts of a U-turn on traffic. Based on conversations with Department of Transportation (DOT) staff, the concern is not the impact of the park users on traffic, but the impact of a U-turn and traffic signal change on existing traffic. The applicant will continue to work with the DOT to provide you sufficient information to make a decision on the proposed signal change. The guidelines for the traffic study that you provided in your letter are appreciated. The Final EA will state the issue as unresolved (Chapter 1.4).

We understand that plans for work within the State highway right-of-way are subject to DOT review and approval and this is added to the list of permits and approvals required (Final EA Table 7-1).

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

FD-Ping

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 621
HONOLULU, HAWAII 96809

02 AUG -1 PM 12:23

RECEIVED
'02 AUG -2 P1:35

ADMIN
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
STATE PARKS
WATER RESOURCE MANAGEMENT

July 31, 2002

LD-NAV
L-3668/627/227/196/[illegible]

KAWAINUIGATEWAY.RCM

Honorable Rae M. Loui, Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Ms. Loui:

Subject: Draft Environmental Assessment Covering the Kawai Nui Gateway Park, Kailua, Oahu

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) covering the Kawai Nui Park project.

A copy of the DEA was distributed to the following Department of Land and Natural Resources' Divisions for their review and comment:

Division of Aquatic Resources - Division of Forestry & Wildlife
Division of State Parks - Historic Preservation Division - Commission on Water Resource Management - Land Division Engineering Branch - Land Division Planning and Technical Services - Land Division Oahu District Land Office

Attached herewith is a copy of the Division of Aquatic Resources, Historic Preservation Division, Division of Forestry and Wildlife, Division of State Parks, Commission on Water Resource Management, Land Division Engineering Branch and Land Division Planning and Technical Services comments.

The Department of Land and Natural Resources has no other comment to offer on the subject matter based on the attached responses. Should we receive additional comments, they will be forwarded to your office at that time.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0438.

Very truly yours,

Charlene E. Unoki
for DIERDRE S. MAMIYA
Administrator

813
13

c: Oahu District Land Office

DEC Fax:5234767 Aug 7 2002 14:05 P.02

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Ms. Dierdre S. Mamiya, Administrator
Land Division
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

Dear Ms. Mamiya:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for coordinating the review of the subject document and project within Department of Land and Natural Resources. According to your July 31, 2002 letter, comment letters were received from the following:

- Division of Aquatic Resources
- Historic Preservation Division
- Division of Forestry and Wildlife
- Division of State Parks
- Commission on Water Resource Management
- Land Engineering Branch
- Land Division Planning and Technical Services.

We acknowledge the receipt of these letters and have addressed them individually. Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

FD-PW3

BENJAMIN J. CAYETANO
GOVERNOR

GLENN M. OKIMOTO
COMPTROLLER

MARY ALICE EVANS
DEPUTY COMPTROLLER

LETTER NO. P/W/02.P155

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810

02 JUL -2 AM 8:44

JUN 27 2002 RECEIVED

'02 JUL -3 P12:28

FACILITIES DESIGN & ENG.
DEPT OF DESIGN & CONST
C & C OF HONOLULU

Ms. Rae M. Loui, P.E., Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Ms. Loui:

Subject: *Kawai Nui Gateway Park*
Draft Environmental Assessment (DEA)

Thank you for the opportunity to review the Kawai Nui Gateway Park DEA for the subject project.

This project does not impact any Department of Accounting and General Services projects or existing facilities. Therefore, we have no comments to offer.

Should you have any questions, please have your staff call Mr. Allen Yamanoha of the Planning Branch at 586-0488.

Very truly yours,

GLENN M. OKIMOTO
State Comptroller

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Glenn Okimoto, State Comptroller
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Okimoto:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your letter, dated August 1, 2002 regarding the subject document and project.

We understand the project does not impact the Department of Accounting and General Services projects or facilities.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

FD

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DEPT OF DESIGN & CONSTR
C & C OF HONOLULU
02 AUG 30 PM 2:15

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:
02-202/epo

RECEIVED
'02 SEP -1 P1:49

August 27, 2002

FACILITIES DESIGN & ENG.
DEPT OF DESIGN & CONST
C. & C. OF HONOLULU

Ms. Rae M. Loui, P.E., Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Ms. Loui:

Subject: Draft Environmental Assessment (DEA)
Kawai Nui Gateway Park
Kailua, Koolaupoko, Oahu
Tax Map Keys: 4-4-034:025; 4-2-017:020; and 4-2-016:001

Thank you for the opportunity to review and comment on the subject proposal. The DEA was routed to the various branches of the Environmental Health Administration. We have the following comments.

Clean Water Branch (CWB)

1. The applicant should contact the Army Corps of Engineers to identify whether a federal permit (including a Department of Army permit) is required for this project. A Section 401 Water Quality Certification is required for "Any applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters...", pursuant to Section 401(a)(1) of the Federal Water Pollution Act (commonly known as the "Clean Water Act");

2. A National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for the following discharges to waters of the State:

   a. Discharge of storm water runoff associated with industrial activities, as define in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi);

   b. Discharge of storm water runoff associated with construction activities that involve the disturbance of five (5) acres or greater, including clearing, grading, and excavation;

   c. Discharge of treated effluent from leaking underground storage tank remedial activities;

   d. Discharge of once through cooling water less than one million gallons per day;

   e. Discharge of hydro-testing water;

   f. Discharge of construction dewatering effluent;

   g. Discharge of treated effluent from petroleum bulk stations and terminals; and

   h. Discharge of treated effluent from well drilling activities.

Any person requesting to be covered by a NPDES general permit for any of the above activities should file a Notice of Intent with the Department of Health, Clean Water Branch (CWB) at least thirty (30) days prior to commencement of any discharges to State waters;

3. If construction activities involve the disturbance of one acre or greater, including clearing, grading, and excavation, and will take place or extend after March 10, 2003, an NPDES general permit coverage is required for discharges of storm water runoff into State waters; and

4. The applicant may be required to apply for an individual NPDES permit if there is any type of activity in which wastewater is discharged from the project into State waters.

If you have any questions, please contact the Clean Water Branch at (808) 586-4309.

Wastewater Branch (WWB)

The use of individual wastewater systems is not acceptable, as this project must be connected to the County sewer system.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems". We reserve the right to review the detailed wastewater plans for conformance to applicable rules.

If you have any questions, please contact the Planning/Design Section of the Wastewater Branch at (808) 586-4294.

Solid and Hazardous Waste Branch (SHWB)

The Office of Solid Waste Management (OSWM) recommends the development of a solid waste management plan that encompasses all project phases including demolition, construction, and occupation of the buildings.

Specific examples of elements that the plan should address include:

- Recycling of green-waste during clear and grub activities;
- Recycling construction and demolition wastes, as appropriate;
- Use of locally produced compost in landscaping;
- Use of recycled content building materials; and
- The provision of recycling facilities in the design of the project.

Hawaii Revised Statute 103-D-407 stipulate that all highway and road construction and improvement projects funded by the state or a county, or roadways that are to be accepted by the state or a county as public roads, shall utilize a minimum of 10 per cent crushed glass aggregate as specified by the Department of Transportation in all base course (treated or untreated) and sub-base when the glass is available to the quarry or contractor at a price no greater than that of the equivalent aggregate.

The developer shall ensure that all solid waste generated during construction is directed to a permitted solid waste or recycling facility.

If you have any questions, please contact the Solid and Hazardous Waste Branch at (808) 586-4240.

Clean Air Branch (CAB)

Control of Fugitive Dust

There is a significant potential for fugitive dust emissions during the removal, transport and installation activities that would impact nearby residents and thoroughfares. It is recommended that a dust control management plan be developed which identifies and addresses all activities that have a potential to generate fugitive dust. Implementation of adequate dust control measures during all phases of development and construction activities is warranted.

Construction activities must comply with provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust.

The contractor should provide adequate measures to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to:

a. 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 potentially dusty equipment in areas of the least impact;

b. Providing an adequate water source at the site prior to start up of construction activities;

c. Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;

d. Controlling of dust from shoulders and access roads;

e. Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and

f. Controlling of dust from debris being hauled away from project site.

If you have any questions regarding these issues on fugitive dust, please contact the Clean Air Branch at (808) 586-4200.

Noise, Radiation and Indoor Air Quality (NRIAQ) Branch

All project activities shall comply with the Administrative Rules of the Department of Health, Chapter 11-46, on "Community Noise Control".

If you have any questions, please contact the NRIAQ at (808) 586-4701.

Environmental Planning Office (EPO)

As noted on page 5-9 of the Draft Environmental Assessment (DEA), the Oneawa Canal is an "impaired stream." Specifically, it is co-listed (as "Kawainui Stream") with Kawainui Marsh and Kapaa Stream under section 303(d) of the Clean Water Act for impairment by nutrients, sediments, and metals. Kaelepulu Channel, which borders the proposed Coconut Grove site, flows into Kaelepulu Stream. Kaelepulu Stream is similarly listed for impairment by nutrients and sediments. Under the Clean Water Act, the Department of Health (DOH) must establish Total Maximum Daily Loads (TMDLs) for each of these pollutant/water body combinations. TMDLs suggest how the existing pollutant loads may be reduced in order for water quality standards to be attained.

Although TMDLs for these listed waters are yet to be established and implemented, a first step in achieving TMDL objectives would be to prevent any project-related increases in pollutant loads. The proposed project appears to contribute to the achievement of these objectives by discouraging unauthorized dumping (Project Summary page 1-4), and according to page 5-3 of the DEA, "In the long-term operation of the Park, storm water runoff from the parking lot at the Mokapu Site will be directed to landscaped areas and be retained onsite. This will minimize the potential for typical parking lot oil and grease spills from washing into the Canal. The minimal improvements at the Coconut Grove Site will not affect storm water runoff quality."

We suggest that this retention function and the location of the retention areas be further discussed in DEA section 3.3.1.6 (Landscaping) and referenced in the Mokapu Site Plan (Figure 4). We also suggest that proposed landscape improvements at the Mokapu Site and water bird habitat enhancement at the Coconut Grove Site may change the behavior and quality of storm water runoff after the runoff enters from off-site during larger storm events.

Given the State's responsibility to establish TMDLs for the entire Kawainui Marsh and Kaelepulu Stream systems and the utility of concurrently studying various system components, we recommend that the overall management of Kawai Nui include the collection of water quality data that can be used to support the development of TMDLs for these systems. This work should include consultation and cooperation with local cooperators and stakeholders, the DOH, and other members of the TMDL Workgroup convened by the DOH. We encourage the Department of Design & Construction to continue participating in the TMDL process and suggest consultation with the Department of Health Clean Water Branch (Engineering Section) to discuss how water pollution control permitting may be linked with TMDL implementation.

If you have any questions or would like more information on our TMDL program, please call David Penn at (808) 586-4337.

Sincerely,

GARY GILL
Deputy Director
Environmental Health Administration

c: CWB
WWB
CAB
SHWB
NRIAQ
EPO

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Gary Gill, Deputy Director
Environmental Health Administration
Department of Health
P.O. Box 3378
Honolulu, HI 96801

Dear Mr. Gill:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your department's comment letter, dated August 27, 2002, regarding the subject document and project.

Clean Water Branch

1. Per your suggestion, we have initiated consultation with the Army Corps of Engineers regarding the requirement for a federal permit. Their response is pending. We understand a section 401 Water Quality Certification will be required if a federal permit is required.
2. National Pollutant Discharge general permit coverage will be obtained for the discharge of stormwater runoff associated with construction activities including clearing, grading and excavation. The project will commence after the new requirement for NPDES coverage for projects involving the disturbance of one acre or greater. None of the other NPDES discharges listed in your letter are applicable to this project.
3. Per the Environmental Planning Office comments, TMDL implementation will be incorporated with the NPDES and Section 401 Water Quality Certification requirements, to the extent practical.

Wastewater Branch

The project will be connected to the municipal wastewater system. The load on the system will be associated with the comfort station and the showers. The County will make an official determination of capacity of the municipal wastewater system to handle the project load during the building permit approval process.

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

Solid and Hazardous Waste Branch
A stand-alone solid waste management plan will be prepared at the contractor's discretion. All elements of the solid waste management plan described in your letter will be incorporated into the Final Environmental Assessment (EA). All solid waste generated during construction will be directed to a permitted facility.

Clean Air Branch
Fugitive dust control measures are incorporated into the EA. Construction will comply with HAR, Chapter 11-60.1, "Air Pollution Control", Section 11-60.1-33, " Fugitive Dust".

Noise, Radiation and Indoor Air Quality Branch
The Project will comply with HAR, Chapter 11-46, "Community Noise Control".

Environmental Planning Office
Additional information you provided on the TMDL status of waterways in the vicinity of the project is appreciated. The Final EA will incorporate these details. The stormwater retention areas have not been identified yet, therefore specifics will not be included in the Final EA. Stormwater at the Mokapu Site will be retained onsite.

During the NPDES permit and Section 401 Water Quality Certification processes, the Water Quality sampling and analysis requirements will be amended as necessary to support TMDL implementation.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

County

FD-Planning

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 309 • KAPOLEI, HAWAII 96707
TELEPHONE: (808) 692-5561 • FAX: (808) 692-5133 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

WILLIAM D. BALFOUR JR.
DIRECTOR

EDWARD T. "SKIPPA" DIAZ
DEPUTY DIRECTOR

RECEIVED
'02 JUL 16 P3:46

DEPT OF DESIGN & CONSTR
C & C OF HONOLULU
02 JUL 15 AM 10:41

July 9, 2002

FACILITIES DESIGN & ENG.
DEPT. OF DESIGN & CONST
C & C OF HONOLULU

TO: RAE M. LOUI, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

FROM: WILLIAM D. BALFOUR, JR., DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
KAWAI NUI GATEWAY PARK
KAILUA, OAHU, HAWAII
TAX MAP KEYS: 4-4-34:25; 4-2-17:20; 4-2-16:01

Thank you for the opportunity to review and comment on the Draft Environmental Assessment relating to Kawai Nui Gateway Park.

The Department of Parks and Recreation has participated in the planning of and supports the development of this park.

Should you have any questions, please contact Mr. John Reid, Planner, at 692-5454.

W. D. Balfour

WILLIAM D. BALFOUR, JR.
Director

WDB:mk (12969)

cc: Mr. Donald Griffin, Department of Design and Construction

1/16
11

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. William Balfour, Jr., Director
Department of Parks and Recreation
City and County of Honolulu
1000 Uluohia Street, Suite 309
Kapolei, Hawaii 96707

Dear Mr. Balfour:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your letter, dated July 9, 2002 regarding the subject document and project.

Your support of the project is appreciated. Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

FD-planning

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111
http://www.honolulupd.org
www.co.honolulu.hi.us

02 JUL 17 PM 2:42

JEREMY HARRIS
MAYOR

LEE D. DONOHUE
CHIEF

ROBERT AU
GLEN KAJIYAMA
DEPUTY CHIEFS

RECEIVED
'02 JUL 18 P2:40

OUR REFERENCE CS-KP

July 16, 2002

TO: RAE M. LOUI, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

FROM: LEE D. DONOHUE, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT, KAWAI NUI GATEWAY PARK, KAILUA, OAHU, HAWAII, TMK: 4-4-34:25; 4-2-17:20; 4-2-16:01

Thank you for the opportunity to review and comment on the subject project.

The Honolulu Police Department has no comment regarding impacts on Special Management Area (SMA) resources or concerns as defined in the SMA Ordinance or the State Coastal Zone Management Act. However, we are concerned about the impact this proposal will have on the services provided by this department.

This is a "high" theft area. The proposed berms, vegetation, and gated entrance may limit the police officers' ability to view and easily access the area. There is also the question of which agency would be responsible for securing and unsecuring the gate, which may also have an impact on the services provided by this department.

Further, canoe loading and unloading may become an enforcement issue and may impact calls for service to the area.

In an effort to minimize some of our concerns, it is advisable to discuss these issues with Lieutenant James Addision of District 4 patrol. He can be reached at 247-2166.

If there are any questions, please call Ms. Carol Sodetani of the Support Services Bureau at 529-3658.

LEE D. DONOHUE
Chief of Police

By
KARL GODSEY
Assistant Chief of Police
Support Services Bureau

Serving and Protecting with Aloha

7/18

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Chief Lee Donohue
Honolulu Police Department
City and County of Honolulu
801 S. Beretania Street
Honolulu, Hawaii 96813

Dear Chief Donohue:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 16, 2002, regarding the subject document and project. We understand the Police Department is concerned about increased service calls regarding illegal activity at the park. On your recommendation, we discussed these issues with Lieutenant James Addison of District 4 Patrol on September 5, 2002 at the Mokapu Site.

The berms and vegetation along Mokapu Boulevard will generally be less than 3 feet in height; therefore visibility into the park will be relatively unobstructed for routine police patrols passing on Mokapu Boulevard. Based on the description provided, Lt. Addison stated that visibility into the park would be sufficient, but suggested additional lighting. On the other hand, he acknowledged that the neighbors would be concerned about additional lighting.

A chain across the entrance will be locked by County employees, who will have sole control of access; therefore, the Police Department will not be responsible for daily securing and unlocking the gate. On Lt. Addison's recommendation, the final EA will propose that no street parking be allowed on Mokapu Boulevard fronting the park. This will discourage people from parking outside the park and walking into the park after hours.

The "high theft" area referred to in the Police Department comment letter refers to automobile theft, not home security. Nonetheless, Lt. Addison acknowledged that the proposed bridge would provide an additional access to residences south of Oneawa Canal. Currently, there is access to these properties from the existing community park and levee pathway. Mitigation includes formation of a community watch group such as the group organized for the Kailua boat ramp. Sgt. Barry Chang of the Police Department would be able to assist in organizing the community volunteers.

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

During the conversation with Lt. Addison, there was conjecture regarding the amount of illegal activity that may currently occur at the Mokapu Site, since the vegetation prohibits views into the Site. The park development would improve police surveillance of the parcel from the road, in addition to the primary benefit to improve the appearance of the area.

Lt. Addison suggested the Kalaheo High School administration be consulted regarding student use of the park and the administration was consulted.

In summary, Lt. Addison concurred that there may be an increase in service calls to the police regarding illegal activities at the park; however, the anticipated increase would not increase police manpower requirements and should not prohibit Kawai Nui Gateway Park development. The mitigation measures proposed should minimize the number of calls.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4414 • FAX: (808) 527-6743 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

RECEIVED
'02 JUL 18 P2:40
FACILITIES DESIGN & ENG.
DEPT OF DESIGN & CONST
C & C OF HONOLULU

2002/ELOG-1827(jl)

July 17, 2002

MEMORANDUM

TO : RAE M. LOUI, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN. : GARY DOI

FROM : RANDALL K. FUJIKI, AIA, DIRECTOR
for DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT : DRAFT ENVIRONMENT ASSESSMENT
KAWAI NUI GATEWAY PARK
KAWAI NUI MARSH - KAILUA
TAX MAP KEYS 4-4-34: 25; 4-2-17:20; AND
4-2-16: 1

We have reviewed the Draft Environmental Assessment (DEA) for the proposed Kawai Nui Gateway Park and offer the following comments:

1. **Page 3-9.** The footbridges may require a flood study.

2. **Page 6-8, Special Management Area.** The Special Management Area (SMA) boundary should be delineated on Figure 11 and elsewhere as appropriate.

   The first paragraph states that the County reviews development proposals that are located within approximately 100 yards of the shoreline, which is referred to as the SMA boundary. There is no fixed distance from the shoreline to the SMA boundary line. The SMA boundary is set by SMA maps which are on file with DPP.

3. **Page 7-1, Table 7-1 Permits and Approvals.** For the Environmental Impact Assessment, the Department of Design and Construction is the approving agency. For the Building Permit, the DPP is the approving agency.

DM165693

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Randall Fujiki, AIA, Director
Department of Planning and Permitting
City & County of Honolulu
650 S. King Street
Honolulu, HI 96813

Dear Mr. Fujiki:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 17, 2002, regarding the subject document and project. Our responses to your three concerns are noted in the following table:

Subject	Draft EA Chapter	Comment	Applicant Response	Applicant Action
Flood Study	3	Footbridges may require flood study.	concur	Final EA will reference County LUO Sec. 21-9.10, and federal CFR Title 44 subsection 60.3 development standards. Based on conversations with your staff, we understand that if base flood elevations are not available on the FEMA maps or if there is some question of their accuracy, then during the building permit review process the Site Development Division may request a flood study to determine base flood elevations. This information is added to the EA.
SMA	6	Delineate SMA on Figure 11	concur	Figure 11 is modified to show SMA
		SMA boundary is determined by agency mapping; not a set distance from the shoreline.	concur	Final EA text is edited to refer to agency maps.
Permits & Approvals	Table 7-1	DPP approves building permits and DDC approves environmental assessment.	concur	Table 7-1 modified.

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

Helber Hastert & Fee
Planners, Inc.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3375 KOAPAKA STREET, SUITE H425
HONOLULU, HAWAII 96819-1859

JEREMY HARRIS
MAYOR

ATTILIO K. LEONARDI
FIRE CHIEF

JOHN CLARK
DEPUTY FIRE CHIEF

July 19, 2002

02 JUL 23 PM 1:51
DEPT OF DESIGN & CONSTR
C & C OF HONOLULU

TO: RAE M. LOUI, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTENTION: GARY DOI, PROJECT MANAGER

FROM: ATTILIO K. LEONARDI, FIRE CHIEF

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
KAWAI NUI GATEWAY PARK
KAILUA, OAHU, HAWAII
TAX MAP KEYS: 4-4-034: 025; 4-2-017: 020; AND 4-2-016: 001

We received your memorandum dated June 21, 2002, requesting our review and comments on the above-mentioned project. The proposed project will not have any adverse impact on the services provided by the Honolulu Fire Department.

Should you have any questions, please call Battalion Chief Kenneth Silva of our Fire Prevention Bureau at 831-7778.

ATTILIO K. LEONARDI
Fire Chief

AKL/SD:jo

Jul 24 2002 13:41 Fax:5234767 P.02

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Attilio K. Leonardi, Fire Chief
Fire Department
City and County of Honolulu
3375 Koapaka Street, suite H425
Honolulu, Hawaii 96819-1859

Dear Mr. Leonardi:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your letter, dated July 19, 2002, regarding the subject document and project.

We understand the project will not impact the services provided by the Fire Department.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

Hawaiian Electric Company, Inc. • PC Box 2750 • Honolulu, HI 96840-0001

GEN-6 (EIS)

August 1, 2002

RECEIVED

'02 AUG -5 A9:03

FACILITIES DESIGN & ENG.
DEPT OF DESIGN & CONST
C & C OF HONOLULU

Attention: Mr. Gary Doi
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Doi:

Re: Kawai Nui Gateway Park

Thank you for the opportunity to review and comment on the June 21, 2002 Draft EA for the Kawai Nui Gateway Park in Kailua.

There is a HECO distribution line fronting the subject property along Mokapu Boulevard. Please make a request for service when plans are finalized to allow adequate time to schedule the work.

Our point of contact for this project, and the originator of these comments, is Enrique Che (543-7281), Director of Planning & Design, Customer Installations. I suggest your staff and consultant deal directly with Enrique to coordinate HECO's participation in this project.

Sincerely,

Kirk Tomita
Senior Environmental Scientist

cc: OEQC

14 8/5

WINNER OF THE EDISON AWARD
FOR DISTINGUISHED INDUSTRY LEADERSHIP

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Kirk Tomita, Senior Environmental Scientist
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, HI 96840-0001

Dear Mr. Tomita:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated August 1, 2002 regarding the subject document and project.

The applicant, City and County of Honolulu Department of Design and Construction, will continue to work with Mr. Enrique Che, Hawaiian Electric Company's, Director of Planning & Design, Customer Installations as the project moves toward construction. We appreciate verification that there is an electrical distribution line aligned along Mokapu Boulevard and that this line will be used to provide service to the comfort station.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

Other

UNIVERSITY OF HAWAI'I
ENVIRONMENTAL CENTER

A UNIT OF THE WATER RESOURCES RESEARCH CENTER

July 8, 2002

Gary Doi
City and County of Honolulu
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, Hawai'i 96813

Kawai Nui Gateway Park
Draft Environmental Assessment

On the recommendation of the Kailua Vision Team, the City and County of Honolulu Department of Design and Construction proposes to develop Kawai Nui Gateway Park on vacant government-owned lands located along the north-eastern boundaries of Kawai Nui Marsh (Marsh) in Kailua. The park is designed for passive recreational use and will include a comfort station, a parking lot, an education pavilion, outrigger canoe access to Oneawa Canal, a pedestrian bridge across Oneawa Canal, a nature walk, and waterbird habitat enhancement. Kawai Nui Gateway Park will be the visual and physical gateway to the Marsh and Kailua from Mokapu Boulevard. It will provide access to underutilized areas along the periphery of the Marsh for a variety of "low-impact" activities that are complementary to preserving, enhancing, studying and appreciating the Marsh resources. The objectives of the project are: to improve the quality of experience for visitors to the Marsh; to improve scenic view planes to the Marsh; to enhance public awareness of the value of the Marsh as a significant natural and cultural resource; to facilitate wetland ecosystem education and research; to improve endangered species habitats; to provide low-impact access for wildlife observation; to facilitate recreational use of Oneawa Canal by canoe paddlers; to complete a segment of the Kawai Nui Pathway designed to encircle the Marsh; and to provide additional parking for visitors to the Marsh to relieve parking pressure at Kawai Nui Community Park.

This review was conducted with the assistance of Dave Sims, Environmental Center.

Cumulative Impacts

Kawai Nui is an enormously valuable asset with sensitivities in the realm of culture, ecology, biology, hydrology, and archeology. Assessment of any activity undertaken in this sensitive area must consider the cumulative impacts of all projects occurring in the area, pursuant to Hawai'i EIS law:

KRAUSS ANNEX 19 • 2550 DOLE STREET • HONOLULU, HAWAI'I 96822 • (808) 956-7361 • FAX (808) 956-3980
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

Agency actions (a) For all proposed actions which are not exempt as defined in section 11-200-8, the agency shall assess at the earliest practical time the significance of potential impacts of its actions, including the overall, cumulative impact in light of related actions in the region and further actions contemplated. (§11-200-5, Hawai'i Administrative Rules)

In this regard, this draft EA in Section 2.0 Purpose and Need, refers to the 1994 *Kawai Nui Marsh Master Plan* prepared by DLNR and the 1993 *Kawai Nui Marsh Resource Management Plan* prepared by the former State Dept. of Planning and Economic Development, and it also refers in Section 3.3.1.2 Access, to the recent Kawai Nui Marsh Pathway Project. However, several other projects currently are planned for the Kawai Nui Marsh area including the *Kawai Nui Education Center* and the *Kawai Nui Community Parking Lot & Landscape Improvement*.

In addressing cumulative impacts, analyses should consider physical characteristics, as well as effects of increased human activity on water resources, biological resources, aquatic resources, historical, cultural, and archaeological resources, including but not limited to noise, traffic, pollution, community health and safety, for all projects within the Kawai Nui Gateway vicinity.

Wetland Enhancement

We note that although restoration of open water areas is included in plans for the Coconut Grove site, no similar waterbird enhancement activities are proposed for the Mokapu area. In light of Dr. Bruner's discussion (appendix A), incorporating such a feature into plans for the Mokapu site would appear to offer substantial conservation and educational value at relatively minimal cost.

Thank you for the opportunity to comment on this draft EA.

Sincerely,

John T. Harrison, Ph.D.
Environmental Coordinator

cc: OEQC
David Curry, Helber Hastert & Fee Planners, Inc.
James Moncur
Dave Sims

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. John Harrison, Ph.D., Environmental Coordinator
Environmental Center
University of Hawaii
2500 Dole Street, Krauss Annex 19
Honolulu, HI 96822

Dear Dr. Harrison:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated June 8, 2002, regarding the subject document and project. We concur the Draft Environmental Assessment (EA) did not address all projects in the Kawai Nui Marsh area. The Final EA (Chapter 5) assesses cumulative impacts of four projects in the area including the two that you mention in your letter. In summary, no significant adverse cumulative impacts were identified.

Your second comment suggests restoration of open water waterbird habitat areas at the Mokapu site as proposed at the Coconut Grove Site. This additional waterbird enhancement was considered early in the process, but preliminary cost estimates by the project civil engineer indicated this alternative was too expensive. Subsequent archaeological surveys reported the western portion of the Mokapu Site may have paleoenvironmental deposits and additional archaeological surveys would be required prior to construction. Pending community support and future funding, wetland enhancement at the Mokapu Site is encouraged. Unfortunately, it is not economically feasible at this time.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel 808 545-2055 Fax 808 545-2050 www.hhf.com E-mail: info@hhf.com

July 19, 2002

Gary Doi, Project Manager
Department of design and Construction
City and county of Honolulu
650 South King Street
Honolulu, Hawai'i 96813

RECEIVED
02 JUL 26 A9:07

RE: DRAFT ENVIRONMENTAL ASSESSMENT
KAWAI NUI GATEWAY June 2002

The *Kailua Neighborhood Board Environment Committee* has reviewed the DEA and has the following questions, concerns and requests for information.

The Environment Committee does not necessarily appose some development of the two sites but is seeking assurances that view planes of Kawai Nui marsh are not compromised, canal water and wetlands are not adversely impacted, that residents are not unduly bothered by nuisances, that wildlife is adequately protected, that the marsh ecosystem will not be negatively impacted and that all facilities can be properly maintained. From this DEA we do not ascertain that these concerns will be met.

The DEA can not be accepted as written because it does not identify methods to be used to prevent erosion and siltation to wetlands and open water bodies even thought all the work is either adjacent to or in water and wetlands.

At the February 7, 2002 Kailua Neighborhood Board meeting David Curry gave a presentation on the Kawai Nui Gateway Park. In response to Board questions he said, "All safety issues will be addressed in the Environmental Assessment." As shown in our comments, not all safety concerns were adequately addressed. Concerns were raised about the lack of parking for the Coconut Grove site. The DEA fails to adequately address this issue.

The DEA is silent on impacts from point and non-point pollution from construction, pedestrian use and maintenance of facilities, boardwalks, pathways, and canoe launching site.

The DEA fails to provide any figures on how many people will use the park, canoe launching, and nature trails – daily, monthly and yearly. Without an understanding of how many people are expected to use these sites it is impossible to evaluate impacts to the wetland, wildlife and their habitat.

The DEA does not evaluate the cumulative impact on water quality from the increased hardening of surfaces for the park and nature trail.

The DEA does not provide adequate dimensions for the pavilion, viewing platform, comfort station, parking area, amount of blue rock to be used for nature pathway, and canoe launching site so it is impossible to determine the individual and collective cumulative impacts.

The DEA does not provide adequate topographical maps or any dimensions for the levee wall so the committee could only guess at the base and finished height of the pavilion, comfort station,

and bridge that must be higher than the existing levee wall. Using our best estimate we calculated the following:

- The comfort station will be 23 feet above the present ground level. With a finished height almost as tall as a 4 story building at of approximately 36 feet.
- The pavilion will be15 feet above the present ground level. With a finished height of approximately 27 feet.
- The bridge supports will be 14 feet above the present ground level. With a potential apex height of 20 feet.

Pg. 1-1 Project Characteristics

- The Land use Designations legend does not explain what the X and AH under FEMA Zone represent. The Final EA should provide an explanation.

Pg. 1-5 Summary of Potential Environmental Impacts and Mitigation

- This section states "permit conditions may include dampening the soil to control dust, minimizing the surface area of exposed soil, and installing silt retention fencing." (Emphasis added) Since the Mokapu site is part of Kawai Nui and directly interacts with the Marsh and the Coconut Grove Site borders water and encompasses a wetland we recommend that at a minimum all three underlined mitigation measures be required and not optional.
- To better protect Kawai Nui and the canal we recommend that innovative non-plastic silt retention fencing and other retention means be used such as: BioFence, a high quality straw, coir fiber (a by-product of the coconut industry) and biodegradable netting and thread fencing, or a 100% natural (coconut) fiber mesh.
- Explain where the water will come from that will be used for dust control.
- How will silt and erosion be controlled after the projects are completed? We recommend that sediment mats, that trap about 80% of the disturbed sediment, be placed on all banks to prevent or minimize adverse impact.
- The DEA states that there will be "No long-term adverse impacts on the general community…." Yet the next two sentences identify "potential adverse impacts " to residents adjacent to the park. These two statements seem to be contradictory. How is "general community" defined?
- What type(s) of landscaping will be used to reduce light pollution and prevent trespassing? Identify how new landscaping will be more or less effective than present conditions? Identify what type of "security fencing" will be used and how much fencing will be put up and where?
- What "county ordinance" will "restrict" park hours of operation? Is there a general ordinance in effect now?
- Will any site clearing/building occur in the water? If so, where and what means will be used to clear areas?
- Will any heavy or light equipment be placed in Oneawa or Kaelepulu canals to either dredge or clear the canal banks? If so, identify what type(s) of equipment will be used, where they will be used, what they will be used for, give duration of use and mitigation measures to be used to prevent degradation. Where will dredged material be deposited?

Table 1-1 Potential Impacts and Mitigation

- **Water birds –**
  - Habitat enhancement

- What aspects of this project will enhance wildlife habitat and how will wildlife habitat be enhanced?
- Describe what will be done to enhance wildlife habitat.

- Potential for increased pedestrian traffic to wildlife areas. Mitigation
  - Explain how access to pathways will be restricted.
  - What methods will be used to prohibit animals not on leases?
  - Will existing shoreline vegetation be retained or will new vegetation be planted? If existing vegetation will be removed explain how wildlife will be protected while new vegetation is growing?
- Scenic & Aesthetic
  - It is presumptuous and premature to say that property values will increase when trespassing, traffic lights and new and additional noise and unauthorized evening park use have been identified negative impacts by the neighbors.

3.3.1 Mokapu Site

3.3.1.1 Site Preparation

- How many *milo* trees are there and where are they located?
- Why is soil being removed and new soil being brought on to the site?
- How much soil will be removed from the site? Where will it be taken?
- How much topsoil will be brought on to the site overall?
- How much soil will be needed and imported to raise the pavilion and comfort station above the levee wall?

3.3.1.2 Access

- Why is the pathway 6 feet wide? Is this a Federal/State requirement?
- Will the pathway continue to be 6 feet wide and made of concrete on the Kawai Nui Community Park side?

3.3.1.4 Structures

- The DEA fails to give any description – dimensions, design, of the comfort station except to say that it will be a "standard County-designed facility" and approximately 600 sq. feet. Without exact dimensions it is impossible to ascertain individual and cumulative impacts on the environmental and view plane.
- Without adequate information it is impossible to evaluate the individual and cumulative environmental, aesthetic, and visual impacts of the comfort station.
- Why was the proposed site for the comfort station selected? For security reasons, preservation of view planes and less impact on waterways from shower runoff and accidental spills the facility should be moved as close to Mokapu road as possible.
- No information was given about the outdoor shower other than it will have a roof. Will the shower be hooked up to the municipal water system? Where will the outdoor shower be placed in relation to the comfort station? How large will the footprint be and how many showerheads will there be? What is the water drainage pattern? Will the water drain into a municipal system, the canal or Kawai Nui?
- If the bridge is not funded then it is wrong to include the bridge in the environmental review process, very little information and then when and if the FEA is accepted assume that the environmental and cumulative impacts of the bridge have been evaluated so that when money is available the project can proceed without any further environmental review.

- Without adequate information it is impossible to determine individual and cumulative impacts from the bridge construction and existence on the coastal zone. This DEA cannot be accepted until substantial information about the bridge is provided. Such as:
  - How will the bridge be stabilized on the canal banks? How much dredging, digging, and grading will be required to attach the bridge to the canal banks? What erosion and siltation measures will be used during and after construction of the bridge? If the bridge must be "elevated above the top of the levee wall" as, recommended by the US Army Corp of Engineers, what is the height of the bridge at the highest point? What is the impact on the current unobstructed view plane? Will there be lights on the bridge for aesthetic and/or safety reasons? If so, what is the visual impact and impact to migratory might fly water birds? Will there be gates on either side of the bridge? Will fishing and net throwing be allowed from the bridge? If not, what measures will prevent these actions? If yes, what are the hours that fishing will be permitted?
- What are the dimensions of the pavilion? Will the pavilion have lights? Will the pavilion be lit 24-hours to prevent theft and loitering? Will the pavilion be built exactly as shown in Figure 6? Where will any furniture be stored? How will unwanted use by homeless and late night partiers be prevented?

3.3.1.5 Canoe Paddling Facilities

- How much excavation, grading and grubbing will be required to construct the "hard edge" for canoe launching along the water's edge?
- What measures will be used to prevent erosion and siltation into the canal during construction of the canoe launching area?
- What measures will be used to stabilize the canal bank?
- What is the life span of the plastic "timbers?" How often will they have to be replaced? What measures will be used to prevent erosion and siltation when replacing the "timbers?"
- Since parking of canoe trailers will be prohibited in the parking lot and parking is prohibited on Mokapu road where will trailer parking be available?

3.3.1.6 Landscaping

- Other than the *milo* trees what other native plants exist in the two areas that will be retained?
- What are the dimensions of the retaining wall around the viewing platform? How high above ground will the platform be built? How much excavation and grading will be required to put in the platform? Will extra dirt be brought in to build up the platform? If so, how much?

3.3.1.9 Utilities

- How many people are anticipated to use the park per day/hour? Is there sufficient capacity at Kailua Wastewater Treatment Plant to handle the anticipated and unanticipated usage?
- Although the DEA says there will be no lights other than the comfort station it explains in detail "the lights will be shielded with full cut-off fixtures to eliminate direct illumination to any adjacent residential units." Since the comfort station is

on the opposite side of the park from the existing housing this statement sounds like there will be additional lighting. Is this correct? If so, where will the additional lighting be, how will it impact migratory birds, how many lights will there be and will they be on 24 hours a day?
- Will the comfort station lights be only within the structure or outside? If outside, identify how many lights there will be and where they will be placed?

3.3.2 Coconut Grove Site
- We saw no provisions for protection of wildlife from harassment in this isolated area. What are the plans to protect wildlife once nesting and foraging areas are open to the public?
- Figure 9 shows a perimeter fence yet there is no discussion regarding any fencing. Where will the perimeter fence be placed, what is the purpose, how long will it be, and what will it be made of?

3.3.2.2 Pathways
- How much gravel and "blue rock" will be brought in for the pathways? How thick will the gravel be? How will the gravel and "blue rock" be prevented from washing into the wetland during heavy rain and flooding? If the gravel and "blue rock" wash into the wetland what are the impacts?
- While the use of gravel and blue rock are more environmentally sensitive then concrete their use can be an attractive nuisance for people to throw at the waterfowl. This activity is not limited to children as an adult was observed throwing rocks at ducks along Hamakua Canal.
- Why are the pathway "nature trails" 4-feet wide and the boardwalks 6-feet wide?
- How many lumber or concrete support posts will be placed into the wetland for each boardwalk segment? How deep will the holes be dug into the wetland? What are the dimensions of the poles? W hat will be used to anchor the poles – concrete, steel etc.?
- Will support poles for the footbridges be placed in the canals? Is so, how many poles will be necessary and where they will be placed?
- What measures will be used to prevent erosion of the canal banks and siltation of the canals, Kaelepulu channel and the wetland during construction?

3.3.2.3 Landscaping
- Do the native shrubs, cultural trees and palm forest shown in Figure 9 currently exist or will these plants be brought in?

3.3.2.5 Observation Deck
- How many poles will be placed into the wetland and canal to form the footing for the deck?
- What are the dimensions of the poles? How will they be placed into the wetland/canal – by machine or by hand?
- W hat will be used to anchor the poles – concrete, steel?
- How will erosion and siltation be contained and prevented during construction of the deck?
-

3.4 Maintenance
- Does the statement "Wetland enhancement and maintenance activities will be dependent upon volunteer community efforts" mean that the City and County will not maintain the Coconut Grove site but maintenance is reliant on volunteers?
- Does this mean that there will be no regular trash pickup?
- Does this mean that once the footbridges, boardwalks and trails are constructed that there will be no regularly scheduled maintenance of these facilities or areas?
- Who will evaluate the footbridges and boardwalks for public safety?
- Who will be responsible for replacing facilities when needed?

3.6 Phasing
- Why is no discussion of the Coconut Grove site in this section? If this site it not anticipated to be constructed within a reasonable time why is it included in this DEA? Isn't it premature?
- If the Coconut Grove site is not slated to be constructed in the near future then it is wrong to include it in this DEA and then assume that when the money is available, which could be many years from now, that circumstances will be the same and all environmental issues have been thoroughly evaluated.

4.0 Alternative to the Proposed Project
- It is incorrect to say that the potential negative environmental impacts have largely been identified and appropriate mitigation included. Through out this DEA there are countless unanswered questions as noted in our questions and comments.

Table 4-1 Design Alternatives
- Under the Mokapu **Design** alternative the last column states No lights installed. Then under **Reason for Dismissal** the DEA states "improved security with lighting at comfort station." Will there be lighting at the comfort station or has that been dismissed?

5.0 Affected Environment, Potential Impacts, and Proposed Mitigation
- It is not sufficient to say that Best Management Practices (BMP) will be used. Instead this disclosure document should disclose what practices will be used to prevent erosion, siltation, pollution and further degradation to the waterways.
- Are the typical BMPs standard for all sites even those areas that are adjacent to waterways, wetlands and sensitive wildlife habitat?
- One environmental assessment objectives is to provide adequate environmental information so that decision makers can make informed decisions and the public can present comprehensive and responsible testimony. This generalization is another example of how this document fails to present sufficient information on which to present meaningful comments and evaluate individual and cumulative impacts to the environment.

5.2.1.2 Potential Impacts
- Without good topographical maps and knowing the height of the levee wall it is impossible to accurately determine the height of levee wall in relation to the Mokapu site and sites for anchoring the bridge. Thus, it is impossible to accurately determine the base

elevation of the comfort station, pavilion and bridge supports so that they will be "greater than the top of the levee wall."
- Lacking this crucial information the committee guessed that the comfort station would be 23 feet above the current ground level; the pavilion 15 feet above the current ground level and the bridge supports 14 feet above the current ground level.
- From our guess estimates the shower roof will be approximately 24 feet the height of a two story house, the bridge could be 20 feet at the apex and at 23 feet above the current ground level the comfort station structure could rise to 36 feet which is almost 4 stories tall. Since all of the Mokapu Site is vacant these high-rise structures will be obvious, obtrusive and intrusive into the Kawai Nui view plane.
- At the proposed height the lighting at the comfort station will cast a wide glare that could hamper and endanger night flying water birds. Was a study conducted to consider the lighting impact on flying waterfowl?
- While the comfort facility itself may be protected from flooding what precautions are being taken for the sewer lines that are buried at ground level?

5.2.3.2 Potential Impacts
- The DEA does not mention the use of any chemicals at any site until this chapter. Identify the areas where herbicides will be applied?
- List how many times and when herbicides will be used during construction and maintenance of the park?
- Will herbicides or any other chemicals be used at the Coconut Grove site? If yes, identify the chemical and explain why, when and where it will be used?
- What landscaping techniques and features that will be used to retain storm water runoff from the Mokapu site parking lot on site?

5.3 Biological Resources

5.3.1.1 Existing Conditions-Mokapu Site
- If the overgrown vegetation along the bank of Oneawa canal provides foraging habitat for water birds explain how this habitat will be protected from park users and launching of canoes.
- How will a canoe launching area impact the foraging habitat for water birds?
- The DEA states "Nesting is unlikely along Oneawa canal but offers no proof that this is the case. If nesting does occur along the banks how will this project impact the nesting of endangered and endemic water birds?

5.3.1.2 Existing Conditions-Coconut Grove Site
- Will the trees that the Black-crowned Night Herons roost in be removed?
- The FEA must describe in greater detail how the many native and endangered water birds that use this area will be impacted by construction, increased accessibility by humans and predators and how they will be protected.

5.3.1.3 Impacts and Mitigation-Mokapu Site
- Identify the "other" shoreline areas that will be landscaped with grasses."
- Where will pole fishing be permitted and how will pole fishing along the banks of the canal impact wildlife foraging and possible nesting habitat?

5.3.1.4 Impacts and Mitigation-Coconut Grove Site
- Other than thinning vegetation how will this project enhance the existing wetland at the northern portion of the site?

5.4 Aquatic Resources

5.4.2 Potential Impacts
- How long will construction of the individual boardwalks and viewing platform take?
- How long will construction of the gravel and blue rock nature trail take?

5.5 Historical, Cultural, and Archaeological Resources

5.5.3.2 Coconut Grove Site
- Since it is know that this site "may contain subsurface remains of Hawaiian land use and burials" will sediment coring be incorporated into this project as the various segments – boardwalk, pathway and viewing platform are developed? If this will not be done explain why.
- How will the boardwalks, pathways and viewing platform with its poles be constructed on land and in the water without any grading or excavation?
- What is considered "minimal disturbance?"
- This section is contradictory in that it states that the Coconut Grove site construction activities "do not involve grading or excavation" yet there will be "earthmoving." What is the difference?
- How will the pathway and viewing platform areas be leveled if there will be no digging?
- How will the poles for the boardwalks and viewing platform be installed if there will be no digging?
- What is meant by, "in the absence of potential impact?"

5.6 Ambient Noise
- It is naïve to believe that signs stating that the park as closed will prevent people from using the park, bridge and facilities. Thus, we recommend that money be set aside to establish a neighborhood patrol to police the park. This patrol, with established responsibilities, some form of formal structure and dedicated funding, must be in place before the FEA is accepted and construction begun.

5.7 Light Pollution
- Will the bridge have any safety lighting?
- Since Kawai Nui is home to four endanger water birds and other water fowl was a study conducted to evaluate the impact of night lighting on migratory water birds that fly at night and use Kawai Nui for nesting and foraging? If a study was done, what are the results? If a study was not done, explain why.

5.8 Community Health and Safety
- While this section stated the concerns of surrounding residents it did not provide any resolution to the residents concerns regarding vagrancy and activities after the park is closed at night. This is irresponsible. See **5.6.2 Potential Impacts and Mitigation** for our recommendation.

5.9 Traffic and Parking

- Has DOT approved the use of this site for a park?
- What is the alternative if DOT does not approve a U turn at Kapaa and Mokapu intersection? Will all users, except those from Kaneohe, have to use Kapaa Quarry Road to get to the Mokapu park?
- Are the anticipated two buses full size buses or mini-vans? Will there be parking for mini-vans? What is to prevent buses and mini-vans from using the car and bus parking spaces?
- How many handicap parking spaces will there be? Are these spaces considered part of the 18 parking spaces or additional?
- Without a dedicated loading and off-loading area for outrigger canoes and trailers and personal canoes parking will be restricted in the parking lot. This is unacceptable.
- Why weren't separate loading, off-loading and trailer parking considered in the design of the park and parking area?
- Where are people supposed to park their outrigger canoe trailers?
- It is unrealistic and dangerous to suggest and expect vehicles pulling outrigger canoes to use Kapaa Quarry Road to get to the park. The dips and curves in this narrow road make it dangerous to pull such a long load.
- The phrase "Daily transport of canoes on and off site is not anticipated" infers that canoes will be brought on site and remain there for an undetermined time. How long will canoes be permitted to remain overnight? How many canoes will be permitted to stay overnight? How will they be secured to avoid vandalism, theft etc? Where is the designated area for canoes? Who is liable if something happens to the canoes?
- Who will police the area to ensure that canoe trailers and others are not parking illegally and preventing public users to park in the parking lot?
- How much is traffic on Mokapu anticipated to increase once the park is open?

5.12 Utilities

- Since the DEA did not provide any numbers on the numbers of people anticipated to use the park and park facilities how was it determined that the load on the municipal wastewater treatment systems would be "insignificant?"

5.14 Cumulative Impacts

- In our response to the Kawai Nui Pathway DEA and response to this DEA the committee has pointed out numerous ways how both projects individually will have cumulative impacts on the waters and ecosystems of Kawai Nui marsh.
- It is irresponsible to state that "No long-term adverse environmental impacts are anticipated..." when the marsh will be open and exposed to new diverse uses and thousands and thousands of users. Each use and user will have some impact and all which must cumulatively and individually be considered and evaluated in order to the protect and preserve this unique wildlife habitat and ecosystem.

Submitted by.

Donna Wong, Chair
Environment Committee
Kailua Neighborhood Board

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Ms. Donna Wong, Chair
Environmental Committee
Neighborhood Commission
530 S. King Street, Suite 400
Kailua, Hawaii 96813

Dear Ms. Wong:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 19, 2002, regarding the subject document and project.

The comments on Page 1 of your letter are a summary of itemized comments on subsequent pages. Your itemized comments are addressed in Table 1 in the order they were presented in your letter.

By way of general response to your comments, there appears to be some doubt that existing local state and federal regulations, agencies and permitting systems are adequate to safeguard the environment. This is an issue that is outside the scope of this project and will not be addressed in the Final EA. Please note that there will be at least two other permit processes that invite public input. Project-specific stipulations above and beyond existing laws and regulations are best addressed as conditions to those permits. The Final EA, complete with public comments will accompany the permit application.

Some unresolved issues remain and may preclude development of the project; however the resolution of these issues will not have significant environmental impacts. For example, the parcels have not yet been transferred to the State, and the County has not yet assumed management responsibility. We are optimistic these events will occur, and until then there will be no project. There is no justification for delaying the environmental review process pending resolution of these issues.

Those residents adjacent to the proposed projects are understandably concerned about the changes this project will have on their personal environments. Any change in the use of the subject parcels would impact these residents at some level. A passive park is a permitted use for the State and County parcels, and is consistent with the Kawai Nui Marsh Master Plan. Mitigation is proposed to address potential negative impacts to the extent practical, but it is not within the scope of this project or environmental process to resolve or eliminate all impacts. We assert that the benefits of Kawai Nui Gateway Park on the community, as a whole, far exceed the potential negative impacts on a few.

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Table 1 Responses to Comments

Subject	DEA Reference	Comment	Response	Action/Explanation
Flood Zones	Pg1-1	Explain flood hazard designations	Concur	The Final EA includes a description of flood hazard zones designations on page 1-1.
Erosion	Pg 1-5	Require dampening soil, minimizing exposed area, and installing silt fencing	Concur w/ qualification	The grading and grubbing permit conditions will require best management practices (BMPs) that are likely to include these 3 requirements. The contractor will propose BMPs and the approving agency will determine if the BMPs are adequate.
Erosion control		Recommend non-plastic retention fencing.	Concur	The Final EA includes recommendation for use of non-plastic fencing (Ch. 5.1.3) for erosion control.
Dust control		What is source of dust control water?		BWS water will be brought onsite in a tanker from by the contractor. Added to Ch. 5.1.3.
Erosion control		Recommend sediment mats to control erosion after construction is complete.	Concur	The BMPs will address post-construction erosion protection. The Final EA will recommend the use of "grass pavers" on the banks at the canoe launch and sediment mats in other areas. Language is added to the Ch 5.1.3
Long-term impacts		Apparent contradiction when stating no long-term impacts to general community while acknowledging impacts to adjacent residents	Disagree	There are approximately 30 residences adjacent to the park that will experience a permanent change to their immediate environment. The remainder of the 100,000's of households in the "general" community will experience no direct

Subject	DEA Reference	Comment	Response	Action/Explanation
				Impacts. No changes to EA.
Ambient light	Pg 1-1	a)What type of vegetation will reduce ambient light and prevent trespassing? b)How effective will it be? c)What type and where will security fencing be installed		a & b)The types of vegetation proposed are listed in Ch 3.3.1.6. There are no assertions in the EA that the plantings will eliminate ambient light or prevent trespassing; they will serve to mitigate these impacts. We do not know the effectiveness. c) the chain-link security fencing is described in the DEA Ch 3.3.17, and will be located along the property boundaries between the park and adjacent private property.
Access		What is the County ordinance restricting access? Is it in effect now?		The DEA was in error when referring to an ordinance. The rules for each park are specific to that park and final determination of rules will be the Dept. of Parks & Recreation. All references to an existing ordinance are deleted from the EA. The EA recommends restricted park access after hours.
Site preparation		Site clearing or building in the water? Where and how?		Clearing of vegetation will be done by hand or light equipment in accordance with permit conditions. Posts will be installed to support bridges and observation decks at the Coconut Grove Site. No supports will be placed in the canals. The details of how many posts and precise locations have yet to be determined. The number will be dictated by safety requirements.

Site preparation		Heavy or light equipment used to dredge or clear banks? What types, where, why, duration, mitigation? dredge material disposal?		Dredging pertains to removing sediment from a waterway. No dredging is proposed. The clearing will either employ light equipment or be done by hand along the banks. The duration is not determined, but construction will occur as quickly as possible to minimize ground surface exposure and erosion. BMPs will mitigate erosion.
Habitat enhancement	Table 1-1	What & where?		Explained in Ch 3.
Access	Table 1	Pathway restrictions?		Park rules will dictate hours of operation. No barriers to pedestrian traffic proposed. Text is added to the EA
	Table 1	Pet restrictions?		"leash laws" apply. Added reference to the EA.
Wildlife	Table 1	Retain vegetation at shoreline? Shoreline vegetation removal impacts on wildlife?		Ch 5.2 discusses impacts on biological resources.
Socio-economic	Table 1-1	Premature to suggest property values will increase	Disagree	It is appropriate to identify potential positive impacts as well as potential negative impacts. Cleaning-up an overgrown vacant lot is viewed as an property improvement. Increased parks in a community are often perceived as advantageous to property values.
Site Preparation	Ch 3.3.1	How many milo trees?		Number was not reported in biological survey, but the stands identified will be retained.
Site Preparation	Ch 3.3.1	Why is soil being removed from the site and some brought to the site?		The EA does not say soil will be removed from the site. Debris will be removed. Topsoil is proposed to encourage rapid growth of

				new landscaping.
Site Preparation	Ch 3.3.1	How much soil removed?		No soil will be removed from the site.
Site Preparation	Ch 3.3.1	How much soil will be brought onsite?		The quantity of topsoil is unknown at this time. There will not be significant changes to the grade at the site.
Site Preparation	Ch 3.3.1	How much soil to raise the structures above the levee wall?		The Mokapu structures are located outside the 100-year and 500-year flood hazard area. The existing topography at the Mokapu site is at a greater elevation than the levee area. Soil will not be required to raise the base elevations of the structures Surface soils will be graded to provide a level surface for the structures. EA text will clarify soil issue and a new figure is added to show the relative elevations of the structures.
Access	Ch. 3.3.1 2	Why is Mokapu pathway 6 ft. wide? Coconut Grove is 4 feet wide with 6ft wide bridges. Regulation?		Arbitrary. 4 feet is standard for a sidewalk and the extra 2 feet on the bridges would permit easy passing of those lingering on the bridge. The proposed width at Mokapu Site assumes educational events will periodically generate higher volume of pedestrian traffic.
Mokapu pathway		Will pathway continue to be 6 feet wide and concrete on the Kawai Nui Community Park side?		The concrete pathway will not continue on the Community Park side of the canal.
Mokapu Structures	Ch 3.3.1.4	Exact dimensions of comfort station?		Exact dimensions are not available at this time, standardized County design will be used. 600 sq. ft is a maximum possible area so that "worse-case" impacts can be assessed. Floor elevation is estimated at 20

				ft. Mean Sea Level, which approximates the existing topographic elevation. A new figure is included in the EA to show the relative height of the Mokapu structures.
Mokapu Structures	Ch 3.3.1.4	Structural information inadequate.	Disagree	Although precise details are not available, the general impact of the structure of a specified area can be assessed from an environmental perspective. The base level of the structures will approximate the existing topographic elevation. The exception is the bridge span which will be at approximately 20 ft MSL , comparable to the top of the levee.
Mokapu Structures	Ch 3.3.1.4	Why isn't comfort station closer to Mokapu Blvd.?		The comfort station location was placed as close to the road for security reasons while not compromising the views along Mokapu Boulevard.
Mokapu Structures	Ch 3.3.1.4	What are outdoor shower details, besides having a roof?		The shower will utilize municipal water and drain to the sanitary sewer system. A roof is required to prevent stormwater flow into the sewer drain. The floor of the shower will be concrete and direct shower water into the drains. The number of shower heads will be dictated by the County.
Oneawa Canal bridge	Ch 3.3.1.4	"Wrong" to include bridge if not funded.	Disagree that bridge should not be addressed.	Lest the applicant be accused of segmenting a project, it is appropriate to disclose as much information as possible about phased projects as soon as possible.

		Bridge details lacking.	Agree that some additional bridge detail is needed.	See response to individual questions below:
		How will bridge be stabilized? How much earth movement? What erosion control measures?		These details are not available yet. But as with the other structures, federal, state and county permit and approval processes will dictate conditions to protect the health & safety of he bridge users and the water quality. The conditions of the permits are not known at this time.
		What is height of bridge span? What is visual impact.		The height of the span will be approximately 20 ft. MSL, comparable to the top of the levee, and a new figure is included in the EA to show the visual impact. Above the span will be 3 ft- tall hand rails.
		Will there be lights? What are the impacts of the lights?		No lights proposed. No impacts.
		Will there be gates?		No
		Will fishing be allowed?		Yes-during park hours from banks of the canal.
Canoe	Ch. 3.3.1.5	How much grading and grubbing proposed at water's edge? What measures will be used to prevent erosion? What measures will be used to stabilize the bank?		The construction plans have not been developed yet. The County grading & grubbing permit will include conditions to protect the water. The EA will recommend the use of "grass pavers", a rigid plastic net that has cells that are filled with soil and seeded. The support will retain soil and minimize impacts of foot traffic on grass.

Canoe	Ch. 3.3.1.5	What is the life span of plastic timber?		Plastic lumber is reportedly more durable than wood, but calls to island vendors did not yield information on the specific life span.
Canoe	Ch. 3.3.1.5	Where will canoe trailers be parked?		Canoe trailers will be parked offsite at their current location, Kailua Beach.
Landscaping	Ch. 3.3.1.6	What native plants are onsite?		Refer to Ch. 5.3.2 of EA
Utilities	Ch 3.3.1.9	What are dimensions of retaining wall? What is elevation of platform? How much excavation required? How much fill? Load at park?		The rock wall will be a maximum of 30 inches in height. The pavilion floor elevation will be 15 feet MSL as shown on Figure 8 of the DEA. No fill is anticipated. The excavation will be limited to that required to level the base. The buses will provide transport to the park for education classes, which are likely to held during the weekday days. Assume 50 per bus times 2 stalls = 100 people. The classes will not coincide with the recreational users that are anticipated on weekends, mornings and afternoons. Assuming 3 people per car for recreational use (3 x 18 parking stalls = 54 recreational users).
lighting		Can existing utilities handle load?		Yes, but final approval will be made during the building permit review.
lighting		Where is lighting in addition to comfort station?		There is no additional lighting proposed. Commentor is correct to state that comfort station is far from residences.
lighting		Where will comfort station lighting be?		Lighting will be inside and outside. The number of fixtures will be determined at later date, and will be

				consistent with other County park comfort stations.
Coconut Grove materials	3.3.2	Plans to protect wildlife?		Access will be restricted to viewing platforms and pathways. No other plans to protect wildlife proposed.
Illegal activities	3.3.2	Gravel may be thrown at wildlife.	Concur	Throwing gravel is a public safety issue as well as a wildlife safety issue. There is no mitigation proposed for the misuse of project materials. Public education and signage may address this concern.
Coconut Grove structures	3.3.2	Why are trails 4-ft wide and boardwalks 6 ft wide?		Arbitrary. 4 feet is standard for a sidewalk and the extra 2 feet on the boardwalk would permit easy passing of those lingering on the bridge.
	3.3.2	How many support posts in wetland? How deep? What are pole dimensions? How will they be anchored?		These construction details are not available at this time. All construction will be in accordance with applicable laws and regulations. The structures will meet the requirements for public safety.
	3.3.2	Will supports be in the canals?		No
Erosion	3.3.2	Erosion control during construction?		Construction will be in accordance with conditions of the grading and grubbing permit.
Vegetation	3.3.2.3	Are the plants on Figure 9 new or existing?		Figure 9 identifies "existing forest canopy" that will be retained. The native plants described along the western edge of the figure do not exist and will be planted.
Observation deck construction	3.3.2.5	How many poles in wetland and canal? Dimensions of poles? How will they be anchored? Erosions control measures?		No poles are proposed in the canals. The structures will span waterways. The number of supports, dimensions, and anchoring methods are not available at

				this time, but will be sufficient to ensure public safety. Grading and grubbing permit will dictate erosion control measures.
maintenance	3.4	How will poles be placed? Machine or by hand? Volunteer maintenance?		Appropriate construction methods will be determined by contractor and will meet environmental protection conditions of grading and grubbing permit. The structures will be maintained by the County, and the community will be relied upon to maintain the waterbird habitat.
trash		Will there be regular trash pickup?		Yes - by the County
maintenance safety		Does this mean no maintenance of structures? Who evaluates safety of structures?		No. County will maintain. County through building permit review process.
maintenance		Who replaces structures?		County
phasing	3.6	Why no mention of Coconut Grove? Should not be included in EA if not funded.	Disagree	The EA does mention Coconut Grove funding ($190,000) in FY2003. Even if funding were not earmarked for Coconut Grove Site, it is appropriate to discuss it lest the applicant be accused of project segmentation.
Opinion	4.0	It is incorrect to say that potential negative impacts have been identified and appropriate mitigation included. There remain countless unanswered questions.	Disagree	Potential negative impacts were identified during extensive public scooping before the Draft EA and addressed in the EA. A good faith attempt was made to provide answers to comment letter questions and the EA was modified to incorporate the new information. The remaining unanswered questions will be resolved prior to construction, and permit-

				approving agencies will ensure that conditions are attached to the permits to protect the environment and public safety.
Lighting	Table 4-1	Clarify whether lights will be installed at the comfort station.		Table 4-1 states that one suggestion was that there be no lights at the comfort station, but for security reasons, lighting is included in the project
Erosion control	5.0	Not sufficient to say BMPs will be used. Need to be more specific.	Disagree	The contractor (not selected yet) is responsible for developing BMPs to meet permit requirements and the County is responsible for approving these conditions. The specific methods to be employed are not known at this time. In addition, NPDES permit coverage is required and conditions will be imposed to address erosion into waterways.
Opinion	5.2.1.2	The document fails to present sufficient information on which to present meaningful comments and evaluate impacts. Need topographic maps to appreciate finished height of structures and visual impacts. Letter presents estimates of structure heights and resultant negative impacts	Disagree Concur	State and County agencies that reviewed the Draft EA have not commented on a lack of adequate information. Your comment letter provided meaningful comments. Final EA includes a figure showing elevations. Only the bridge span needs to be above the levee wall. The finished heights are much less than you estimated and are included in the Final EA.The impacts on visual view planes are not significant. The lighting glare will not be an issue. The impact on waterfowl is mitigated by low intensity lighting directed to the ground.

Sewer lines	5.2.1.2	What precautions are taken to protect sewer lines from flooding?		No precautions are taken to protect utilities from flooding.
Herbicides	5.2.3.2	Where and when will herbicides be used? At Coconut Grove Site? Why?		Herbicides will be used on an as needed basis at the discretion of the landscape contractors at both sites. No application is anticipated during maintenance. The chemicals will be applied in accordance with manufacturer's instructions and State regulations. The applicant will continue to work with DLNR and Kawai Nui Heritage Foundation to address vegetation control.
Stormwater	5.2.3.2	What techniques to control stormwater runoff from the parking lot?		Other comment letters have recommended French drains and this recommendation is added to the EA.
Canoes	5.3.1.1	Does the vegetation along the bank of the canal provide a nesting area for birds? How will it be protected? Canoe launching area along bank will disrupt habitat.		Subsequent to the Draft EA development, the bank of Oneawa Canal has been cleared of vegetation. It no longer offer protection for waterbirds. The western portion of the Mokapu Site will continue to serve as a waterbird habitat. The birds can adapt to human presence as long as it is not excessive or threatening, and they have a place to retreat such as the western portion of the site and the vacant lots at he eastern end. The canoe activities are unlikely to have long-term adverse impacts on the birds. EA text is amended.
Water birds	5.3.1.2	Removing trees where Night Herons roost? Request further description		No, these trees will not be removed.

		regarding effects to water birds.		Per a discussion with Dr. Bruner, waterbirds can adapt to human presence and noise if they have suitable habitat to retreat to. During construction the noise from the workers and the fight equipment will temporarily discourage the birds from the area; but it is the intention that enhanced wetlands will encourage the return of the waterbirds from other areas in the marsh when the construction is complete. No protection for the waterbirds is proposed. Predators are an exiting problem in the marsh and this project will not increase the presence of predators. The clearing of mangrove is likely to decrease the nesting areas for mongoose and rats.
Mokapu site	5.3.1.3	Which "other" shoreline areas will be landscaped with grass?		Refer to Figure 4 showing tall vegetation along the shoreline, except in a few discrete areas of short vegetation.
Pole Fishing	5.3.1.3	Will pole fishing be allowed? Where?		Pole fishing will be allowed during park hours. There will not be a designated area, but access will be from the banks of the canal.
	5.3.1.4	Describe wetland enhancement.		Vegetation will be cleared in the interior of the site to create small ponds.
Construction	5.4.2	Time frame for completing boardwalks, viewing platform and gravel and blue rock nature trails.		Construction details and projected timelines are not available at this time.
Archaeology	5.5.3.2	Will there be sediment coring? If not, why?		The Final EA states that an archaeological survey including sediment coring will be conducted at the

				Coconut Grove Site. In addition, SMA permit conditions are proposed.
	5.5.3.2	What is construction method for poles? Isn't this "excavation"? What is minimal disturbance?		The construction method is not known at this time. The method will be selected based on conclusions of the archaeological survey.
	5.5.3.2	Contradiction in stating there will be no grading and stating there will be earthmoving. How will platforms be leveled if there is no grading.	Concur	The use of the word "earthmoving" is misleading and is deleted from the EA. Grading will be limited to the ground surface. The pole placement will involve subsurface disturbance and an archaeological survey will be conducted prior to construction at the Coconut Grove Site.
	5.5.3.2	"In absence of potential impact"- clarify.		This section of the EA is modified to describe additional archaeological surveys prior to construction.
Opinion	5.6	Posted signs insufficient for preventing people from using park after hours. Recommend money set aside to establish neighborhood patrol.		The signs and laws governing the park's use are proposed mitigation. Violation of these rules and laws is a police matter. No funds will be used for community patrols. Concerned citizens are encouraged to discuss voluntary community watch with the Police Department.
Lighting	5.7	Will the bridge have safety lighting?		No lighting is proposed.
		Was a study conducted to evaluate impact of night lighting on migratory birds? If not, why?		No study was conducted; however based on DEA recommendations from DLNR, the lighting will be low-intensity and directed downward by shielded fixtures.
Opinion	5.8	Irresponsible to leave resident's concern	Disagree	Resolution of potential impacts is not a reasonable

		regarding vagrancy an unresolved issue.		expectation. The problems of vagrancy and after dark activities are a police matter. Mitigation proposed includes boundary fencing and vegetation, secured vehicular access, and comfort station lighting. The Neighborhood Board is encouraged to address the security concerns at the community level. A Community Watch Group was effective at the Kailua boat launch area. Sgt. Barry Chang of the Police Department assisted in that effort.
Traffic and Parking	5.9	Has DOT approved this site for a park?		DOT reviewed the EA and had no concerns about the selection of the park site. The Mokapu site is identified as a park in the State DLNR Plan of 1994.
		What is the alternative if DOT does not approve proposed U-turn?		Access to the park will be less convenient for westbound travelers on Mokapu Boulevard, but alternative routes are available.
		Is parking designed for full size buses or mini-vans? What will prevent them from parking in spaces designated for cars?		Full-size bus parking. Mini-vans that do not fit in the car stalls may use the bus stalls on space available basis. Illegal parking will be a police matter.
		Are the handicap parking stalls included in the 18 parking stalls?		Two of the 18 car parking stalls will be for the handicapped.

		Explain decision not to include dedicated canoe loading and unloading area.		The canoe clubs have stated that the Mokapu site will not be the primary practice site. The loading and unloading will be infrequent; therefore the inconvenience caused by these activities will be infrequent and of short-duration. The designation of additional loading and unloading area would detract from the primary goal of passive park use.
		Where are outrigger canoe trailers parked?		Canoe trailer storage is not accommodated at the park. The canoe clubs will not be storing trailers at the park.
Opinion	5.9	Unrealistic and dangerous to expect canoes be towed along Kapaa Quarry Road.		There are alternative yet longer routes to the park. The condition of Kapaa Quarry Road is outside the scope of this EA. The use of Kapaa Quarry Road is a judgement call to be made by the canoe haulers.
		Explain how long canoes can remain at site and liability.		Canoes will be stored at the site at the canoe clubs' risk. Figure 4 shows the storage location. There are no additional provisions for security of the canoes. There is no limit set on the duration of storage, but it is not intended to be a primary storage site. There is adequate space for approximately 10 canoes.
		Who will police the area to ensure legal parking of canoe trailers?		Illegal parking will be handled as it is handled at other County parks. The canoe trailers will not be parked at the park beyond the time needed to load and unload canoes.

		What is the anticipated increase to traffic on Mokapu once park opens?		The maximum parking capacity is 18 vehicles. The limited parking will minimize the load on Mokapu Boulevard. DOT did not express concern regarding the additional load on traffic.
Utilities	5.12	How was it determined that the load on municipal systems would be "insignificant?"		The County departments were consulted and will make final determinations during the building permit approval process.
Opinion	5.14	Irresponsible to state "no long-term adverse environmental impacts are anticipated..."	Disagree	The park is intended for passive use. Those looking for a peaceful nature walk and finding the park in use will likely return at another time. In this way, the park use will be self-limiting. The park is on the periphery of the marsh and is consistent with the marsh master plan. The beneficial impacts to the community outweigh the minimal adverse

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

July 22, 2002

Department of Design and Construction
City and County of Honolulu
Attn: Gary Doi
650 South King Street, 11th Floor
Honolulu, Hawai'i 96813

Re: Draft Environmental Assessment for Kawai Nui Gateway Park, Kailua, Ko'olaupoko, O'ahu; TMK 4-4-34:25; 4-2-17:20 (por); 4-2-16:01 (por)

Kawai Nui Heritage Foundation appreciates the opportunity to comment on the subject dEA. Please note that our comments focus on either material that we felt was missing, needed clarification, or is internally inconsistent. Our lack of comment on other parts of the document should not be construed as approval of those parts.

With respect to unresolved issues, we note four items that we believe were omitted or not satisfactorily resolved:

1. While vehicular access to the Mokapu site was listed as the only unresolved issue (item 1.4), left turn access to and from the park needs to be addressed. The existing pedestrian access (seldom used) across Mokapu Blvd. from the high school entrance to the Quarry Rd. was not identified in the dEA.

2. Construction of the Oneawa Canal footbridge is mentioned but, as is noted, funding was not included in the current budget (page 3-9). Since no reason was given for excluding it, this remains an unresolved issue.

   Residents of the adjoining community, the majority of meeting attendees, were not in favor of it, but no attempt was made to identify potential users and weigh the pros and cons of this facility. Potential users would include dike walkers who used the Mokapu site parking lot, student field trips, and high school students going to/from Coconut Grove. This park site is part of a regional state recreation/preservation resource and regional interests as well as adjoining community interests should be fully considered.

3. A high school staff representative indicated the school supported the park but the impact of high school students on the park was not addressed except for including a canoe launching area for a school team. This impact could be positive or negative and includes such unresolved issues as student/school event parking and general student use of area before, during and after school.

Na Kia'i Pono 'O Kawai Nui
KAWAI NUI HERITAGE FOUNDATION
P.O. BOX 1101 KAILUA, HAWAI'I 96734

4. The Mokapu site is partially owned by the State; the County owns a portion that is part of the proposed land transfer to the State. The dEA assumes the transfer will occur, and the site will then be assigned to the County by Executive Order. There is no timetable for completing the land transfer or assigning an E.O. and some disputes may remain. Thus, this assumption is based on an unresolved issue.

5. In the list of permits in Section 7.1, we note that no mention is made of an NPDES permit for erosion control, issued by DOH Clean Water Branch. Although the current requirements for such permits apply only to clearing of five acres or greater, the requirement will apply to projects one acre or more as of March 2003. It seems highly likely that this project will not have commenced by that time.

With respect to issues needing clarification, we note the following:

1. Although the Park plans indicate an effort to protect the existing native seashore paspalum grass along the Mokapu site, the Foundation urges consideration of both a rock wall and the planting of a hedge plant with the thorny characteristics of Java plum between the wall and the paspalum grass. The area along Kaelepulu Channel opposite Buzz's Restaurant that is currently used for canoe launching and storage once had paspalum grass in the abundance now seen at the Mokapu site. Our concern with the Park site is not canoe launching but too many exploratory feet. The wall and hedge plant wold not only protect the grass but also serve as a safety barrier and buffer for waterbirds foraging in the area.

With respect to internal inconsistencies, we note the following:

1. Stormwater management
   Page 3-14: "Stormwater flow from impervious areas of the road and parking lot will flow to adjacent landscaped areas. In heavy rains, the storm flow will discharge into Oneawa Canal."

   Page 5-3: "5.2.3.2 Potential Impacts ... In the long-term operation of the Park, stormwater runoff from the parking lot at the Mokapu site will be directed to landscaped areas and be retained onsite. This will minimize the potential for typical parking lot oil and grease spills from washing into the [Oneawa] Canal."

   The Foundation believes that the second statement should be the planning and engineering goal with respect to stormwater management. Such a goal will be consistent with the City & County's erosion and sedimentation ordinance and BMP manual. Also, as noted in section 5.4.1 "Aquatic Resources", Oneawa Canal has been listed by the EPA as an "impaired waterbody". Impaired water bodies are defined as those waterbodies that cannot meet State water quality standards even if all point sources of pollution are removed. Whether or not Oneawa ends up on the final list, it makes little sense to increase polluted runoff into the Canal.

   We urge the use of appropriately sized french drains around all road and parking lot boundaries for the interception and filtering of stormwater runoff.

Lastly, the Foundation urges the use of plastic lumber wherever the structure and codes permit. This is suggested both for its ability to be painted in ways that simulate wood and thus provide a

more natural setting and for maintenance reasons. The dEA suggests, for example, that the pavilion be constructed of metal. This seems highly inappropriate for an area that is exposed to both damp and sea air.

If the Foundation can be of assistance in answering any questions that our comments may raise, please do not hesitate to be in touch with me at 261-7580.

Me ke aloha pumehana,

Susan Elliott Miller, President

Cc: Helber Hastert and Fee, Attn: David Curry
Office of Environmental Quality Control

Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Ms. Susan Miller, President
Kawai Nui Heritage Foundation
P.O. Box 1101
Kailua, Hawaii 96734

Dear Ms. Miller:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated July 22, 2002, regarding the subject document and project.

Subject	DEA Chapter	Comment	Response	Action
Pedestrian Access	5.9	Pedestrian access via the Mokapu Blvd.- Kapaa Quarry Intersection to the Mokapu Site was not described.	concur	The Final EA describes the pedestrian access from Mokapu Boulevard in Chapter 5.9.
Access		Convenient left turn access to and from the park is unresolved.	concur	The Final EA acknowledges that convenient left turn to and from the park as an unresolved issue (Chapter 1).
Oneawa Footbridge		Oneawa footbridge costs not included and potential impacts are not adequately addressed.	concur	The Final EA includes costs and potential impacts of the footbridge, however the construction will be part of a later phase of development.
High School students		Kalaheo High School student potential use of the park not fully described.	concur	The Draft EA addressed the potential inappropriate use of the Park by Kalaheo High School students, but does not fully address appropriate student use of the park (e.g. educational, recreational). The Final EA describes these impacts in Chapter 5.11. The school administrators and the Police Department were consulted on mitigation for inappropriate behavior and these ideas are incorporated into the Final EA.

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
Tel. 808 545-2055 Fax 808 545-2050 www.hhf.com Email: info@hhf.com

Subject	DEA Chapter	Comment	Response	Action
EO		Unresolved issue	concur	The EO is an unresolved issue that must be resolved before the project construction (Chapter 1).
NPDES permit		omitted	concur	The Department of Health made a similar comment. NPDES permit coverage for construction activities is anticipated.
vegetation		Impact of pedestrians on paspalum. Wall and hedge proposed.	Concur with qualification	We appreciate the concern for grass survival. The final EA will include a recommendation for grass paving systems in the canoe launch area. Limited access to the shoreline will be retained and no wall or hedge is proposed. The number of people using the park will be considerably less than in the Buzz's area.
Stormwater management	pages 3-14 and 5-3	Inconsistency in describing stormwater management	concur	Stormwater control will be designed to prevent flow into the canal from the Mokapu Site. Final EA Ch. 3 is corrected.
		Recommend installation of French drains	concur	French drains are recommended. The stormwater retention design is not complete, but the recommendation will remain in the final EA.
		Receiving water warrants protection even if quality compromised	concur	No change to the EA text proposed. NPDES and Water Quality Certification conditions will provide additional protection of receiving water during construction. Efforts will be made to coordinate the water sampling requirements with the TMDL requirements.
Recycled lumber		Use recycled lumber for all structures including pavilion wherever codes and structure permit.	concur	Recommendation for plastic lumber is added to the EA. This comment was also made by DOH.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David R. Curry

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Hawaiian Electric Company, Inc. • PC Box 2750 • Honolulu, HI 96840-0001

GEN-6 (EIS)

August 1, 2002

RECEIVED

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FACILITIES DESIGN & ENG.
DEPT OF DESIGN & CONST
CITY OF HONOLULU

Attention: Mr. Gary Dol
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Dol:

Re: Kawai Nui Gateway Park

Thank you for the opportunity to review and comment on the June 24, 2002 Draft EA for the Kawai Nui Gateway Park in Kailua.

There is a HECO distribution line fronting the subject property along Mokapu Boulevard. Please make a request for service when plans are finalized to allow adequate time to schedule the work.

Our point of contact for this project, and the originator of these comments, is Enrique Cho (543-7281), Director of Planning & Design, Customer Installations. I suggest your staff and consultant deal directly with Enrique to coordinate HECO's participation in this project.

Sincerely,

Kirk Tomita
Senior Environmental Scientist

cc: OEQC

14 815

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Helber Hastert & Fee
Planners, Inc.

October 4, 2002

Mr. Kirk Tomita, Senior Environmental Scientist
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, HI 96840-0001

Dear Mr. Tomita:

Draft Environmental Assessment
Kawai Nui Gateway Park
Kailua, Oahu, Hawaii

Thank you for your comment letter, dated August 1, 2002 regarding the subject document and project.

The applicant, City and County of Honolulu Department of Design and Construction, will continue to work with Mr. Enrique Che, Hawaiian Electric Company's, Director of Planning & Design, Customer Installations as the project moves toward construction. We appreciate verification that there is an electrical distribution line aligned along Mokapu Boulevard and that this line will be used to provide service to the comfort station.

Your letter and this response are included in the Final EA, Appendix E.

If you have any questions regarding this project, please call me at 545-2055.

Sincerely,

HELBER HASTERT & FEE, Planners

David Curry, AICP
Principal

cc: Ms. Rae Loui, P.E., Director, Department of Design and Construction

Pacific Guardian Center, 733 Bishop Street, Suite 2590 Honolulu, Hawaii 96813
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